



62670



Class _____ No. _____

Presented by

A. A. Eschner, M. D.

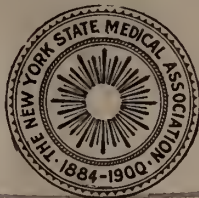
*1.70

Mans Sp.

THE

New York State Journal of Medicine.

Published Monthly by The New York State Medical Association.



VOL. 2. No. 1.

NEW YORK, JANUARY, 1902.

\$1.00 PER ANNUM.

CONTENTS.

Blackmail Suits Against Physicians..... 1	CORRESPONDENCE.	The Treatment of Pulmonary Tuberculosis, by Charles E. Quimby, M.D., New York 12
The Army Canteen..... 1	"Benefits of the Association"..... 6	Surgical Procedures for Pulmonary Tuberculosis, by William G. Le Boutilier, M.D., New York..... 15
Venereal Disease in the Army..... 2	"Treatment of Pneumonia"..... 7	Comments on Some New Surgical Methods, by John A. Wyeth, M.D., New York 17
Venereal Virulence in the Army..... 2	BOOK REVIEWS.	Gun-shot Wounds of the Hip-joint by Reduced-caliber Projectiles, by Louis A. LaGarde, Washington, D. C..... 21
Legal Restraints on Consumptives..... 2	A System of Physiologic Therapeutics, by F. Parkes Weber, M.D., and Guy Hinsdale, M.D. 7	Malignant Disease of the Nose and Accessory Sinuses, by Joseph S. Gibb, M.D., Philadelphia 24
Hardships Inflicted on Consumptives... 3	International Clinics, by H. W. Cattell, M.D. 7	
Medical Experts and Insanity..... 3	PRACTICE OF MEDICINE.	
Physicians as Office-holders..... 3	Treatment of Pneumonia, by C. E. Nammack, M.D., New York..... 8	
New York County Association..... 4	ORIGINAL ARTICLES.	
January Meetings in the Fifth District. 4	Tuberculin and Products of the Tubercle Bacillus, by E. A. De Schweinitz, M.D., Washington, D. C..... 9	
Correction in the Treasurer's Report... 5		
Orange County Association..... 5		
Erie County Association..... 5		
Address, Read at the Special Meeting of the Fifth District Branch, by Emil Mayer, M.D., New York..... 5		

Copyrighted, 1901, by the New York State Medical Association. Entered as second-class matter at the New York, N. Y. Post Office, January 18, 1901.

AMERICAN MEDICAL ASSOCIATION.

Next Annual Meeting at Saratoga Springs, N. Y., June 10-13, 1902.

President—John Allan Wyeth, New York, N. Y.

First Vice-President—Alonzo Garcelon, Maine. Second Vice-President—A. J. Stone, Minnesota.

Third Vice-President—A. W. Jonas, Nebraska. Fourth Vice-President—John R. Dibrell, Arkansas.

Secretary—George H. Simmons, 61 Market St., Chicago, Ill. Treasurer—Henry P. Newman, 100 Washington St., Chicago, Ill.

THE NEW YORK STATE MEDICAL ASSOCIATION.

President—Alvin A. Hubbell, 212 Franklin Street, Buffalo.

Vice-President—William H. Biggam, 1167 Dean Street, Brooklyn.

Vice-Presidents Ex-Officio—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 32nd Street, New York.

Counsel—James Taylor Lewis, Esq., 120 Broadway, New York.

STANDING COMMITTEES.

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 93d Street, New York. Chas. B. Tefft, Utica. E. D. Ferguson, Troy. Elias Lester, Seneca Falls. Chas. 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 36th 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 46th Street, New York. Elice 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 36th Street, New York. W. H. Biggam, Brooklyn. E. Eliot Harris, New York, 5th District. A. G. Bennett, Buffalo, Z. J. Lusk, Warsaw, 4th District. J. G. Orton, Binghamton. C. D. VerNooy, Cortland, 3rd District. John M. Humphrey Saratoga, William J. Hunt, Glens Falls, 2d District. W. B. Read, Rome, Douglass Ayres, Fort Plains, 1st 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.

Business Manager, William Starr Bullock, 64 Madison Avenue, New York.

MAY - 2 1903

THE NEW YORK STATE MEDICAL ASSOCIATION.

FIRST DISTRICT BRANCH.

President—Charles B. Tefft, Utica.
 Vice-President—J. W. Douglas, Boonville.
 Secretary and Treasurer—E. H. Douglas, Little Falls.

Herkimer County Medical Association.

President—C. H. Glidden, Little Falls.
 Vice-President—S. S. Richards, Frankfort.
 Secretary and Treasurer—E. H. Douglas, Little Falls.

Oneida County Medical Association.

President—W. B. Reid, Rome.
 Vice-President—H. C. Palmer, Utica.
 Secretary—J. O. Stranahan, Rome.
 Treasurer—John Groman, Utica.

SECOND DISTRICT BRANCH.

President—E. D. Ferguson, Troy.
 Vice-President—D. J. Fitzgerald, Glens Falls.
 Secretary and Treasurer—W. L. Hogeboom, 2179 Fifth Avenue, Troy.

Albany County Medical Association.

President—Charles Mortimer Culver, 36 Eagle Street, Albany.
 Vice-President—Adam T. Van Vranken, 1603 Third Avenue, Watervliet.
 Secretary and Treasurer—William B. Sabin, 1425 Broadway, Watervliet.

Committee on Public Health—J. B. Harvie, Chairman, Troy. D. W. Houston. W. L. Hogeboom.
 Committee on Ethics and Discipline—J. P. Marsh, Chairman, Troy. H. C. Gordinier. George L. Meredith.

Saratoga County Medical Association.

President—F. J. Sherman, Balston Spa.
 Vice-President—G. F. Comstock, Saratoga Springs.
 Secretary—J. F. Humphrey, Saratoga Springs.
 Treasurer—W. E. Swan, Saratoga Springs.
 Executive Committee—P. C. Curtis, Round Lake, (1 year). F. A. Palmer, Mechanicsville, (2 years).
 (3 years).

Columbia County Medical Association.

President—Thomas Wilson, Hudson.
 Vice-President—H. Lyle Smith, Hudson.
 Secretary and Treasurer—Otis H. Bradley, Hudson.

Warren County Medical Association.

President—G. R. Martine, Glens Falls.
 Vice-President—D. J. Fitzgerald, Glens Falls.
 Secretary and Treasurer—F. J. Fielding, Glens Falls.

Rensselaer County Medical Association.

President—C. S. Allen, Rensselaer.
 Vice-President—M. B. Hutton, Valley Falls.
 Secretary and Treasurer—F. A. Smith, Troy.
 Committee on Legislation—E. D. Ferguson, Chairman, Troy.
 William Finder, Jr. William L. Allen.

THIRD DISTRICT BRANCH.

President—Elias Lester, Seneca Falls.
 Secretary—B. S. Moore, 906 N. Alvord Street, Syracuse.
 Treasurer—Chauncey P. Biggs, 117 East Buffalo Street, Ithaca.

Broome County Medical Association.

President—LeRoy D. Farnham, Binghamton.
 Vice-President—William A. White, Binghamton.
 Secretary—Clark W. Greene, Binghamton.
 Treasurer—William H. Knapp, Binghamton.

Cortland County Medical Association.

President—H. S. Braman, Homer.
 Vice-President—S. C. Sornberger, Cortland.
 Secretary—P. M. Neary, Cortland.
 Treasurer—F. W. Higgins, Cortland.

Onondaga County Medical Association.

President—Adelbert D. Head, 202 W. Genesee Street, Syracuse.
 Vice-President—F. J. Kaufman, 311 W. Genesee Street, Syracuse.
 Secretary—Bernard S. Moore, 906 N. Alvord Street, Syracuse.
 Treasurer—Alexander J. Campbell, 410 Warren Street, Syracuse.

FOURTH DISTRICT BRANCH.

President—Charles A. Wall, 306 Hudson Street, Buffalo.
 Vice-President—J. W. Morris, Jamestown.
 Secretary—Bernard Cohen, 497 Niagara Street, Buffalo.
 Treasurer—William Irving Thompson, 152 Jersey Street, Buffalo.

Chautauquus County Medical Association.

President—Thomas D. Strong, Westfield.
 First Vice-President—William M. Bemus, Jamestown.
 Second Vice-President—O. C. Shaw, Cassadaga.
 Secretary and Treasurer—H. A. Eastman, Jamestown.
 Committee on Legislation—Laban Hazeltine, Jamestown. J. R. Smith, Conewango Valley. L. P. McCray, Clymer.
 Committee on Public Health and Medical Charities—E. A. Rodd, Bozovsky, Dunkirk. A. A. Becker, Jamestown. E. A. Rodd, Westfield.
 Committee on Ethics and Discipline—E. A. Scofield, Bemus Point. Morris N. Bemus, Jamestown. O. C. Shaw, Cassadaga.

Committee on Ethics, Discipline and Membership—C. G. Stockton, Chairman, Buffalo. J. H. Potter, Buffalo. W. A. McFadden, Buffalo.
 Committee on Legislation—H. E. Hayd, Chairman, Buffalo. E. A. Smith, Buffalo. E. E. Blaauw, Buffalo.
 Committee on Public Health and Medical Charities—Julius Ullman, Chairman, Buffalo. C. S. Jewett, Buffalo. H. L. Hunt, Orchard Park.

Genesee County Medical Association.

President—Morris W. Townsend, Bergen.
 Vice-President—E. E. Snow, Batavia.
 Secretary and Treasurer—A. M. Cheney, Batavia.

Erie County Medical Association.

President—DeLancey Rochester, 469 Franklin Street, Buffalo.
 Vice-President—W. H. Jackson, Springville.
 Secretary—Arthur G. Bennett, 26 Allen Street, Buffalo.
 Treasurer—Charles A. Wall, 306 Hudson Street, Buffalo.

Wyoming County Medical Association.

President—Carl C. Mann, Warsaw.
 Vice-President—P. S. Goodwin, Perry.
 Secretary and Treasurer—Z. G. Truesdell, Warsaw

FIFTH DISTRICT BRANCH.

President—Emil Mayer, 25 East 77th Street, New York.
 Vice-President—Mary Gage-Day, Kingston.
 Secretary—Edmund L. Cocks, 156 West 119th Street, New York.
 Treasurer—E. H. Squibb, P. O. Box 760, Brooklyn.

Dutchess County Medical Association.

President—Irving D. LeRoy, Pleasant Valley.
 Vice-President—Edwin Barnes, Pleasant Plains.
 Secretary—John W. Atwood, Fishkill-on-Hudson.
 Treasurer—Monroe T. Pultz, Stanfordsville.

Kings County Medical Association.

Meets at 315 Washington Street, Brooklyn, at 8.30 P. M., on second Tuesday of each month, except July, August and September.
 President—Hubert Arrowsmith, 180 Clinton Street, Brooklyn.
 Vice-President—George H. Treadwell, 64 South Portland Avenue, Brooklyn.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. NO 1.

JANUARY, 1902.

\$1.00 PER ANNUM.

Blackmail Suits Against Physicians.—A large number of legal actions are tried against physicians every year, in which no damages are secured nor any adequate cause of action shown. There is a very much larger list of actions which never come to trial and of which we never hear. Either the physician thinks that while he is sure of winning in the end, it is cheaper to pay blackmail in the beginning and settle out of court, or the patient, disheartened at the prospect of a sturdy defense, drops his suit. In by far the largest proportion of cases no suit would be brought unless there was a prospect of bluffing the physician into a settlement. And no settlement would be made except as a means of saving money.

The Executive Committee of the New York County Medical Association has for a long time been studying this subject, and, as a result, at the last meeting, a report of which will be found elsewhere, the Association adopted the following plan:

1. The Executive Committee 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 Executive Committee 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 Executive Committee, shall sign a contract renouncing his own and vesting in the Executive Committee sole authority to conduct the defense of said suit or to settle by compromise, and shall make other agreements as the Executive Committee may require.

4. The Executive Committee 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 Executive Committee shall not obligate the Association to the payment of any damages awarded by decree of court or upon compromise.

It was further resolved that this plan shall

cease to be effective when the New York State Medical Association shall adopt similar measures for the protection of all its members.

Timid and thrifty members will have no object in settling out of court, because it will be cheaper for them to fight than to settle, and there is nothing to prevent a member employing his own attorney if he so desires.

The Association does not for a moment intend to protect its members who have been guilty of actual malpractice further than to see that they get justice, but it does intend to protect them from the harpies who thrive on their distaste for litigation and notoriety.

* * *

There is a certain burglar insurance company which enjoys such a reputation among criminals for the relentless pursuit of offenders that an insignificant sign in the front window of a house furnishes, in the great majority of cases, all necessary protection against thieves. On the same principle we do not expect to see the legal force of the New York County Association overworked.

* * *

The Army Canteen.—The effect of the abolition of the army canteen continues to be a subject of dispute. Just now the prohibitionists are deriving great comfort from the report of General Miles, in which he rather cautiously approves the results of the present system. Their opponents insinuate that the General's approval must not be taken too literally, since the previously declared opposition of the Adjutant-General left him no other course. Secretary Root, a man distinguished for his good judgment and evenness of temper, is inclined to think that the results have hardly justified its abolition. Officers of lower rank also differ widely on the subject. Perhaps the majority of the medical men connected with the service think the post canteen a beneficial institution, but there exists a minority, respectable both in numbers and ability, which has expressed contrary views. Meantime the various army reports shed very little light on the subject.

Alcoholism in the Army, if we can judge from reports, has been regularly and gradually decreasing since 1889, each year showing steady

progress, down to the time of the late war. Army officers have been inclined to ascribe this improvement to the canteen system, and it has been asserted that since its abolition alcoholism has greatly increased. If this is so, the Surgeon-General's report certainly gives no evidence of it as resulting in an increased admission rate in the hospitals. If anything there has been a very slightly less number of admissions for alcoholism. This is said to be due to the fact that the percentage of drunkenness is always somewhat less when the army is to a great extent engaged in active service.

* * *

Venereal Disease in the Army.—Advocates of the army canteen have argued that when soldiers are compelled to leave the post to get the beer and light drinks they used to obtain at the canteen, they are served instead with the more potent liquors of the low-grade saloons that have sprung up near each encampment. At such a time, when their intelligence is clouded and their passions excited by drink, they are exposed to the temptations of the brothel that is always connected with the cheap saloon. The Surgeon-General's report certainly gives color to this assertion. The average admission rate for venereal diseases of the decade 1889-1898 to post hospitals was 71.45 per thousand. The rate for the past two years has been 133. This enormous increase is not entirely due to the foreign service, for while the regulars in the Philippines show a rate of 138, those in the United States show 155. In Porto Rico the enormous admission rate of 367 per thousand is recorded. The people who forced the abolition of the canteen, in claiming the credit of reducing alcoholism, can hardly avoid the duty of accounting for this increase in venereal diseases.

After all, the sole judges in the matter should be the officers, line and medical, and we fear they are becoming so embittered on the subject that the final decision will be the result of passion rather than good judgment. We can, however, with perfect propriety deprecate the fact that the canteen was abolished by Congress at the behest of hysterical women of both sexes, as a contemporary puts it, against all the weight of professional authority and contrary to the private convictions of a majority of the legislators themselves. Nevertheless, the fact that the first act was hasty and ill-advised is no argument for a hasty reversal. The present plan should have a fair trial and be continued or changed on its merits without regard to narrow fanaticism on either side.

* * *

Venereal Virulence in the Army.—Another rather curious feature of the Surgeon-General's report appears in the ratio of soldiers discharged for disability due to venereal diseases. The volunteers in the Philippines have an admission rate of 79 per thousand and only .41

are sufficiently incapacitated to require their discharge from the service. The ratio among the regulars in the same service is 138 and .96. In China the admissions rose to 173 without a single discharge for disability. In the United States the admission rate is 155 and the discharge rate is over 7 per thousand. Explanation of these facts would be very interesting. It is perfectly plain that the volunteer is more virtuous or more select than the regular in the same service, but it seems equally plain that for some reason disease is at least seven times more likely to disable the soldier when derived from civilized sources. Possibly it may be partly explained that in the United States the soldier is the prey of the filthiest and most degraded women of their class, while in China or the Philippines a soldier, or any white man for that matter, is a superior being and has a greater freedom of choice.

* * *

Legal Restraint on Consumptives.—Popular sentiment is generally hard to awaken, and very likely when it has been aroused to swing to the opposite extreme and be unduly sensitive and unreasonable.

Nothing in medical literature better illustrates this than the popular attitude toward tuberculosis. It is only a short time since the disbelief in the communicability of tuberculosis was almost universal. Now the public, with its half knowledge, is firmly convinced that the disease is not only communicable but contagious, and we must expect to see much unnecessary hardship inflicted on this diseased and defenseless class.

Because of a declaration by the Surgeon-General of the Marine Hospital Service, that pulmonary tuberculosis was a dangerous, contagious disease, the Superintendent of Immigration has issued an order that in future all immigrants with this disease must be turned back from our ports, whether the aliens be first or second class passengers or steerage.

* * *

More recently the Board of Health of Liberty, Sullivan County, has enacted an ordinance providing that no building situated within the limits of the village shall be used as a sanitarium for the reception of patients afflicted with consumption. A first violation of the offense is punishable by a fine of \$50, and for a subsequent violation there is to be a penalty in the discretion of the board, not to exceed \$100.

This means that Liberty, which was rapidly becoming famous as a resort for consumptives, will not be allowed to receive them any more. Hotels for their reception, costing thousands of dollars, have been built, and in winter they used to flock there in great numbers. Every hotel in Liberty, except one, catered to their patronage.

The Loomis Sanitarium, located beyond the village limits, will not be directly affected, except that, as the ordinance states that no patients, "public or private," will be entertained within the limits, the patients will not be allowed to stop at any of the hotels for temporary rest or refreshment.

* * *

Hardships Inflicted on Consumptives.—The same popular fear which is steadily growing, will soon be strong enough to perhaps cause State legislation along the same lines, which, in the opinion of those best qualified to judge, are unnecessarily severe. The consumptive ceases to be dangerous to the community, and even to his own intimates, when his sputum is properly disposed of. The profession should anticipate such ignorant action and do what it can to prevent the infliction of unnecessary hardship.

There is a tendency among all sorts of people to look to the powers that be for help in the emergencies they cannot meet themselves, but as a rule it is only justified in extreme cases. The communal care of the sick, the insane and the criminal has always been and probably always will be far from perfect. The power that takes the helpless and infirm away from the natural protection of relatives will always at times be abused.

We have no doubt that the insane who are public charges are sometimes mishandled. The accommodations for the reception of patients with contagious diseases are notoriously imperfect in many places, and public officials do not hesitate to claim credit for money saved at the expense of helpless wards. The smallpox patients of a neighboring community were housed in tents during the recent cold weather, and probably if we were not searching for motes in the hospitals of others we could see an occasional beam in our own.

We should hesitate long before turning the consumptive over to the same tender care. The powers which can see revenue in sources as far apart as the prostitute and the milkman are not likely to be oblivious to the revenue of the sick who want to stay at home.

* * *

Medical Experts and Insanity.—A recent decision of the Supreme Court of Iowa (State vs. McCulloch, Oct., 1901, 87 N. W., 503) bearing directly on this point is of great interest.

The defendant, a boy of 18, a good scholar, bright and industrious, had three times previously been convicted of larceny of small articles, the one in the present case being a book valued at 75 cents. The evidence for the defense was all directed toward his mental condition, showing that three brothers or sisters were idiots, that he was addicted to self-abuse, and that he was subject to an inordinate temptation to possess himself of articles of small value and

of no use to him; in other words, that he was a kleptomaniac.

The Lower Court, in charging the jury which convicted, used this language regarding the medical testimony offered for the defendant: "In this connection I deem it proper to say that, while, perhaps, the profession of law has not fully kept pace with that of medicine on the subject of insanity, medical authorities have propounded doctrines respecting it as an excuse for criminal acts which a due regard for the safety of the community, and an enlightened public policy, must prevent juries from adopting as a part of the law of the land." The case was appealed, and the Supreme Court, in reversing the previous decision, devotes considerable time to the subject of the credibility of medical experts as contrasted with other experts. It clearly recognizes two principles to be observed in passing judgment on the insane: First, that there are forms of insanity which affect the will without affecting the individual's perception of the distinction between right and wrong. Second, that in questions as abstruse as that of determining the moral responsibility of the supposedly insane, both courts and juries must rely on the opinions of experts and render judgment according to the apparent weight of the expert testimony offered.

* * *

Physicians as Office-holders.—Two of Mayor Low's appointments for responsible positions under the new city government of New York are likely to be of great interest to physicians—namely, the heads of the departments of Street Cleaning and Health.

In the first we are interested, because the incumbent is a physician, and in the second because he is not a physician.

Dr. Woodbury is, from all reports, a very capable man, and his selection meets with the approval of all those who are best qualified to judge his fitness. If he succeeds, however, it will be because of his executive ability and not for any qualities inherent in a physician. If he fails his failure ought not to be used as an argument against the fitness of physicians for public office. The problem of clean streets is not a medical, but an engineering one.

* * *

On the other hand, we do not think the position of Commissioner of Health can be ideally filled except by a physician. Mayor Low has evidently given this phase of the question careful thought, for he says:

"It has been to me a matter of no little study to decide whether, under these circumstances, the Health Commissioner had better be a layman or a physician. After careful reflection I have determined that even under these conditions it is best that the Health Commissioner should be a layman. On the other hand, the disappearance of the medical members from the board as now constituted makes it highly im-

portant, as I conceive, that there shall be a certain reorganization of the department on its medical side.

"I have therefore arranged with Mr. Lederle that Dr. Herman J. Biggs, now at the head of the bacteriological laboratories of the Health Department, shall be placed in practical charge of all the medical side of the department, with the title of Medical Officer."

The Association.

New York County Association.—The December meeting was held at the Academy of Medicine on the evening of the 16th, and was attended by about one hundred and fifty members.

Dr. Frederick Holme Wiggin presented some pathological specimens, and the remainder of the evening was taken up by a symposium on tuberculosis.

It began with an exhibition of X-ray pictures of diseased lungs, illustrating a paper on the early diagnosis of pulmonary tuberculosis, which was read by Dr. J. Edward Stubbert, the physician at the Loomis Sanitarium. Dr. Stubbert expressed his belief that the X-ray furnished the best means of detecting the early invasion of the disease before consumption had reached the stage when its presence could be ascertained by microscopic examination of the sputum.

In his paper Dr. Stubbert advocated frankness by physicians in treatment of patients in the incipient stage of the disease when cures are possible. Too many physicians, he said, deceived patients, making them believe they had merely bronchitis, when there was evidence to the trained ear that the lungs were affected. Such patients, he said, should be informed of their real trouble, in order that they might cooperate in treatment for their recovery.

Dr. Irving S. Haynes gave a demonstration of the surgical anatomy of the lungs, after which a paper on "The Present Status of the Use of Tuberculin and Products Obtained Directly or Indirectly from the Tubercle Bacillus in Pulmonary Tuberculosis" was read by Dr. E. A. De Schweinitz, chief of the Biochemic Laboratory at Washington.

Dr. W. G. Le Boutillier read a paper on "Surgical Procedures for Pulmonary Tuberculosis" and was followed by Dr. Charles E. Quimby with a paper on the "Treatment of Pulmonary Tuberculosis."

The last three papers we present in full to our readers in this number.

At the executive session the following resolution was adopted unanimously:

WHEREAS, The following resolution has been received from the Medical Society of the County of New York:

"Resolved, That the president of the Medical Society of the County of New York appoint a committee of five, of which he shall be chairman, provided a similar committee be named by the New York County Medical Association, to confer with that body with reference to a union of the two organizations, and that this committee be requested to report to the Society at the stated meeting in January, 1902, or sooner, in order that the Society may, if desirable, make a recommendation to the Medical Society of the State of New York at its next annual meeting;" and,

WHEREAS, The subject of union of the medical profession in this State, as expressed in the foregoing resolution as presented by the Medical Society of the County of New York, is wholly a State question; and,

WHEREAS, The published charter and by-laws of the New York State Medical Association do not allow its county associations to act independently on State questions,

Be it resolved, That we heartily favor a union of the profession in one State medical body, and respectfully suggest that the Medical Society of the County of New York request the Medical Society of the State of New York to appoint a committee to consider this question.

And be it further resolved, That the New York County Medical Association request the New York State Medical Association to appoint a committee on conference in case the Medical Society of the State of New York shall appoint a similar committee.

The Executive Committee reported a plan for the defense of members of the New York County Association against suits for malpractice.

The plan was unanimously adopted, a provision being included that it should be continued only till the State Association should adopt similar measures.

* * *

January Meetings in the Fifth District.—Dutchess County Medical Association at Vassar Hospital, Poughkeepsie, on January 8, 1902, at 2 p. m. Irving D. LeRoy, President.

Kings County Medical Association, at 315 Washington street, Brooklyn, on January 14, 1902, at 8.15 p. m. Dr. Hubert Arrowsmith, President.

New York County Medical Association, at Academy of Medicine, 17 West 43d street, New York, on January 20, 1902, at 8.15 p. m. Dr. Parker Syms, President.

Orange County Medical Association, at Middletown, on January 15, 1902, at 2 p. m. Dr. M. C. Conner, President.

Rockland County Medical Association, at Nyack, on January 15, 1902, at 2 p. m. Dr. G. F. Blauvelt, President.

Westchester County Medical Association, at Parish House, White Plains, on January 23, 1902, at 2 p. m. Dr. N. J. Sands, President.

Correction in Treasurer's Report.—The treasurer desires to call special attention to a grave omission in the printing of his annual report as it appears on page 303 of the December number of the JOURNAL, and to make the records complete would ask each member of the association to write after the fourth line of the actual report the figures \$679. The complete line will then read: "Initiation fees and fines collected, \$679." Then, if the figures \$31.02, directly following in the column, be considered as shifted to the right sufficiently to realize that they are an essential part of the column of figures to be added, the whole amount of gross receipts as indicated will add up properly to the \$12,851.56. Another slight correction is to be made in the total expenses of the secretary's office. Such should read: \$2,411.48, as the items so add up. These omissions have been traced directly to carelessness in the printing office.

* * *

Orange County Association.—The regular monthly meeting was held at Middletown, N. Y., on Wednesday, December 18, 1901, with a good attendance. The meeting was called to order by Dr. M. C. Connor, president. In the absence of the secretary, Dr. C. I. Redfield, Dr. A. W. Preston, of Middletown, was elected secretary pro tem. The president introduced Dr. Ramon Guiteras, of New York, who presented a very interesting paper on "Gall Stones and Their Surgical Treatment." He presented in a very concise manner the etiology, diagnosis, symptoms and surgical treatment of gall stones, giving a complete résumé of the subject, excepting the medicinal measures, which, of course, could not be included in his paper. At the conclusion of the paper a spirited discussion ensued among the members present, especial part being taken by Drs. Conner, Douglas and Mills, and a vote of thanks was extended to Dr. Guiteras. An executive session followed, after which the association adjourned, to meet again on Wednesday, January 15, 1902, at which time the annual report will be read and officers elected for the coming year.

* * *

Erie County Medical Association.—The regular quarterly meeting of the Erie County Medical Association was held at the Buffalo Library Building, on December 9, 1901. Dr. A. E. Woehnert read a paper entitled "Clinical Reports of Ulcerative Endocarditis." He cited four cases and emphasized the value of the blood-count in diagnosing this condition from typhoid fever, which it at times so closely simulates.

Dr. Grover W. Wende illustrated with the stereopticon a number of special diseases affecting the skin.

ADDRESS READ AT THE SPECIAL MEETING OF THE FIFTH DISTRICT BRANCH.*

BY EMIL MAYER, M.D.,
New York,

President Fifth District Branch.

GENTLEMEN—In behalf of the New York State Medical Association, whose representative I have the honor to be, permit me to extend to you a most cordial and hearty welcome to this gathering. It is a pleasure to me to see so many of you present, and to those of you who have at no little sacrifice come here to attest your loyalty, I wish especially to extend my thanks. To the gentlemen on the program, whom we will hear, I desire to express the sentiments of my colleagues of the Committee on Program, that they are exceedingly grateful to them for their prompt and willing response.

It is but little more than a year ago that those of us who are interested in the future of the New York State Medical Association were in some trepidation and even anxiety. The reorganization scheme was then only beginning to be a practical thing; but the short space of one year has so shown the wisdom of these gentlemen in promoting the plan and scheme of this reorganization that they must indeed feel a great deal of pride in the success of their creation. The plan on the whole has been so very fair, so very liberal and has met with the approval of so many that it has been adopted as the foundation plan of the American Medical Association, and, as far as our own State is concerned, the great increase in membership, together with the fact that twenty-two new counties have been organized under this plan, shows its feasibility.

The plan, in brief, is the formation of a State association which shall be composed entirely of county associations. There is no State association *per se*, but there are a number of county associations, which, combined together, form the State association. Our own State, with sixty-odd counties, has been divided into five districts, known as district branches, each one of these branches having some twelve or thirteen counties under its jurisdiction, and this district, over which I have the honor to preside, is known as the fifth, or southern district, embracing all the counties south of and including Sullivan.

A few of the benefits derived from membership in the association may be mentioned, one of which is that every member of our association receives a copy of the association's monthly journal. This takes the place of the yearly volume of transactions, which latter, while pleasant works to refer to, are, I am afraid, hardly ever read. The journal aims to record all facts of interest to the medical profession, the papers read at its State, branch and county meetings, also original matter, and to be in touch with everything for which an honorable profession stands.

The directory which is issued to every member is a work of which we have every reason to

*Held at Newburgh, N. Y., Nov. 20, 1901.

be proud, and very few physicians in daily life can afford to be without it.

It is our aim to bring about the formation of new organizations in counties where none exist, and we hope ere long to have representation in every county in the State.

Being a part and parcel of one organization and the members of one county being interested in the progress of another, it is but natural that we take an interest in the work that is done in all. In regard to that work, I would mention first and foremost the scientific work. It has been the custom for presiding officers of county associations to apply to the president of the district branch for readers of papers at their meetings, and I am pleased to say that no county association has been more active than the one in Orange County, under the presidency of Dr. M. C. Connor. Within a year they have had talks on gynecology, surgery, laryngology, dermatology and general medicine. These meetings have been very well attended, and have, I am sure, assisted very much to increase the benefit of association.

The next point of interest I would mention, and an all-important one, is that we are desirous of being in touch with each other in order that we may present a united stand on the question of matters pertaining to the public health. One of the most important committees that we have, if not the most important, is the Committee on Legislation, and every bill relating to things medical undergoes most careful scrutiny. Knowing full well the unselfish interest that the practitioner takes in matters that relate to the etiology of diseases, especially those referable to unsanitary conditions, you can readily see how important it is that these should be relegated to a separate body, which would have the power, with the united profession back of it, to insist that reasonable care be exercised in placing our great State foremost among all others in ridding localities of unsanitary conditions. It may happen, indeed it has occurred, that individual physicians have attempted to abate nuisances and have themselves been voted a nuisance, and have actually been compelled to leave their community and seek other more congenial climes. This could not occur to a member of this association, as the matter would be referred to district officers, who, upon investigation, finding facts to be as stated, would in turn refer the matter to their Committees on Public Health and Legislation, and in very short order the entire machinery of a powerful organization composed of nearly two thousand physicians would be set in motion, and the removal of plague spots demanded and secured.

It is perhaps needless to state that from time to time the physician, in his attempts to serve suffering humanity, is cruelly and woefully misunderstood, and there are those who take advantage of the apparent helplessness of the medical man to present suits malicious in their nature, claiming that their attending physician had been guilty of malpractice. This has reached such an extent

that there are in existence various organizations for insuring physicians against such suits. It seems to the speaker, however, that these hardly meet the requirements. An insurance organization, rather than go to court, would pay a small sum to settle the case out of court, irrespective of its merits; and again, if the prosecuted physician should be insured in such a company it really would mean a guarantee of the payment of the claim in case the verdict was rendered against him, and might possibly work in the sense of really inciting such suits. It is the purpose of this organization in the near future to arrange for the protection of every one of its members against such suits from the standpoint of the physician. This standpoint is to contest every single suit to the bitter end, so that we might spend "millions for defense but not one cent for tribute." We take a determined stand against illegal practitioners and proceed against them.

Each member of this association has the privilege of attending the meetings of his county association, his district branch and the State meetings, in addition to which he may become, if he so desires, a member of that great organization, the American Medical Association. This body, composed to-day of twelve thousand physicians residing in every State in the Union, has been reorganized mainly on the plan of this State association, and holds its meetings annually in the various cities of the Union.

Its journal stands pre-eminent as being one of the best edited and best conducted journals in this country, and is sent without extra charge to each member.

The value of the organization of such numbers of medical men need hardly be mentioned to an audience like this.

These are but a few of the benefits to be derived from membership in our association. In our own State we have begun to have meetings of the district branches throughout the State, and have selected your city as the first. The success of this meeting will undoubtedly encourage other district branches, and will, I am sure, redound to the credit of the medical profession and the generous public who do us the honor to seek our counsel and our guidance.

To all of you, then, both members and guests, I beg to extend again a most hearty welcome, and now proceed to the scientific portion of our program.

Correspondence.

"BENEFITS OF THE ASSOCIATION."

BINGHAMTON, N. Y., Dec. 23, 1901.

Editor NEW YORK STATE JOURNAL:

Dear Sir—I feel a particular interest in the New York State Medical Association, and believe the plans and objects of the association to be of the greatest benefit to the profession of the State in the way of mutual aid and protection. Its affiliation with the American Medical Association, making all members eligible to that body, is an

advantage not derived through any other organization of this State. But a material advantage to be derived is found in the fraternal spirit existing in the association, by which one member may expect a personal favor at the hands of another. This is something that all know has not existed very generally in the medical profession heretofore.

By joining our association and attending the meetings as *regularly as possible* younger men will become acquainted with many, if not all, the men standing high in the profession; and I can assure new members from personal experience that their talents will be recognized and encouraged and many favors extended that they would not otherwise receive.

Some of the best men in the profession are devoting much time and expense gratis to the interest of the association, with the one object in view—that of uniting the profession into one grand body in order that they may act as a whole on questions of vital importance to the State or the profession in general. In legislative matters individual opinions carry but little weight, as compared to the voice of several thousands. It is surely a strange sentiment that holds a large part of the profession of New York State aloof from the American Medical Association.

AN ACTIVE MEMBER.

"TREATMENT OF PNEUMONIA."

OMAHA, Neb., Dec. 20, 1901.

Editor NEW YORK STATE JOURNAL:

Dear Sir—In your JOURNAL for December I have read with interest your reference to the treatment of pneumonia, as suggested by papers of Drs. Rochester and Dickinson, read before the Section of *Materia Medica* at the last meeting of the A. M. A. You express sorrow that so little mention was made of Dr. Smith's recommendation of carbonate of creosote. Referring to the Journal of the A. M. A., November 9th, you will see that I quite strongly supported Dr. Smith's treatment. I was greatly surprised after adjournment by several physicians asking me for particulars of this line of treatment, they evidently not having read Dr. Smith's strong article in the *New York Medical Record* over two years ago.

Yours very truly,

R. C. MOORE.

Book Reviews.

SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A Practical Exposition of the Methods Other than Drug-giving, Useful in the Prevention of Disease and in the Treatment of the Sick. Edited by Solomon Solis-Cohen, A.M., M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, Philadelphia. Vols. III. and IV., CLIMATOLOGY—HEALTH RESORTS—MINERAL SPRINGS. By F. Parkes Weber, M.A., M.D., F.R.C.P., and Guy Hinsdale, A.M., M.D. Illustrated with Maps. Philadelphia: P. Blakiston's Son & Co., 1901.

These two volumes probably contain more exact and varied information regarding the subjects of which they treat than any treatise yet presented to the medical profession. The effects of soil, temperature, dryness, altitude, proximity to the sea and other climatic features, with their respective advantages and disadvantages, and the physical, sanitary and social characteristics of the health resorts of the world are fully treated. Ocean voyages and the therapeutic effects of climate are studied in relation to special diseases, and the objects to be attained by climatic treatment.

As an indication of the completeness with which each division is treated, some of the subdivisions of the chapter on ocean climates and sea voyages may be cited. First are described voyages from England to the Canary Islands; to South America, etc.; slow steamers between the United States and Europe; New York to Norwegian and Baltic ports; to the West Indies and South America; to Madeira, the Azores, Mediterranean and Black

Sea ports; to Australia, South America, China and Japan; San Francisco to Tahiti; to Hawaii and the East; Alaska coasting trip, and indications and counter-indications for ocean voyages, etc. Names of steamship lines, length of trips and best time to go are given; in fact, everything but price-list. The descriptions of voyages and resorts, indeed, remind one forcibly of Baedeker's guide books.

Part III., devoted to the "General Management of Patients at Health Resorts," and to "Special Therapeutics," is especially valuable. Under the first head, for instance, considerable space is given to change, rest and recreation, exercise and mechanotherapeutics; diet, milk cures, grape cures; mineral waters, baths, and hydrotherapeutic treatment; sea bathing, clothing, medical supervision; sanatorium treatment, etc.; while in the second division—"Special Therapeutics"—the use of health resorts in cases of convalescence or debility; in disorders of metabolism; in diseases of the respiratory organs, circulatory system, digestive, urinary and nervous systems, and of the ears, eyes, skin, etc., is treated in much detail.

If succeeding volumes of this "System of Physiologic Therapeutics" are as valuable from every viewpoint as those already published it will occupy a distinctive place in medical literature. Every chapter of the one under discussion deserves careful study by the physician who would do the best by the patients entrusted to his care. The careful editing, everywhere evident, adds much to the reader's pleasure.

INTERNATIONAL CLINICS. A Quarterly of Clinical Lecture and Especially Prepared Articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and Other Topics of Interest to Students and Practitioners. Edited by Henry W. Cattell, A.M., M.D. VOL. III., Eleventh Series. Philadelphia: J. B. Lippincott Company, 1901.

Vol. III. of the present series of "International Clinics" fully upholds the standard set by the publishers in the preceding volumes. The papers are well written, carefully edited, and timely, and the diversity of the subjects treated makes the book especially valuable for the general medical practitioner.

The opening paper, on "Phototherapy After Finsen's Methods," by Valdemar Vie, Finsen's principal assistant, is of great interest, and the reader is apt to feel, after its perusal, that the ideal treatment of infectious exanthemata has at last been discovered and put within the reach of all. Finsen's Medical Light Institute, at Copenhagen, and his methods are described and illustrated in detail. He believes that if the chemical rays are excluded from concentrated sunlight or electric light, the remaining rays, when focused on the skin, exert marked therapeutic influence, and this theory he undoubtedly has proved to be correct. In the case of smallpox, especially, remarkable results have been obtained. Parasitic and local bacterial diseases of the skin are treated, on the other hand, by concentrated chemical rays. Six hundred cases of lupus vulgaris have been treated at the institute, and a majority of the patients cured. In sixteen cases of epithelioma of the skin treatment in three was ineffectual, five patients were benefited, but not cured, and eight were cured. It is impossible here to enter more fully into a description of Finsen's work and the results achieved. The paper by Dr. Vie deserves careful study by all who wish to keep abreast of the times in a knowledge of therapeutic methods.

"Gonorrhoea and Marriage," by Prof. Louis Jullien, of Paris, presents many old facts in a new and interesting form. Gynecologists would find their sphere of usefulness much curtailed if the good advice he gives regarding entrance into the marriage state were more carefully followed.

Reclus's paper, on "The Drawbacks of the Spinal Use of Cocaine and the Accidents Due to It," is a fitting companion to that by Doleris, on "Cocaine Analgesia," published in Vol. I. of this series. He points out that,

although Tuffier appears to think that lumbar puncture is devoid of danger the point has not yet been satisfactorily demonstrated, and that a heavy death-rate from the method has already occurred. He reports six deaths in a total of less than two thousand cases.

Other valuable papers are: "Remarks on the Treatment of Bleeders," by W. H. Battle, of London; "Exophthalmic Goitre," by Alexander James, of Edinburgh; "Some Acute Affections of the Gall-Bladder and Its Associated Ducts," by Howard Lilienthal, of New York; "Some Results of Microbic Infection in Urinary Disease," by Herbert T. Herring, of London; "Surgical Treatment of Appendicitis," by A. Routier, of Paris, and "The Clinical Laboratory in Private Practice and in the Physician's Office," by C. N. B. Camac, of New York.

Practice of Medicine.

The Treatment of Pneumonia.—We present the substance of a very practical address on this subject, delivered by Dr. Charles E. Nammack, before the Society of the Alumni of Bellevue Hospital at its last meeting.

MORTALITY OF PNEUMONIA.—In spite of recent methods of treatment, the mortality from pneumonia remains about the same in hospital practice, when a large number of cases extending over many years are considered. The hospitals of Boston, New York, Philadelphia and Baltimore have an average mortality of about 28 to 30 per cent. In private practice the results are much better, because better environment, nursing facilities, and better habits of life on the part of the patients usually prevail. Every case is a law unto itself and requires individual rules and management according to time, place, sex, age, temperament, previous health, habits, and degree of infection especially. Patients may be grouped into three classes: Those with infection so mild that they will get well no matter what you do for them; those with toxemia so overwhelming that they die in spite of what you do for them, and a midway class, in which the scale may be turned toward recovery by skilful, watchful therapy.

CAUSE OF DEATH.—The chief cause of death is degeneration of the myocardium. This is produced by toxemia or by exhaustion from mechanical obstruction. Our objects of treatment are to eliminate the poison and to assist the heart. The available avenues of elimination are the bowels and skin, since the lungs and probably the kidneys are seriously crippled by the disease. The best way to assist the heart is to hold the capillaries up to their work, through stimulation of the vasomotor nervous system.

CONTAGIOUSNESS.—The liability of pneumonia to spread to other members of the family, especially to grief-stricken relatives who act as nurses and watchers, must not be forgotten.

SPECIFIC TREATMENT.—As yet no specific for pneumonia has been found, notwithstanding the assertions of the Italian observers that serum

therapy is a specific, the same as Behring's anti-toxine serum in diphtheria. Careful observation in this country seems to show that the use of serum neither shortens the disease nor holds in check the pneumonic process. It is, however, probable that it prevents the development of a pneumococcus septicemia. Inasmuch as death in pneumonia may occur from toxemia enfeebling the heart and nervous system, or from deficient aeration of the blood, caused by the extent of lung involvement, or from a complicating diplococcus meningitis, or from other complications, it is evident that no specific can be found to meet every case.

VENESECTION is to be condemned, in the stage of hepatization, because from two to four pints of blood have already been consumed to supply the pneumonic exudate. But in cases complicated with uremia, with strong heart action and high arterial tension, venesection followed by saline infusion sometimes produces striking results.

Since a moderate degree of leucocytosis is of good prognostic import in pneumonia, remedies which increase the leucocyte count have been advocated. Pilocarpin, antifebrin and antipyrin have been suggested but, in the opinion of the essayist, are inefficient and dangerous.

TEMPERATURE of 104 degrees Fahrenheit in pneumonia requires no antipyretic measures, but is to be welcomed as indicating a good systemic reaction to the infection. Above 104 degrees Fahrenheit, cold compresses were preferred to the full tub bath which produced in some cases dangerous collapse. If associated with active delirium, an ice helmet is ordered and cautious doses of trional may be given.

PAIN.—For the relief of pain, cough and dyspnea in the stage of congestion, the reader recommended snug bandaging or strapping, with hot or cold applications as best subserves the patient's comfort, and Dover's powder if necessary. The free, even forced use of plenty of drinking water favors elimination of some of the poison through the kidneys and skin.

STRYCHNINE AND NITROGLYCERINE.—In the second stage, the best results will be obtained with strychnine and nitroglycerine. These drugs not only stimulate the heart but they steady the vasomotor nervous system, so that the peripheral vessels are kept braced up to their work, oxygenation and the other living functions of the capillaries are carried on, stagnation is prevented, and the heart is enabled to work steadily against a sufficient peripheral resistance. Without this resistance, the heart might be compared to a locomotive whose driving wheels rested on a slippery track, and whose mechanism was being racked and strained by ineffectual efforts to turn the wheels. Strychnine and nitroglycerine restore and maintain the capillary tonicity or "put sand on the track" and enable the heart to do its work.

ALCOHOL.—When these remedies fail to hold

the case, alcohol is added, not in mincing doses at long intervals, but generously and often. The elimination of alcohol is very rapid, therefore half-ounce doses every thirty minutes will do more than one-ounce doses every hour, and desperate cases may require twenty-four ounces or more in twenty-four hours. Alcohol in pneumonia has a triple use: It reduces temperature by increasing heat loss; it lessens heat-production; it supplies a fuel or food to be burned up in place of the tissues. Its one drawback is the tendency to promote relaxation of the capillaries, but this must be met by the conjoint administration of strychnine.

OXYGEN.—Regarding the use of oxygen in pneumonia, the reader could give no logical explanation of its undoubted help in tiding desperate cases over the crisis. Since recent observations seem to show that the pneumococci of Frankel do not thrive in pure oxygen, its use in an early stage would not only be justifiable, but would prevent that dread of its introduction later, in the minds of the patient and his friends, who are apt to regard it as a last resort.

ANTISEPTICS.—The recent advocacy of carbonate of creosote in pneumonia was thought to be worthy of a trial, even though we cannot hope to share the enthusiasm of the gentleman who believes that he can arrest at will, or allow to proceed, the subjective and objective symptoms of pneumonia by giving or withholding this drug.

DIGITALIS.—The use of digitalis in pneumonia is not favored, as its action was likened to making more steam in a locomotive at a disadvantage, without influencing the altered conditions of the work to be done. Besides, digitalis has its own disadvantages of slow action, frequent gastric disturbance, slow elimination, and dangerous cerebral symptoms when given in the large doses recommended by Petresco and others. Again, digitalis loses much of its regulating power over the heart in the presence of high fever.

SALT SOLUTION.—The question of infusion of decinormal salt solution was considered. In the author's opinion, this remedy was valuable in cases complicated by nephritis with threatening uremia, but only in robust patients and when preceded by venesection. The addition of any considerable quantity of liquid to the circulating fluids, without preliminary venesection, was thought to favor pulmonary œdema.

LOCAL TREATMENT of the chest walls is expected by the patient and his friends but, except for the relief of accompanying pleurisy, it has no influence over an underlying pneumonic exudate. It is sometimes difficult to overcome prejudice against open windows and abundant air in the sick chamber, yet it is of prime importance to secure plenty of fresh air. Thirty Louisiana negroes have been treated recently in open-air cabins, with calomel, Epsom salts and strychnine, and twenty-nine cases recovered.

Original Articles.

TUBERCULIN AND PRODUCTS OF THE TUBERCLE BACILLUS.

BY E. A. DE SCHWEINITZ, M.D.,

Chief of the Biochemic Laboratory, B. A. I., Washington, D. C.

“**O**LD” AND “NEW” TUBERCULIN.—It must be remembered that in using the word “tuberculin” I refer to the product which is obtained from the ordinary glycerine beef broth cultures of the tubercle bacillus, after they have been grown for a sufficient length of time and have been thoroughly sterilized. Tuberculin contains, therefore, in solution, not only the material of the culture media, but also the products of the growth of the germ, which have passed into solution during the development of the germs, and those products which are extracted from the germ cells in the preparation of the tuberculin. The so-called “new” tuberculin is a solution of those substances only which have been produced within the cells of the tubercle germs as they develop. In the course of the preparation of the old tuberculin, on account of the high temperature used, some of the germ products have undoubtedly been changed chemically, while in the case of T. R. (new tuberculin) the germs and the solution from them have not been heated to a sufficiently high temperature to cause any chemical change. So far as the use of these two solutions in curing tuberculosis is concerned, the one seems to have given as satisfactory or unsatisfactory results as the other. Since, however, the so-called “new” tuberculin has been obtainable it has practically replaced the other varieties in all tests that have been made upon man.

REACTION.—In a paper recently published by Otis, of Boston, which was read before the American Climatological Society, reports are given of a large number of cases tested with tuberculin in order to see if the results obtained by the use of this reagent are misleading. Otis says, in reviewing the case, that “it shakes one's confidence to use tuberculin in a case which is manifestly tuberculous and have the case fail to react.” It seems to me that there are probably some points which are overlooked in connection with the use of tuberculin in man, the explanation of which may be found in parallel cases with animals. For years the tuberculin used for testing tuberculous cattle in a number of the different States has been prepared in our laboratory, and as the correctness of the diagnosis can always be proven in case of an animal by a subsequent autopsy, if necessary, the results secured are certainly more conclusive than those which would be obtained from tests upon man, where the correct diagnosis could not be confirmed by subsequent autopsies. Out of some thousands of reacting cases the fraction of 1 per cent. of those which did not show the presence of tuberculosis in some form or other

upon autopsy is so small that it is not worth consideration, and even then there is good evidence for believing that if the examination of the animal killed had been still more thorough the disease would have been found present in an incipient form.

Now it is well known that in the case of the examination of cattle for tuberculosis those animals which are undoubtedly tuberculous, but show an irregular temperature, do not always respond to the tuberculin tests, and it seems to me that the same is probably true in the case of man. An apparent failure of a reaction in a known case of tuberculosis in man may be accounted for in this way. It should be mentioned here that the tuberculin uniformly used in this country and all the tuberculin manufactured in our laboratory in the years past and distributed for testing cattle has been made from the human tubercle bacillus, and not only has it been made from the human tubercle bacillus, but from one which, although originally very virulent, has lost its virulence in the course of continued cultivation on artificial media. The germ has lost its virulence, in fact, to such an extent that practically at the present time it is innocuous in large doses for guinea pigs. For purposes of comparison we have again had tested tuberculous cattle with tuberculin made from bovine cultures, and also recently with tuberculin made from cultures obtained from the horse, swine, dog and avian tuberculosis germs. No difference could be noted in the reaction obtained in tuberculous cattle with tuberculin made from the bovine germ and that with the tuberculin made from the human germ. The tuberculin from the swine and dog tubercle bacilli gave as characteristic reactions. The tuberculin from the horse tubercle cultures failed to cause reaction, while the tuberculin from the avian tubercle cultures caused a reaction, but not as marked as that secured from the other varieties. If we would draw any conclusions at all from these tests they would be that the tuberculin from the bovine, swine and dog tubercle bacilli give as characteristic reactions as the tuberculin obtained from the human germ; that the tuberculin obtained from the avian germ will also cause a reaction, although not quite so marked, while the tuberculin from the tubercle bacilli obtained from the horse gave no reaction. The tests, however, with the horse, swine, dog and avian tuberculin should be repeated on a large number of animals before fair conclusions can be drawn. These tuberculin reactions show a close relationship between the human, bovine and other germs.

In some recent tests upon man, in which the tuberculin made from the bovine tubercle bacilli was used, the reactions secured were very characteristic and as marked as those secured with human tuberculin.

The use of the extract of avian tubercle

bacilli or the germs themselves for the purpose of producing immunity to tuberculosis has been suggested and tried some years ago without, however, very satisfactory results. As recent public agitation in regard to the relation of the bovine tuberculosis germ to man has started considerable investigation, I have thought it worth while to begin some experiments in testing the relative value, if any, of the immunizing or curative properties of the extracts obtained respectively from the human, bovine, swine, horse, dog, avian and other tubercle bacilli. I have referred to it only because it should be properly considered in connection with the subject of tuberculin and its use.

PRESENT STATUS OF TUBERCULIN.—In general, at the present time, it seems to me conservative results show that we are warranted in using tuberculin very carefully for purposes of diagnosis, and as has been shown by Dr. Trudeau and others, in certain cases of tuberculosis tuberculin has apparently some beneficial effects. What satisfactory results, if any, can be obtained by the use of tuberculins prepared from other tubercle bacilli remains to be seen.

HUMAN AND BOVINE TUBERCULOSIS.—Perhaps it may not be out of place for me to refer here briefly to some other experiments which we are making in the study of the human and bovine tubercle bacilli. As it is well known that the bovine tuberculosis germs are much more virulent for various species of animals than the human germs, it would seem strange if the bovine germs should suddenly become less virulent when finding a lodging place in man, the highest animal. Of course, this virulence for man could be determined positively by inoculating a number of human beings directly with the bovine tubercle bacilli. As this is manifestly impracticable it occurred to me that possibly the animal that is considered man's first cousin or progenitor might be a suitable substitute. Accordingly, with the co-operation of Dr. Schroeder, the superintendent of the Veterinary Experiment Station of the Bureau of Animal Industry, I have inoculated monkeys with the human and bovine germs respectively. All of these monkeys were in a healthy condition; were tested in the first instance with tuberculin and their freedom from tuberculosis proved. We have used the baboon, the rhesus and the small monkey, commonly called "ringtail." The first experiments were made with the bovine germ alone upon the baboon and the ringtail monkey. The baboon died within about six weeks after the inoculation, showing the most generalized tuberculosis, all the organs of the body being practically filled with tubercles. The inoculation was made subcutaneously, a minute quantity of the germs being injected. The ringtail monkey succumbed to tuberculosis produced by the bovine germ about two weeks later than the baboon. Although the ringtail was a very much

smaller animal than the baboon, it showed apparently more resistance to the disease, which, however, would be naturally expected if there is an increased susceptibility, as the monkey approaches more nearly to man or vice versa. The baboon, of course, is more nearly like man than the ringtail monkey. Subsequently we inoculated baboons and a rhesus with human and bovine cultures respectively. The animals were kept in separate isolated cages. The rhesus that received the bovine culture is dead at the present writing, autopsy showing generalized tuberculosis. The baboon that received the bovine culture appears to be worse than the one which received the human culture. At any rate these preliminary experiments have shown that monkeys are more susceptible, apparently, to bovine germs than they are to the tubercle germs of human origin.

IMMUNITY AND ANTITOXINS.—The effects of the various products obtained from the tubercle bacilli with reference to the production of immunity have been but little studied and deserve more consideration. Although the chemical examination of the tubercle bacilli and their products has been made by the writer and Dorset, Auclair, Levene and others, the relation of the various substances isolated to the progress of the disease has not as yet been as carefully studied as their importance demands.

The production and use of the serums for treating tuberculosis on a plan similar to that adopted in the preparation and use of diphtheria antitoxin have been much discussed and tested during the past years. Personally, I can speak of it only with reference to the use of the material upon small tuberculous animals. As I have often said before, in some cases the disease is apparently arrested for a considerable time. In others so-called anti-tubercle serum appears to have no effect whatever. Dr. Stubbert has used a good deal of this material at the Loomis Sanitarium, in some cases with apparently good results, in others without any results. On a smaller scale others have had similar experiences with this material, and I feel that at the present time we are in a position to say that it sometimes appears to do good, sometimes not. Owing to the difficulty of drawing correct conclusions in the treatment of tuberculosis, except after a long time, it would appear that we can be justified in drawing positive conclusions only when more positive and satisfactory results are secured upon small experimental animals. Recently I have made some modifications of this serum which appeared to give, experimentally, encouragement, but as in many other investigations this apparent encouragement may be but a prelude to more discouragement. This much, I think, may be said: the work so far carried on has been productive of good results. It has shown us points which must be specially investigated, and if the profession will follow carefully the teachings and conclusions of past in-

vestigators it will be the better prepared to utilize intelligently the results which will necessarily follow the present wide study of the bacteriological chemical side of tuberculosis. We should not be discouraged if we are not able to work marvelous cures rapidly and immediately. It is not possible for one or two or several investigators to work out all the numerous points which must be considered in connection with the treatment of tuberculosis. Co-operation will result in securing methods of treating more satisfactorily that dread disease, to which artificial immunity may be experimentally produced and which many of the profession regard to-day as curable.

Bronchitis in Adults.—Abortive treatment should be given a trial at the very onset of the disease. A hot bath, followed by diaphoretics and saline aperients, not infrequently accomplishes this, particularly if combined with inhalations of steam containing sedative remedies. When there is much respiratory distress hot poultices give great relief, but they must be well made and frequently changed. Such treatment will be much more effectual if the patient be kept quietly in bed and on a milk diet.

Acute Stage.—The aim of the treatment at this stage is to reduce the turgescence of the mucous membrane by causing free secretion from it. In mild cases such a simple combination as the following is excellent:

℞ Tr. opii camph.
 Spts. ammon. aromat., aa. ʒij
 Ext. ipecac., fl. ℥xv
 Syr. pruni. virg., ad. ʒii
 M. Sig.: ʒi every 2 or 3 hours for adults.

In cases where an irritating cough is the chief symptom the following is often serviceable:

℞ Acid: hydrocyanici dil. ℥xx
 Potass. bromid. ʒi
 Tr. sanguinariae
 Syr. senegal, aa. ʒii
 Tr. opii camph. ʒiii
 Syr. tolutani, ad. ʒii
 M. Sig.: ʒi every 3 hours.

Inhalations of the steam from boiling water containing creolin or compound tincture of benzoin are also very useful in causing free secretion and lessening local irritation and congestion.

Chronic Bronchitis.—In this form the most useful remedies are iodine, terebene and creosote.

The following has been found very useful in the dry type of the disease without much expectoration:

℞ Potass. iodidi
 Ammon. carb., aa. ʒi
 Tr. camph. comp. ʒii
 Ext. glycerrhiz., fl. ʒii
 Aq., q. s., ad. ʒii

M. Sig.: Teaspoonful in water four times a day.

THE TREATMENT OF PULMONARY TUBERCULOSIS.

BY CHARLES E. QUIMBY, M.D.,
New York.

CLINICALLY, cases of pulmonary tuberculosis are divided in two classes: First, those who have the means and the inclination to do and to sacrifice anything or everything for the simple prolongation of life. In the treatment of this class of cases climate stands pre-eminent. The attitude of the medical profession in the application of climatic treatment to pulmonary tuberculosis is easily stated. Most physicians to whom these cases apply direct them to some nearby sanitarium, with the assurance that a few months' or a year's residence in that climate will enable them to return to their homes and usual avocations. When those same physicians find themselves affected with tuberculosis they immediately sell their household goods and transplant themselves and their domestic altars to Denver. Therein they do wisely. Further comment would be superfluous.

The second class includes those who either can not make a permanent change of residence, or prefer at least to make a preliminary fight here. As these are the only cases with whose treatment we are personally concerned, this paper will be limited to a consideration of "the possibilities in the treatment of pulmonary tuberculosis in New York City."

A review of the history of tuberculosis shows the rather peculiar fact that in our search for something to do we have neglected to consider just what can be done. Since we have no specific, the things which can be done in the treatment of pulmonary tuberculosis fall under two heads: First, the support and stimulation of the systemic defensive forces; and, second, the removal or minimizing of the offensive forces and conditions. I have elsewhere classified these forces in detail; it must now suffice to say that the first set includes all the processes of systemic nutrition and, on the mechanical side, the conditions of pulmonary circulation, while the second set covers the mechanical conditions developed in the lung by the pathic processes, together with the primary and secondary toxemias. It is only as we give attention to every component of these two sets of antagonistic forces that the treatment of tuberculosis can be considered complete, and he who follows such a line of treatment for a few years will find himself continuing it unmoved by the results in single cases.

THE SYSTEMIC DEFENSE — NUTRITION. — There has been no failure to recognize the necessity for high-grade tissue nutrition if a cure is to be obtained in pulmonary disease, yet an analysis of common therapeutic practice and the so-called "dietetic treatments" of phthisis shows that the question of general systemic nutrition receives very little consideration until that stage of the disease in

which it begins to give obvious signs of failure. This is all the more surprising in view of the universal admission that practically a cure of phthisis is to be expected only in its earlier stages. Moreover, these dietetic systems supply merely easy or artificial digestion, ignoring the fact that the gastric and intestinal changes are but a minor part of the nutritive processes, and do nothing to stimulate the secondary metabolism in the various organs. Working, therefore, upon this proposition that in phthisis therapeutic measures are curative only in the early stages, and that our hope of success lies in stimulation of potential function, not in substitution of an artificial for an extinct natural activity, it has been my rule for many years to give the most careful attention, at the very outset of the disease, to every detail and measure that can aid in raising both the primary and secondary nutritive processes to their highest limit. Of the factors conducing to this result diet stands first. The dietetic treatment of phthisis is not so much a question of specific elements as the manner of its application. It is only when the nutritive processes can be forced that feeding is in any sense curative.

To this end the diet should be as attractive and stimulating as possible, and varied not simply from day to day, but from meal to meal, with the dinner at least consisting of numerous courses and digestion stimulated by some form of alcohol and, if need be, aided by artificial means. In other words the patient should live high on a diet calculated to develop gout as rapidly as possible. When such a diet is no longer possible, the first limitations should be not in quantity or quality, but in restricting the food taken at any one meal to a single class of elements, the division being into animal and vegetable, with the continuance of both the digestive stimulant and adjuvant. I am fully convinced that the restriction of the food taken at any one meal to one or the other of these classes, even if they are used alternately at successive meals, is of far more value than the most carefully selected diet which includes articles from each. When the diet of phthisis cases can no longer be based upon the above rules they have passed from the eating to the feeding stage, for which recognized methods are eminently fitted. But while the patient is still eating; stimulation of the digestive, and still more, the assimilative function to the full appropriation of the food taken is of the utmost importance. This is attained more by persistence in the use of the means employed than by the specific power of any particular agent. Personally, I make use of three classes of functional stimulants: First, some combination of aromatic bitters, for which Warburg's Tincture is most frequently selected; second, one or more of the so-called alteratives, usually mercury and arsenic in such doses that they can be given persistently for months; and, third, a special

hepatic stimulant, for which I employ invariably some form of oil. However slight demonstrative evidence there may be of the efficacy of mercury and arsenic, clinical experience has led to the conviction that these two elements have a very powerful and valuable influence upon the process of retrograde and constructive metabolism, and I am perfectly sure that oil is a pure physiological hepatic stimulant. When the necessity for strong hepatic stimulation is shown by persistent constipation or intestinal fermentation castor oil is chosen, but as soon as these symptoms are relieved olive oil is substituted. To attain satisfactory results the oil, like the mercury and arsenic, must be given persistently three times a day, the oil two or three hours after meals and the others with the meals.

It can not be necessary to disclaim any belief that these three sets of agents exert any specific action upon the causative factors of phthisis, but we do unhesitatingly affirm that, by their use as above indicated, the activity of the systemic defensive forces is so augmented that their high therapeutic value is demonstrated beyond question.

CIRCULATION.—Our second class of defensive forces was included in the pulmonary circulation. We shall not enter into a differentiation of the cases admitting or forbidding increased activity of this circulation, beyond the general statement, based upon nearly twenty years' experience, that the universal fear of increasing pulmonary motion and circulation is without foundation, and that only the most acute infiltration and a temperature unduly high in proportion to the area involved are invariably contraindications to excitation of pulmonary circulation.

As our present purpose concerns neglected rather than accepted agents, we pass hydrotherapy with the simple expression of full appreciation of its influence upon both the pulmonary and systemic circulations. Of measures employed to influence pulmonary circulation through action upon the cutaneous vessels and spinal centers, preference should be given to such as act solely through sensory irritation without tissue injury. One of the largely neglected, and, to my mind, most valuable, of this class of agents is simple dry friction. To one who has never employed this measure the effect of a brisk polishing of the back from the neck to the buttocks in relieving the irritating cough of pulmonary congestion or a dry pleurisy and in quieting respiration will be no less pleasing than surprising.

There is but one measure acting directly to modify the pulmonary circulation which need engage our attention, for in pneumatic differentiation we have all that the physical limitations make possible. I shall not here discuss the physics of this measure or demonstrate anew its power to affect both the systemic and thoracic circulations, but confine myself to a statement

of conclusions drawn from results of its application. Even those who have insisted most strenuously upon the necessity for rest of a tubercular lung, and have gone so far as to strap the chest at the first appearance of a plastic pleurisy, can not deny that the reparative processes depend primarily upon the freedom and activity of the circulation, and that arrest of thoracic motion must, *per se*, tend to retard the circulation, and hence hinder the defensive activities. This fear of increased circulatory activity in the lung has been derived largely, and with apparent reason, from the effects of physical exercise upon tubercular processes. But these results are very different from those produced by mechanical measures. I have no hesitancy in stating that by pneumatic differentiation, as developed in the pneumatic cabinet, it is possible to control both the systemic and thoracic circulations, and to influence the attendant vascular tension, to the modification of tissue nutrition and cellular functional activity, in such manner and to such degree as render that instrument our most potent therapeutic agent, aside from climate, for the arrest of pulmonary disease, and superior to climate or anything else for the removal of certain pathic conditions. The freedom and publicity with which this measure has been condemned justify me in saying that such condemnation is based upon ignorance of the involved physics, of the proper methods of application, and of the results attained. This power of pneumatic differentiation to control pulmonary circulation, although its dominant factor of value, is still entirely unappreciated, save by a few who have employed the cabinet. Yet that power has long since ceased to be a matter of opinion and been one of continuous demonstration, becoming unassailable proof in the arrest of pulmonary hemorrhage. Many "eminent authorities" have declared that there is great danger of producing pulmonary hemorrhage in the use of the pneumatic cabinet. Nevertheless the fact remains that we have to-day no measure which can for a moment be compared with that instrument for the arrest of existing and the prevention of recurrent pulmonary hemorrhages. My last case was arrested within five minutes, the patient coughing but three times after entering the cabinet. For stimulation of the circulation in inflamed pleuritic areas, with the relief of cough and pain, and absorption of the exudate to the restoration of function, the cabinet is also without a rival. Pleurisy is the one condition of all others that has been supposed to contraindicate motion; yet I do not believe any one can witness in even a single case the relief of cough and pain and removal of the physical signs so constantly gained by pneumatic differentiation in cases where rest and strapping had been employed in vain, without being convinced that motion may be so applied in pulmonary disease as to produce re-

sults not otherwise attainable. The effects upon local nutrition and tissue repair of the circulatory modifications produced by pneumatic treatment are, of course, not subjects of absolute demonstration. Yet certainly no one can doubt, or would deny, that increased blood flow under a lowered vascular tension must act favorably upon the physiological processes, and hence retard pathic activities, whether acutely inflammatory or degenerative in character. Unquestionable proof that such modification of pulmonary circulation may be obtained by pneumatic differentiation is at hand in sphygmographic tracings from cases of valvular disease treated by this method, to say nothing of the evidence from clinical results.

From this brief consideration of only the two most important terms of the systemic defense we turn to

THE ANTAGONISTIC FORCES.—Those which are found in the lung are the mechanical and toxic. The latter, since the primary tubercle toxin is beyond our control, are practically the secondary infections which take place in the retained exudates and secretions, and being thus directly dependent upon the mechanical conditions the two may be considered together.

MECHANICAL FORCES.—The utter disregard of mechanical conditions in the lung as potent destructive forces in phthisis is, to my mind, one of the most remarkable manifestations of modern medical thought. Not only is there an entire absence from recognized methods of treatment of any measures directed to the removal of these conditions, but their development is even favored by those rules of life which are formulated under the fear of exciting undue pulmonary activity. Nevertheless it is perfectly possible to remove retained secretions, open up collapsed and obstructed tubes and alveoli, absorb inflammatory exudates, and loosen or absorb pleuritic thickenings and adhesions by mechanical means; and such procedure is one of the most potent and successful measures for the arrest of tubercular developments in the lungs. Moreover, similar results can not be obtained by climatic treatment alone or by any method of respiratory exercises. When a patient has his disease arrested under mechanical treatment it is with a clear and open lung, while under climatic treatment the opposite is often the case if not the rule.

Some years since it was my fortune to have presented for examination a prize case of "cured phthisis" at one of the most favored climatic resorts. Special attention was called to the absence of rales in proof of the cure, although the affected area still gave marked dullness and harsh respiration. Permission was asked to place the patient in the cabinet, one being owned by the institution, but not in use. This was granted, and with less than ten minutes' treatment abundant large and small rales were developed all through the affected area,

showing plainly that the condition was one of simple quiescence, with the lung still full of exudate and retained secretions. No treatment of pulmonary tuberculosis is rational or complete which ignores the destructive force of these mechanical conditions.

TOXIC FORCES.—Passing now to the toxic forces, two possible lines of attack are available: directly through the bronchi and by the circulation. As to how far those antiseptic drugs which are excreted in part by the lung affect local toxic conditions I confess myself in doubt. Nevertheless the testimony in their favor seems to prove that they have a certain value, which, I believe, is better obtained by persistent use of moderate doses than by pressing these drugs to the limit of toleration.

Direct action upon the pulmonary toxins implies the use of antiseptic inhalations. The rhythmical rise and fall in the accorded value of pulmonary inhalations is certainly not the result of scientific and logical investigation of their action. The extravagant claims which at times have been made and the vaunting of a special form of inhaler as the agent of salvation are, of course, the vaporings of blind superstition. Their unqualified condemnation, equally unreasonable, is probably due to disgust at their failure to prove specifics, as too often it has been dreamed they might. Antiseptic inhalations will not arrest, but they do diminish pulmonary infection, and one who is willing to accept and be thankful for what they can do will find them very valuable adjuvants in treatment, if rationally employed. The great danger in their use is in attempting to do too much. The agent chosen should be as little irritant as possible. For many years now I have used nothing but alcohol, formalin and ozone, with various balsams for flavoring. Whatever the antiseptic, it should be given by cold vaporization, not with heat or in vapor, and so diluted that its use may be continued for hours at a time every day. Cloths wet with formalin and hung in the sleeping room accomplish this result most satisfactorily. I well know how hard it is to continue the use of any agent which frequently fails to produce demonstrable effects, and such are antiseptic inhalations, yet he who persists in their use for a considerable time will, I believe, be convinced that his results are better than without them. There remain only the secondary or intestinal toxemias. While these conditions, so far as they relate to the small intestine, are sufficiently controlled by the measures directed to the stimulation of nutrition, there is very constantly a sluggishness in the colon which results in a partial retention and a very decided toxic absorption. This is a condition which is easily and too frequently overlooked, but which has appeared to me of sufficient importance to justify regular flushings of the colon with mildly antiseptic solutions in every case of tuberculosis. In very many cases irregular exacerbations of

fever and pulmonary disturbances will be found to depend solely on infection from the colon. It is clearly recognized that this paper contains only the barest outline of the subject and offers nothing either new or startling. Nevertheless it indicates a plan of treatment which, for the past ten years, has given, I believe, quite as good results in the treatment of pulmonary tuberculosis right here in New York as are claimed for the Eastern climatic resorts.

SURGICAL PROCEDURES FOR PULMONARY TUBERCULOSIS.

BY WILLIAM G. LE BOUTILLIER, M.D.,
New York,

Surgeon to the J. Hood Wright Memorial Hospital.

RESULTS OF SURGERY.—The bright hopes once entertained by some enthusiasts that surgery might offer a speedy and sure operative cure for tuberculous affections of the lungs and perhaps revolutionize their treatment have thus far failed of fulfilment. Up to the present time results akin to those achieved in abdominal surgery have not been obtained, so that in the treatment of pulmonary disease medical methods are still in almost undisputed possession of the field.

As a result of operations undertaken for the cure of tuberculous affections of the lungs, surgery can point to a long line of lamentable failures, relieved by only a few satisfactory results. But surgery has something of value to offer for the palliation at least of some sequelæ or complications of pulmonary tuberculosis. Certain definite and satisfactory results can be confidently expected in tuberculous empyema, and pleurisy, and osteitis of the ribs, pyopneumothorax and pneumothorax, and in selected cases of tuberculous cavities if submitted to appropriate surgical intervention. The field is not a very large one, but the result to be expected in any case is fairly certain and the risk to the patient not excessive.

The great obstacles to be surmounted in the surgery of the lung are operative and diagnostic. Shock and hemorrhage, collapse of the lung and infection of the wound or pleura are met or prevented by well-established methods. But uncertainty still remains as to the exact location and extent of a lesion on which operation may be proposed; as to the healthy or diseased condition of the rest of the affected lung and of the opposite lung; as to whether a lesion is single or multiple, and as to the presence or absence of pleuritic adhesions at the site of the lesion. Unless adhesions are present few operations on the lung can safely be undertaken, and accordingly much ingenuity has been applied to perfecting methods to determine if they exist, or to produce them.

As to the details of any of the surgical operations upon the lung I shall only recall to mind that three steps are differentiated in them: First, thoracotomy, the incision of the chest

wall; second, pleurotomy, the incision of the pleura, and third, the attack upon the lung itself, which may be either an incision (pneumonotomy) or the removal of more or less of the lung (pneumonectomy). The thoracotomy may be a very simple affair—an incision through an intercostal space, or through the periosteum—when a portion of rib is removed; or it may be an extensive operation, when the methods of Estländer or Schede are employed, or an osteoplastic flap is raised and replaced at the conclusion of the intrathoracic portion of the operation.

OBJECTS.—Surgical procedures for pulmonary tuberculosis have endeavored to accomplish one or more of the following objects:

1. To extirpate the tuberculous focus in the lung, or portions of the walls of cavities that were ulcerating or necrotic, or the seat of vascular change.
2. To treat local disease by drugs.
3. To remove septic products.
4. To give mechanical rest to the lungs.
5. To permit cicatricial contraction to take place.

The methods by which the attainment of these results has been sought have been:

1. Excision of tuberculous foci.
2. Incision of tuberculous foci and introduction of drugs.
3. Injection of drugs.
4. Aspiration of cavities, combined with the introduction of drugs.
5. Incision of cavities, with drainage, or local application of drugs, or cauterization of their walls.
6. Immobilization of adherent lungs without or with a thoracotomy, to enable the thoracic wall to collapse, as in chronic empyemas.
7. Intrapleural injections of nitrogen.

Injections of drugs into tuberculous pulmonary foci have been practically abandoned. Iodine and sodium iodate, used by W. Koch and König, did produce considerable hyperplasia, followed by shrinkage. It is useless to mention the very long list of drugs that have been employed for this purpose.

Recently very considerable improvement is reported by Wills in two cases, where was introduced iodoform into a tuberculous focus through an incision. There was no cavity, and the nature of the disease had been determined by microscopic examination of a small portion of the indurated mass.

The successful cases of Tuffier and Lawson have not found many to follow their bold and successful lead. Tuffier operated ten years ago on a young man 19 years old. He opened the right thorax in the second space without excising a rib, separated the parietal pleura from the thorax, brought the apex of the lung out of the wound through a slit in the pleura and removed a portion of it that contained a tuberculous mass. He was able to close the wound in

the pleura without allowing pneumothorax to occur, and showed the case at a society meeting twelve days later. After more than four years the patient remained perfectly well. Lawson's case, operated on in 1893, was of disease of the right apex, a nodule the size of a hazel-nut being removed. Death occurred about nine months after the operation and was apparently due to hemorrhage from a gastric ulcer.

INTRODUCTION OF NITROGEN.—As a curative measure the method of putting the lung at rest by introducing nitrogen gas into the pleura is still on trial (Murphy, Forlanini). It is claimed for it that it is free from danger. It is easily possible to regulate the amount of gas introduced, so that collapse of the lung does not occur. Subcutaneous emphysema can be readily prevented by a pad applied over the site of injection, and by using simple precautions infection of the pleural cavity does not occur. Favorable results are reported, but I will not go into any details, leaving the matter for one of the speakers who is to take part in the discussion.

This sums up the proffer of surgery for the cure of pulmonary tuberculosis. Fit cases for extirpation are only those in which there is a single small lesion. As such early cases do not pursue an unsatisfactory course under good hygienic and medical treatment, it is easy to understand the lack of enthusiasm in urging operative measures. No more can be expected from an operation than can result from very much simpler methods which it is rational to prefer.

SURGERY FOR COMPLICATIONS.—On the other hand, for certain complications, and particularly where there is pyogenic infection of the pleura or of a cavity, an early resort to surgery should receive greater consideration than it does at present. Pulmonary hemorrhage and pneumothorax, as well as tuberculous empyema, may be distinctly benefited in some cases. A few recorded cases suggest that at times a curative action similar to that seen in operations on tuberculous peritonitis may also follow operations in the presence of tuberculous pleurisy that is not septic.

THE TREATMENT OF CAVITIES by aspiration and injection has been found inefficient and unsatisfactory. There is a good deal of disagreement about incisions into cavities. The bad results or unsatisfactory ones appear to be due to making too small openings into them or treating them with drugs after incision. In selected cases satisfactory results follow incisions into cavities where these are made large enough to permit the removal of necrotic fragments and the cauterization of their walls and their subsequent complete drainage. The introduction of medication into cavities has received pretty general condemnation. But when the opening is sufficiently free, absorption of septic products ceases and cough and fever promptly disappear or are very much diminished. Even in the more

favorable of these cases obliteration of the cavity is not often obtained, and here it is suggested that the lung be enabled to collapse by freeing it from its adhesions to the chest wall, or by more or less extensive removal of the thoracic cage, as in chronic empyema.

The cases suitable for incision and drainage are particularly those in which there is a single moderate-sized cavity, with little other pulmonary involvement, in an individual whose resistance and general health are good. It is really a question of draining a septic focus. When a patient appears to halt in his progress toward recovery on account of the absorption of septic products from such a cavity, the question of operating upon it should certainly receive careful consideration.

There are strong opponents to the incision of such cavities, who recommend that a thoracotomy, allowing the cavity to contract, be done preferably. Still in some hands good results have been obtained, and there are recorded one perfect and undisputed cure, and one case that "recovered completely" and died five years later of acute tuberculosis.

In these cases of cavities the nitrogen method should be given a trial, unless pleuritic adhesions are present in such quantity as to prevent its efficient action.

In the treatment of hemoptysis very gratifying results are claimed for the injections with nitrogen gas.

TREATMENT OF EMPYEMA.—In all cases of tuberculous empyema surgical intervention should be resorted to early. When empyema is not due to infection with the pneumococcus an early incision of the pleura will conduce to the best possible results. The empyema is sometimes due to a rupture of a suppurating focus of the lung into the pleura, a condition that cannot be certainly stated without operation. When pneumothorax distends the pleura it should not remain unrelieved. The intrapleural pressure may be diminished by puncture with a trocar and imminent danger of death removed, or the thorax may be opened and an attempt made to close the opening in the lung, or the lung may be sutured to the chest wall and its collapse prevented. When suppuration develops in a pneumothorax an operation should always be done.

For Maryland Consumptives.—The State Board of Health will ask the Legislature for aid in establishing a system of sanitariums, to be located in various suitable parts of the State.

The Legislature will be asked first to provide for a commission to study tuberculosis in Maryland. The work of this commission will not involve the treatment of the disease, but its distribution and extent and its present cost to the State. The proposed plan, if adopted, will prove of inestimable advantage, not only in localizing the disease and lessening the number of the foci of infection, but financially.

COMMENTS ON SOME NEW SURGICAL METHODS.*

BY JOHN A. WYETH, M.D.,
New York,

Professor of Surgery at the New York Polyclinic.

WITHIN the current year the production of a more or less complete anesthesia of the lower half of the body, and, in some instances, of all that portion of the body below the level of the nipples, by the injection of a given quantity of hydrochlorate of cocaine into the subarachnoid space of the spinal cord, has attracted widespread attention, and the method is quite extensively practiced by the profession in the United States.

We are chiefly indebted for this innovation to Dr. August Bier, of Kiel, Germany, who, in the *Deutsche Zeitschrift für Chirurgie*, 1899, page 361, has clearly demonstrated the utility of the method, and practically brought it to the attention of the profession. Credit has been given to our countryman, Dr. J. Leonard Corning, of New York City, for the discovery of this method of employing cocaine as a general anæsthetic, but a careful perusal of the report of Dr. Corning's cases in the *New York Medical Journal* for October 31st, 1885, page 483, made it evident that this investigator did not employ the method of Bier, nor did he in any way reach such important results.

He says: "As the introduction of a hypodermic needle beneath the membranes of the medulla spinalis is not practicable without removal of the arches of the vertebræ (on account of the danger of wounding the cord) I decided to inject the anæsthetic between the spinous processes of the lower dorsal vertebræ. I was led to resort to this expedient from a knowledge of the fact that in the human subject numerous small veins (*venæ spinosæ*) run down between the spinous processes of the vertebræ, and, entering the spinal canal, join the more considerable vessels of the plexus spinalis interna. From these theoretical considerations, I reasoned that it was highly probable that, if the anæsthetic was placed between the spinous processes of the vertebræ, it—the anæsthetic—would be rapidly absorbed by the minute ramifications of the veins referred to, and being transferred by the blood to the substance of the cord, would give rise to anesthesia of the sensory, and perhaps of the motor tracts."

In a single experiment upon the human subject he injected thirty minims of a 3 per cent. solution into the space between the spinous processes of the eleventh and twelfth dorsal vertebræ. After a lapse of six or eight minutes, as there was no evidence of modified sensibility, thirty minims additional were injected in the same spot and in the same manner. In fifteen or twenty minutes a recognizable impairment of sensibility, practically limited to the lower extremities and the pelvic regions, was noticeable,

as determined by application of the electric brush and puncture with the needle.

Now, there can be little doubt that at a certain stage of this last injection the point of the needle, without the intention of the operator, penetrated into and perhaps through the dura, into the subarachnoid space, and a small portion of the solution was directly diffused in the cephalo-arachidian fluid. It would be very difficult in any other way to explain even the slight symptoms of anesthesia which supervened. The diminution of sensation could not have been caused, as the experimenter supposed, by bringing the fluid injected into the veins in contact with the tissues of the cord, since the cocaine solution absorbed by the *venæ spinosæ* or the plexus spinalis interna would have been carried away from and not into the spinal cord. Had the needle penetrated an arteriole or had these larger vessels absorbed the cocaine solution thrown in contact with their walls, a very minute quantity of cocaine might have been carried into this organ, but this is extremely improbable.

It would be very gratifying to our pride to claim this as a discovery by an American, but it is evidently unfair not to give full credit to Dr. August Bier.

In July of 1900 Kreis, also of Germany, reported in the *Centralblatt für Chirurgie*, a number of cases in which medullary narcosis was produced during labor with the result of deadening the pain without diminishing the muscular contractions of this trying ordeal.

Medullary narcosis in the United States received, however, its chief impetus from the work of Tuffier, of Paris, whose operations were witnessed by a large number of professional men from this country sojourning in Paris during the Exposition of 1900.

In all innovations in science there is apt to be a period of excessive enthusiasm and over-performance, followed by the inevitable swinging of the pendulum to the other extreme, in which the method is unjustly decried and its real usefulness unappreciated.

In my opinion, the procedure will find a permanent place in surgical practice. The cases which have ended fatally from cocaine poisoning will serve as a caution against its indiscriminate employment, and will emphasize not only the importance of making a proper selection of cases, but of commencing with the minimum quantity—about one-fifth of a grain. It is especially adapted to patients with certain forms of nephritis in which chloroform or ether narcosis would be more apt to produce suppression of urine.

I have obtained perfectly satisfactory narcosis in two instances in which quite extensive operations were done, one for pyelo-nephrosis, and another, suprapubic cystotomy for tumor.

To one of these patients I had, several years previously, administered chloroform in performing a suprapubic cystotomy for the removal of a number of calculi and a tumor of the prostate. This

* President's address read at the eighteenth annual meeting of the New York State Medical Association.

operation was followed by suppression of urine, which came very near ending fatally. Under a medullary narcosis an extensive dissection was made for the relief of a pyelo-nephrosis which was successfully performed, and not a single unpleasant symptom supervened.

I should not hesitate to employ the method in persons in whom no contra-indications exist, and who have a strong prejudice against ether or chloroform narcosis. Many obstetricians will, no doubt, justify its employment in childbirth, although such is the safety of chloroform, as demonstrated in the hands of modern obstetricians, that it is not likely that medullary narcosis will materially supplant the former.

As for the operative technique, I would recommend practically that given by Dr. William R. Stone, of this city, who has had a very large experience in this form of narcosis. He recommends an aseptic aqueous solution of one-fifth grain of hydrochlorate of cocaine to be used at one injection. The spinous process of the fourth lumbar vertebra is accurately located, and the point of the needle introduced just outside of the spine, between the fourth and fifth lumbar vertebrae, at an angle of about thirty degrees, from without inward, and from below upward. The slanting direction of the needle enables one to get under the overlapping lamina of the fourth, passing over that of the fifth vertebra. The patient should be in an exaggerated bicycle posture, or in the Syms position, with the back bent forward as far as possible. In my own practice I sterilize the skin for two or three inches around the point of puncture, and cocainize the integument and the deeper tissues entirely down to the lamina with 2 per cent. or 4 per cent. solution. The skin is punctured with a bistoury, so that the needle may be carried directly into the muscular substance, avoiding even the small danger of carrying the staphylococcus epidermidis albus into the subarachnoid space. When the needle approaches the spinal column it should be pushed in very slowly, and if the point impinges against the bone, a slight depression of the handle will carry it over the edge of the lamina. The escape of the clear cephalo-arachnoidian fluid from the needle demonstrates that the point is within the subarachnoid space. Dr. Stone advises that as many minims of fluid be allowed to escape as it is intended to throw in—usually about ten drops. The cocaine is Pasteurized by placing it in water in a test tube, which tube is placed in boiling water for two minutes. This degree of heat does not destroy the anesthetic property of the drug.

Should there be any contra-indications to puncture of the subarachnoid space in the lumbar region, an equally efficient narcosis can be obtained between the dorsal laminae. In one of my patients Pott's disease had existed in early life, and there was complete ossification between all of the laminae from the last dorsal down to the sacrum, rendering it impossible to reach the subarachnoid space in this region. I was compelled

to carry the needle between the eleventh and twelfth dorsal, and with no unpleasant symptoms secured a narcosis which did not differ from that effected by the injection lower down.

THE OBLITERATION OF BLOOD VESSELS BY INJECTION.

For a number of years I have observed the encouraging results which have followed the work of Professor R. H. M. Dawbarn in his operation of excision of the external carotid arteries and their branches for the purpose of cutting off the blood supply to inoperable tumors situated in the naso-pharynx. This operation, no matter how expert the surgeon, is necessarily tedious and prolonged. It occurred to me that the starvation of these neoplasms might be obtained by injecting into the main trunk of the external carotid some liquid substance which would either produce an obliterating endarteritis by irritation, or would mechanically plug the large arteries and arterioles leading toward the naso-pharynx.

In January of 1901 I made some experiments upon dogs, using two animals. In one of these I injected pure alcohol into the iliac artery. Into another heated liquid paraffine, which was coagulable at 108 Fahrenheit, was injected. In the arteries of another animal I used boiling water, taking a metal syringe (especially adapted for this purpose) out of a small caldron, quickly filling the cylinder and immediately injecting the contents into the vessels. The dogs were killed ten days after these injections, and studied with the following results:

The artery in which the pure alcohol had been injected was still pervious, and there did not seem to be any marked change in the tissues of that extremity. The vessel which was injected with paraffine was occluded down to vessels of about one-twentieth of an inch in diameter, but this substance did not seem to flow into the smaller vessels, and while the muscular tissue was pale and had evidently undergone some degeneration, due to anæmia, there was no gangrene in this extremity. In both the arteries in which boiling water was injected there was complete arrest of the circulation and gangrene ensued.

I have as yet had no opportunity to use either of these agents in the effort to shut off partially or completely the vascular supply to inoperable tumors of the naso-pharynx. The objection may be raised that vessels not contributing to the blood supply of these neoplasms will also be involved in the process of obliteration, as, for instance, the temporal and the inferior dental. The meningeal branch would also be occluded, and a certain amount of meningeal irritation or inflammation might result; but these risks would, in my opinion, be justifiable in view of the desperate condition to be dealt with. The experiments here reported are too meager to be of much scientific value, but they demonstrate that an artery, down to its terminal branches, may be obliterated by the injection of boiling water into the lumen of the vessel.

In July of this year I treated a large angioma of the face (cavernous naevus) in a young woman about twenty-five years of age. It extended over the lower half of the right buccal wall and cheek, along the lower lip as far as the left commissure of the mouth, and over the chin, which protruded three or four inches below its ordinary level. The overlying integument was not discolored, but within the lip there were visible masses of large and tortuous veins, which raised the mucous membrane to the level of the teeth on the right side. The whole mass was elastic on compression, but pulsation could not be felt. Two years prior to this date I had attempted to remove this neoplasm by operation, but after a careful exploratory puncture, such profuse hemorrhage occurred that the attempt was abandoned.

After witnessing the results of the injections of boiling water into the vessels of the dog I determined to try this method in this case. Under ether narcosis, by employing a metal syringe holding four drachms, boiling water was injected into the upper portion of this mass, about two square inches being thus treated. A large-sized, ordinary hypodermic needle was screwed onto the cylinder of the metal syringe, the solid metal piston of which was removed and placed also in the caldron. The cylinder was rapidly filled with boiling water, the piston placed in position, the needle pushed through the skin and well into the vascular growth. About one drachm of boiling water was forced out, the needle withdrawn for one-half inch, and this quantity again injected. In this first operation three syringefuls (12 drachms) were employed. Care was taken to exercise compression around the margins of the injected area for fear that a clot might be dislodged into some efferent vein. No noticeable reaction followed this experiment. The skin was not burned nor even turned red by the treatment, and there was very little pain following the recovery of the patient from the narcosis. Within forty-eight hours there was noticeable solidification in the part which had been injected, and it immediately began to shrink. Two weeks after the first operation the patient was again etherized and the whole mass subjected to the same treatment. The same satisfactory result followed the more extensive operation. No unpleasant reaction occurred, the pain was not severe, the skin was not burned, no sloughing occurred at any point, and atrophy of all the injected area supervened. The patient returned to her home in Virginia, and three months later writes that the growth has diminished in size steadily since the last operation, and at this period is practically cured.

It would seem that use of boiling water may have a still further application in surgery. It has already been used successfully in the treatment of incomplete external fistula of the peri-rectal region. It would in all probability do more to render aseptic an abscess cavity than any other agent we could employ. I should not hesitate to use it in the treatment of certain varieties of angioma,

and it is my intention to try the method of direct injection into inoperable sarcomata.

PROSTATECTOMY.

Recent developments in the operative surgery of the prostate have done much to remove the opprobrium from the surgical art which the long and deplorably unsatisfactory treatment of obstructive prostatic hypertrophy justified. Patients are now no longer condemned to the years of annoyance or suffering and the inevitable lesions of the bladder, ureters and kidneys, which the former catheter life implied, since in probably all the cases in which relief by catheterization is not satisfactory proper operative interference may, if not entirely efficacious, carry with it very great improvement.

The road to this more satisfactory condition of prostatic surgery has been slow and difficult and marked by many mortifying failures. I need but call your attention to the simultaneous deligation of both internal iliac arteries, which was advocated by Bier, and practiced even in this country in a number of instances; or to the mutilating and comparatively inefficacious operation of castration which was introduced by White; or the vasectomy as advocated by Wood. The operation of Harrison, which consisted in opening into the membranous portion of the urethra, and then through this perineal wound, scarifying or incising the floor of the urethra in the vesical as well as prostatic portion, was scarcely less a scientific and justifiable procedure than the deplorable operation of Bottini, which consisted in the electrical cauterization and partial destruction of this organ by means of a specially-devised apparatus. Then followed the more rational procedure of suprapubic cystotomy, and the removal of the projecting middle or lateral lobes, which, as modified by Belfield, by a V-shaped incision in order the more thoroughly to remove the projecting bar, and in some instances a very considerable mass of the hypertrophied prostate, gave a certain degree of relief.

The first real advance, however, in prostatic surgery was the operation which consisted in the exposure of the prostate by a perineal incision, with the piecemeal removal by the scissors, or by the enucleation of the hypertrophied portions of that organ. This naturally led to the final radical procedure for which we are indebted to Nicoll and Samuel Alexander, Eugene Fuller, Parker Syms and other progressive operators.

Prostatectomy may be performed by the suprapubic and intra-vesical route alone; by the perineal route alone, or by a combination of these two methods in certain selected cases. Naturally, if it be possible to obtain a satisfactory operative result, the perineal route should be preferred for the reason that it does away with the disagreeable features of the suprapubic cystotomy, without regard to the complete or partial closure of this wound. In any event, suprapubic leakage is

a complication always to be avoided when this can be done with safety to the patient.

Professor Eugene Fuller, of New York, has advised and recommended the suprapubic and intra-vesical operation, which he performs as follows:

With the patient on the back, the bladder is carefully washed out and distended with from eight to twelve ounces of fluid. Entering this organ by the suprapubic incision, the forefinger of the left hand is made to find the vesical opening of the urethra. Guided along this, the serrated-edge, curved scissors, with unusually long handles are carried to the tip of the left forefinger, and are made to cut through the mucous membrane lining the floor of the bladder, commencing at the posterior inferior limit of the vesical opening of the urethra, and extending directly backwards in the median line from an inch to an inch and a half. The blades of the scissors are rough and serrated, thereby making an incision which bleeds but little. The forefinger is slipped through this vesical wound, while the fist of the other hand makes firm counter-pressure against the perineum. When the prostatic growth is brought well into the reach of the forefinger within the bladder, enucleation is performed, either en masse or piece by piece, as may be most easily done. The scissors or biting forceps may be employed when enucleation with the finger is impossible. A perineal incision is now made, and a large, soft-rubber tube passed through the perineal cut into the bladder, which is irrigated with hot water some minutes to wash out blood clots and stop hemorrhage. The suprapubic wound is closed in part by a deep layer of catgut sutures, which include the bladder wall, and by a more superficial layer of silkworm gut sutures. A single silkworm gut suture, passing through the integument, muscles and bladder wall on either side, and to be left temporarily untied, is substituted in the middle of the incision for the catgut. Through this temporary opening a rubber drainage tube is inserted and allowed to remain from four to seven days, or as long as drainage is necessary. When the tube is finally removed, the opening into the bladder is closed by tying this suture.

The method of Nicoll and Alexander consists of a free perineal incision between the rectum and urethra, down to the prostate. Suprapubic cystotomy is then performed, and by the introduction into the bladder of a finger or two of one hand, the hypertrophied organ is pushed into the perineal wound, where it can be enucleated with the finger of the other hand. In the operation, as performed by Alexander, a counter opening is made in the floor of the bladder, through which perineal drainage by means of a good-sized rubber tube is effected.

In the perineal operation, with the patient in the lithotomy position, a vertical incision is made through the middle of the perineum, beginning near the base of the scrotum and extending down

to within three-quarters of an inch of the anal margin. When the prostate is deeply located, additional room for the dissection may be obtained by a semilunar cut around the margin of the anus, joining in the median line the posterior extremity of the perpendicular incision. Keeping clear of the bulb, and following the loose connective tissues between the rectum and the urethra and prostate, this body is reached by rapid dissection with usually insignificant hemorrhage. If the hypertrophy is of moderate size and extent, the capsule of the gland may be opened upon either side, and enucleation effected with the finger; on in some instances, when the connective tissue is greatly developed, the scissors may be necessary to clip away the indurated portions. If a soft catheter or a rubber bougie of ordinary size shall have been introduced into the urethra it will serve as a guide to warn the operator from opening into this tube, although in spite of every precaution this accident not infrequently occurs. It is not, however, a serious matter, since the opening thus made closes usually without serious inconvenience to the patient.

When the hypertrophy is extensive and is chiefly backward into the bladder, and the perineum is deep, it will be found at times exceedingly difficult to reach the posterior surface of the gland on account of a backward projection or displacement of this organ. Under such conditions it may be necessary to do a suprapubic cystotomy, and to introduce two fingers of one hand (or have those of an assistant substituted) in order to make counter pressure against the dissection from the perineal side.

Dr. Parker Syms has devised an apparatus consisting of a rubber bulb, attached to the end of a strong, catheter-like rubber tube, which is introduced through an incision in the membranous portion of the urethra, and when carried into the bladder the bulb is distended by injecting two ounces of water. Strong traction is made by an assistant, and in this way the prostate and bladder are held down in the perineum, and the dissection greatly facilitated. The opening into the urethra is utilized for drainage for several days after the operation, a urethral tube being introduced and left in for this purpose. When the hypertrophy is enormous, as not infrequently occurs in long-neglected cases, it will no doubt be found advisable to combine the operation of Fuller with the technique of Alexander and Parker Syms.

It is a matter of great satisfaction to note that the death-rate following prostatectomy has gradually diminished, as the operation has been more thoroughly developed, and now with the improved methods and with the proper selection of cases, encouraged as surgeons must be to advise an early resort to operative measures, there can be no doubt that the rate of mortality will fall so low that it will be practically insignificant. I do not hesitate to express the opinion

that this operation is one of the most valuable contributions which has been made to surgery within the last decade.

THE EFFECT OF REMOVAL OF THE OVARIES UPON
CARCINOMA OF THE BREAST.

The subject of cancer, always of interest to the surgeon, is attracting unusual attention at this time on account of a recent contribution by Mr. George T. Beatson, surgeon to the Cancer Hospital at Glasgow.

In a young woman of thirty-three years, suffering from a recurrent carcinoma of the breast, he observed that after removal of the ovaries the cancerous mass entirely disappeared. Encouraged by this success, Mr. Beatson and other operators repeated the experiment in a number of cases in which recurrence had taken place to such an extent that a radical extirpation was impossible. The details of these experiments are given in recent issues of the medical periodicals, and are too bulky to repeat here, but it is worthy of note that while in some instances the cancerous growth was not affected, in an encouraging proportion there was a diminution of the neoplasm, and in a still smaller proportion there was complete disappearance of all signs of cancer.

In this country Dr. Robert Abbe has reported a case in which after a complete extirpation had been performed, recurrence took place at the expiration of six months, and four months later when this patient presented herself, there was not only a large recurrent mass in the field of operation, but a well-marked metastasis had occurred in the opposite breast, the growth there being as large as a hen's egg, and with a well-marked lymphatic chain leading into the axilla. The ovaries, which were full-sized and apparently normal, were removed in this case on the 4th of March. At the end of a week atrophic changes were noticeable in the nodules, which had formed in the scar of the first operation. These became pale and flattened. In three weeks they were distinctly umbilicated, and at the end of the fourth week had practically disappeared. At the same time the tumor in the right breast gradually diminished, and in eight weeks every vestige of this neoplasm was gone. Four months after removal of these organs she was absolutely well, with no trace of malignant disease.

This case and others reported by Dr. Abbe and Mr. Beatson and other operators in Great Britain should certainly attract the close attention of surgeons. Physiologically there exists a direct relation between the ovaries and the mammary glands, and under pathological conditions it would seem that this relationship should and does exist.

In any event, in view of the general hopeless condition in patients suffering from recurrent carcinoma of the breast, any surgical operation, such as oophorectomy, which does not endanger life, is justifiable even as an experiment.

GUNSHOT WOUNDS OF THE HIP JOINT BY
REDUCED CALIBER PROJECTILES.

BY LOUIS A. LAGARDE,

Major and Surgeon U. S. Army.

GUNSHOT wounds of the hip joint have hitherto been rated as the most fatal wounds in war hospitals. Of 389 cases in the Civil War, Otis informs us that by the various methods of treatment then employed the mortality was 84 per cent. The results quoted are a fair average of those in the Crimean and other great wars during the pre-antiseptic era of wound treatment. In addition to the ravages of sepsis, gunshot wounds in those days were inflicted by a bullet that was prone to invite sepsis from the great amount of local injury which it inflicted, especially on the bones and joints. The missile of the military rifle of the wars mentioned varied from 50 to 55 calibers in diameter, weighing an ounce, 480 grains and over, composed of soft lead which was easily deformed upon impact with resistant structures. Wounds of the larger joints inflicted by such a missile were marked by an area of destruction in the channel wound corresponding to the original caliber of the bullet, and larger when deformation took place. The injury to the bone in the foyer of fracture was characterized by many loose spiculæ and fissures running into the marrow of the shaft involved, and to add to the danger of such wounds the balls often lodged in or around the joint structures. We need not dwell upon the gravity of such wounds to life and limb under the treatment then in vogue. Had no change but the introduction of our intelligent wound treatment occurred since the Civil War gunshot wounds of the large joints, including the hip, would still be marked by a discouraging mortality, to say nothing of the long list of cripples to invoke the assistance of the commonwealth. Fortunately for human life and human suffering, as well as the viewpoint of economy to the State, a change in the armament of all governments occurred almost coincidentally with the perfection of our wound treatment which rivals it in results. Commencing with France and Germany in 1886, all the governments have now discarded the large caliber leaden bullet of about 45 and 50 calibers, weighing approximately 480 grains, for one of 26 to 30 calibers, weighing from 220 to about 240 grains. In other words, the caliber and weight of the bullet of the military rifle have been reduced about one-half. More than this, the lead of the new bullet is enclosed in an envelope of the hardest steel, so that deformation is seldom observed. The humane advantages of such a missile are especially shown in the soft parts and joint ends of the bones. At relatively short ranges, owing to superior velocity, the small bore bullet is apt to cause as much destruction of bony tissue as the large bore bullet; but at the battle ranges—say, from 600 to 1500 yards—the humane ad-

vantages of the smaller bullets are especially demonstrated on the cancellous tissue of bone. This spongy structure, compared to the compact substance, offers so little resistance, the lateral displacement on the part of the bullet is so limited that the tendency in all wounds of the epiphyses is toward clean-cut perforations. In addition it may be stated that the ball seldom lodges. The results of joint wounds under these advantageous conditions have been specially noted in the knee. In the Spanish-American

wounded by a Mauser bullet at San Juan, July 1, 1898. Distance about 700 yards. Bullet entered outer aspect of right thigh 3 centimeters below Poupart's ligament, opposite a point corresponding to the location of the anterior crural nerve, branches of which were probably severed, ranging directly backward it emerged in the buttock of the same side. The scar marking the wound of entrance is slightly oblong, about the diameter of the projectile. The wound of exit is marked by a linear scar 1 centimeter in

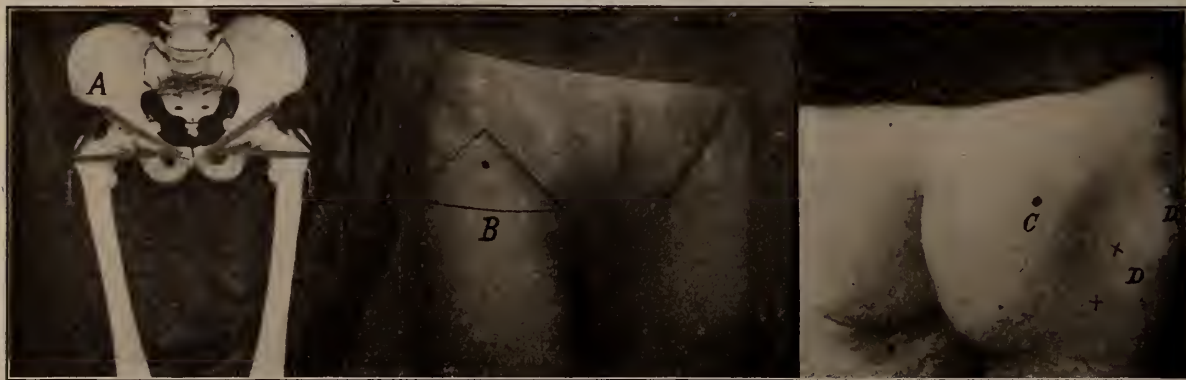


FIG. 1. CASE NO. 1.
A. Stephenson's triangle. B. Wound of entrance. C. Wound of exit.

and insurgent wars in the Philippines fifty-one gunshot wounds of the knee are reported with three deaths, making a mortality of 5.88 per cent., as compared to 84 per cent. in the Civil War.

Because of the infrequency of wounds of the hip, compared to those of the knee, the opportunities to study gunshots of the latter by the reduced caliber bullet are much more limited. I am only able to present two cases from the Spanish-American war, and they are not as well marked as they might be. The diagnosis of gunshot wounds of the hip joint, always difficult, was more so in the days of low velocity projectiles, whose course was easily deflected by the slightest resistance. With high velocity missiles that travel in a straight line, as a rule, regardless of obstacles met in the human body, the tract of the missile can be well defined by a study of the anatomy between the entrance and exit wounds. Again the Röntgen ray aids us in the diagnosis, if not by demonstrating a lesion, we can at least ascertain whether the joint can be traversed or not by projecting a shadow from a metal disk placed over the point of entrance of the ball. If the shadow is projected toward the exit wound and it crosses the joint limit the diagnosis is certain. In addition, as pointed out by Langenbeck, Stephenson and others, we have strong presumptive evidence of joint injury when the ball passes through an area circumscribed by certain anatomical landmarks as shown in the following cases:

C. F., private Company G, Seventh Infantry,

length. On the outer and posterior aspect of the upper thigh there are four small scars which mark the location of splinters of bone detected by the X-ray and which were removed by the surgeons. The patient states that the fragments were very small. If we have reason to adhere to the rule that the hip joint may be included in a triangle (Stephenson), the angles of which are at the spine of the pubes, the anterior-inferior spine of the ilium and the outermost part of the trochanter, it may be assumed that this case represents a gunshot perforation without fracture of the surgical neck of the femur, and that the fragments were spiculæ of bones chipped from it which acted as secondary projectiles.

The remote effects were as follows: Slight limitation of movements at hip joint; moderate atrophy, stiffness and impaired nutrition of leg, pain, of a burning and boring character, shooting down thigh and leg.

J. H., private Company D, Sixteenth Infantry, was wounded at the battle of San Juan Hill, July 1, 1898, by a Mauser bullet at a distance of 800 yards. The ball entered the right groin 3 centimeters below Poupart's ligament on a level with the pubic spine and just to the outer side of the femoral vessels, the pulsation of the artery being visible on the inner wall of the wound. Wound of entrance was small, circular, corresponding to the size of the bullet. The ball emerged 3 centimeters above the gluteal fold in the middle line of the thigh. Wound of exit is represented by a transverse oval scar. There was a coarse, grating noise on movement of hip

after being wounded, but no particles of bone were removed. There was paralysis of leg and knee for two weeks after injury. The wounds healed in about two weeks. Radiograph taken March, 1901, shows two small particles of bone just below the neck of the femur. There is no change or mark visible on the bone.

Remote Effects.—Considerable weakness of the entire leg and a slight limp on walking. Pain at times sharp and shooting down to knee, again dull and aching over the entire leg.

plicated recover with almost normal motion, some stiffness only remaining, and that likely to diminish with time. These, it seems to me, are cases, as you suggest, in which the Mauser bullet at medium and longer ranges has passed through the joint without causing solution of continuity in the head or neck of the bone and in which suppuration has been avoided, cases in which the bone injury consists in a clean, punched out hole, with no comminution. I am quite sure that Mauser bullets do this frequently

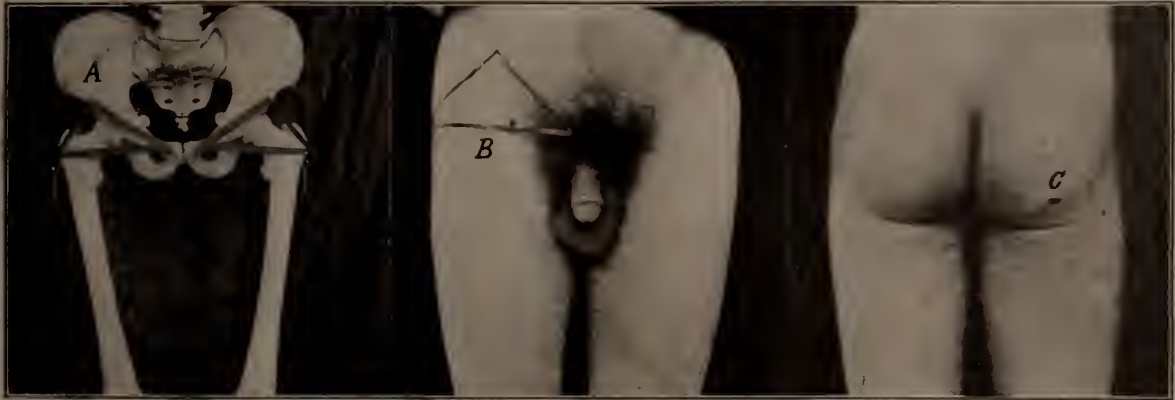


FIG. 2. CASE NO. 2.

A. Stephenson's triangle. B. Wound of entrance. C. Wound of exit.

Slight hyperesthesia just above knee joint over the anterior surface of thigh. Some twitching of thigh muscles at times.

When I was first invited to read this paper I wrote to Col. W. F. Stephenson, surgeon in the British army, to please let me know the result of hip joint injuries in the Anglo-Boer war by small bore missiles. Under date of September 3, 1901, he writes as follows: "I saw many cases in which the hip joint was certainly im-

at medium and long ranges and occasionally at short ones. Skiagrams can show nothing of this class of injury; but with circular entrance and exit wounds, between which we know the hip joint to lie, I don't think we should consider that the joint must have escaped simply because the patient shows no signs of wound of the hip and recovers well. I saw other cases in which both the size of the exit wound suggested and



FIG. 3.

Fragments of bone chipped from neck of femur.



FIG. 4.

Ball from 38-caliber revolver lodged in head of femur.

skiagrams showed extensive injury to the head and neck of the femur, which were followed by the usual symptoms, and offered the usual difficulties in treatment. I cannot give you figures, but the death rate was high for these cases, though I don't believe it was as great as in the old days. I cannot say how many amputations at the joint were done in all, but I know of three, with only one death. The only reasons I can suggest for the two classes of injury are differences in the remaining velocities of the bullets, and that some of the latter class were produced by soft nose and expanding bullets. On the whole, small-bore bullets do not produce as much damage as the large ones did, and recovery from these injuries is more frequent than used to be the case. This applies to hip cases as well as others."

I regret that I have no more data in my own experience to show you in connection with this important subject.

MALIGNANT DISEASE OF THE NOSE AND ACCESSORY SINUSES.

BY JOSEPH S. GIBB, M.D.,
Philadelphia.

Professor of Diseases of the Throat and Nose, Philadelphia Polyclinic.

MALIGNANT disease of the nasal chamber and accessory sinuses is not common. Sarcoma is more frequently observed than carcinoma.

Bosworth in 1889 pointed out the infrequency of these morbid conditions and the sparsity of literature. With much labor he succeeded in collecting and carefully narrating 41 cases of sarcoma, three of which were observed by himself, and 30 cases of carcinoma, one of which occurred in his own experience.

By careful search of the literature 70 cases of sarcoma and 48 of carcinoma may be added to this list.

Primary carcinoma of the nasal chambers is undoubtedly rare, but one case of this nature has come to my notice in a special practice of ten and more years with the facilities offered by two large hospitals.

Sarcoma is not so rare as the statistics seem to indicate. Quite a number of these cases come under my observation and many of my professional friends have seen cases. It is probable that numbers of cases remain unidentified and still sarcoma of the nares is a comparatively rare disease.

SARCOMA OF THE NARES.

Site.—When brought to the notice of the rhinologist sarcoma usually has existed so long as to have formed attachments, and also attained such size as to make difficult the exact location of the original site. In those cases, however, in which the location has been noted, the favorite site is either the septum or the middle turbinate bone. Next in frequency is the base of the sphenoid. The lower turbinate, floor of the nose, and outer wall of the nasal

chamber have each been observed as primarily affected.

Progress and Duration.—Sarcoma progresses much more slowly in the nasal chambers than in other localities, nor does it seem to exercise so great an influence on the general health. The duration of the disease extends from a few months to fourteen years. A number of cases are reported in which the disease had existed from six to fourteen years.

It would be safe in stating the average duration at two and a half to three years. While slowness of growth and few constitutional symptoms are the rule in sarcoma in this locality, instances are not wanting of exception to this rule.

Osio (reported by Bosworth) narrates the case of a man, aged 55 years, with melanotic sarcoma of the nose involving the antrum of Highmore, the orbit and the sphenoidal sinuses and attended by much external deformity. The disease had existed eight months and terminated fatally after a radical operation was performed. Another case reported by Verneuil and mentioned in Bosworth's list, of a young man, aged 19 years, with a reddish tumor filling the right nostril, accompanied by epistaxis and slight external deformity.

An abscess formed in the inner canthus of the eye, together with headache and some obscure brain symptoms from which he succumbed. The autopsy revealed the fact that the orbital abscess communicated with a large abscess at the base of the brain, which was the result of extension of the sarcomatous disease through the cribriform plate.

A number of other cases could be cited, but these are sufficient to demonstrate that sarcoma of the nares may be appalling in rapidity of progress and the suffering and deformity it induces.

Symptoms.—The symptoms attending sarcoma of the nares are similar in the main to all obstructive diseases of the nose, and are dependent somewhat upon the stage to which the disease has attained. It is unilateral, or at least always on one side at an early period in its course.

A very early symptom is epistaxis. This symptom is present in nearly every case. Suspicion of malignancy may well be excited by the susceptibility of the parts to bleed upon the slightest touch, even in those cases in which there is no spontaneous bleeding.

At a very early period unilateral obstruction of the nares is noticed by the patient, and should the parts be inspected the affected naris would be found more or less occupied, according to the stage, by a reddish, fleshy-looking mass.

Pain is not a very constant symptom and depends largely on the site of the growth and the size to which it has attained. The greater number of cases suffer no pain throughout the course of the disease.

Muco-purulent offensive discharge, noted in some cases, is by no means characteristic, as with the symptom of pain it depends upon the location of the growth.

Stenosis, which is a constant symptom, grows progressively worse as the growth continues to increase in size, and other symptoms are added as surrounding tissues become invaded.

The tendency of sarcoma in the nasal chambers is to increase in size and extend in all directions by way of the natural channels. It does not attack the tissues directly—*i. e.*, by ulceration—although by pressure of the new growth all tissues, even bone, may be absorbed.

The new growth spreads in all directions, usually at points of least resistance; *e. g.*, primarily attached either to the septum or the middle turbinate body, it fills all the meatuses and bulges the *alæ*, causing external deformity.



FIG. 1. SARCOMA OF NARES.

Later it extends into the sinuses and along the lachrymal duct and even through the cribriform plate of the ethmoid into the anterior fossæ.

It is in those cases of extensive involvement of the sinuses that pain becomes a prominent symptom, and also here is observed the most distressing and disfiguring external deformities. Probably involvement of the ethmoid cells is responsible for most of those dreadful pictures of frog-face occasionally observed. In this connection I desire to bring to your notice this photograph, which very well portrays the extent of disfigurement which may take place where the ethmoid cells are involved. Here, as you will observe, there is wide separation of the nasal bones by the lateral extension of the growth within the sinus. By absorption the

growth has attenuated the lateral wall of the sinus until it has at last burst through the orbit, displacing the eyeball entirely and producing much distortion of the face.

Sex and Age.—There seems, from the records, to be a preponderance of cases of sarcoma of the nares in the male sex. In a total of 96 cases in which the sex is mentioned there are 57 males and 39 females.

Sarcoma of the nares is regarded by some writers as a disease of childhood. Our statistics do not bear this out. No period of life is exempt. Cases are recorded from very early childhood to old age. In a total of 91 cases in which the age is mentioned nearly the same number of cases occurred after as before the age of 40.

Varieties of Sarcoma.—Nearly all forms of sarcoma have been found in the nasal chamber. By far the greatest number of cases are of the round or spindle-cell variety. The melanotic form is reported in six cases; of these in three recurrence and death occurred within a few months, and in the three remaining no recurrence had taken place in from several months to one and a half years after operation.

After the round and spindle-cell varieties the fibro and myxo sarcomata claim the largest number of cases. The other varieties mentioned are myeloid, mixed, round, and spindle cell, mixed sarcoma and carcinoma, angio-myxo sarcoma, adeno sarcoma, sarcoma telangiectiade and alveolar.

Diagnosis.—The diagnosis of sarcoma of the nose is not difficult. The symptoms already enumerated point strongly toward the presence of a malignant growth and a rhinoscopic examination will, in most instances, confirm these suspicions. Should, however, doubt remain, the removal by snare of a piece will afford an opportunity to confirm the diagnosis by microscopic examination. Just here let us pause to consider this method of diagnosis. Mackenzie, of Baltimore, in no uncertain language condemns this practice and claims our skill in diagnosis by inspection should be sufficient to enable us to arrive at a conclusion in most cases, and in those in which we are in doubt it is far better to remain so than to submit the patient to an incomplete operation. There can be little doubt that manipulative interference with malignant growths which stops short of complete eradication is fraught with the danger of exciting more rapidity of growth (I cannot believe growths benign are made malignant by such procedures). While condemning the practice of removing pieces of a suspected growth merely to confirm a diagnosis, I am not prepared to go so far as Mackenzie and condemn it "in toto." Cases arise in which it becomes imperative, to be sure of the diagnosis, and the means at our command at the present time, without the aid of the microscope, are not sufficient to be absolutely sure.

When the ultimate object contemplated is thorough eradication, should our suspicions be confirmed by the microscope, it makes but little difference if but a brief period exists between the diagnostic operation and the subsequent radical one. Unfortunately, the microscope is not infallible. Cases have occurred in my experience, and I presume in that of every rhinologist, in which the microscopic diagnosis has been that of malignancy, when the subsequent course of the case has proven this to be fallacious. More frequently, perhaps, the symptoms have suggested malignancy and the microscope failed to confirm it, in cases which subsequently proved the microscopic diagnosis in error.

Prognosis.—The prognosis of sarcoma of the nares is unfavorable. Cases of complete eradication of the growth and return to health are not wanting, but after a critical study of the records these are few.

The face of statistics gives the impression that it is quite amenable to operative treatment; careful analysis discloses many fallacies.

Operations in numbers have been reported, in which the method of operation is elaborately detailed and no subsequent history mentioned. These, of course, are worthless from a statistic standpoint and must be eliminated. Cases are reported after a ridiculously brief interval from the time of the operation to the time of the report. In 31 cases in which the subsequent history is given after the complete eradication, in 4 cases one month elapsed, 13 cases from 2 to 12 months, 9 cases from 1 to 2 years, 3 cases from 2 to 3 years, 1 case from 3 to 4 years and 1 case 7 years.

How incomplete and inadequate these figures are will be seen if reference is made to the table in which recurrence and death took place in at least three instances (cases Nos. 54, 74 and 75) at intervals varying from sixteen months to two years.

It is, of course, unfair to eliminate in this way, for many of the cases in which no subsequent history is given, or in which too brief a period has elapsed since operation, may be instances of complete recovery. There is no other course to pursue. To sum up, there are but five cases in a total of thirty-one in which a period of more than two years has elapsed since operation. While this is not a brilliant showing it is not so bad, as will be seen when we come to study other malignant growths of the nose. What the duration and fatality of nasal sarcoma would be if permitted to progress without surgical interference is difficult to predict, as our data are very imperfect. We can find records of six cases in which no attempt at removal was attempted which resulted fatally. One of these cases died of pneumonia, in which the disease had existed fourteen years. The others died of rapid extension of the growth in from three to sixteen months. It would be interesting to ascertain the duration of sarcoma without surgical meas-

ures. A very large proportion of the cases in our table were subjected to some form of nasal surgical methods; all of these methods were necessarily incomplete operations in a surgical sense. What the duration of these cases would have been without such treatment is a question that cannot be answered. I am inclined to believe, however, that the length of life would have been increased.

Treatment.—Success in the treatment of sarcoma of the nares rests upon complete and thorough eradication of the morbid growth.

The earlier the case is seen before encroachment upon surrounding tissues has taken place the more is to be expected from operative interference. Small growths with moderate attachment may be removed by intra-nasal methods; *e. g.*, the snare, cautery and curette, with very fair prospect of ultimate success. When the growth has extended beyond the confines of the nasal chambers and involved the sinuses little can be accomplished through intra-nasal operative methods. Indeed it is probable such incomplete surgical measures stimulate the growth to greater activity. In these more advanced cases only the most thorough and complete radical measures offer the least prospect of success.

Many operative procedures are devised to obtain access to the nasal cavities. It is unnecessary to refer to these in detail. It is sufficient for our purpose to say that only that operation which admits of the removal of every vestige of malignant growth should be considered.

Ligation of the common carotid artery, thus cutting off blood supply to the growth, has been advised. There is but one case recorded in which this method has actually been carried into execution. Van Buren (reported by Bosworth) tied the carotid after all other means failed in retarding the growth. The patient died eighty-two hours after the operation. Van Buren states there was a visible diminution in the size of the tumor.

From the fact that many of the cases are brought to the notice of the surgeon in an inoperable condition there would seem to be a field for the employment of Coley's fluid. We have, however, record of but two cases in which this was employed. Harvey Smith (Manitoba and West Canada *Lancet*) removed the growth by snare and curette. It recurred in one month and was again removed and again recurred in two weeks. Radical operation was refused and Coley's fluid (mixed toxines) employed. Seven weeks after the last operation the nose was entirely free of growth. Smith believes the good result was due to the last operation, and that the toxines had no influence on the progress of the growth.

In Ledermann's case no benefit was obtained from the use of toxines.

(To be continued.)

SARCOMA OF NASAL CHAMBERS.

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
1	Pelleta (1820). Cited by Casabiana, <i>Thèse de Par.</i> , '77.	Severe pains in head, of unknown cause.	Septum.	M.	—	Sarcoma.	Right.	None.	Death; at Post large tumor found; origin septum.
2	Van Buren. <i>N. Y. Jour. of Med.</i> , '49, vol. ii, p. 297.	Epistaxis and nasal stenosis.	Lower turb. antrum and ethmoid.	F.	34	Spindle-celled sarcoma; 8 years.	Right.	Cold snare and finally ligature of R. common carotid.	Death 82 hours after operation.
3	Michaux. <i>Gaz. Med. de Par.</i> , '49, No. 48, p. 931.	Nasal stenosis for 9 mos., epistaxis, facial neuralgia, displacement of eyeball.	—	M.	40	Reported as case of cancer, but evidently sarcoma; 9 months.	Right.	Excision of R. superior maxilla.	Recovery (?) Not seen after 40 days.
4	Chassaignac. <i>Moniteur des Hospitaux Par.</i> , 1854, vol. ii, p. 266.	Violent epistaxis and tumor of nares; headache.	Both sides of nose.	M.	40	Sarcoma, from gross appearance; 4 mos.	Both.	Snared on several occasions; finally radical operation.	Recovery after 1 month; no further history.
5	Gosselin. <i>Gaz. des Hopiteaux</i> , '56, xxix., p. 175.	Epistaxis.	Floor of naris.	F.	38	Sarcoma, from gross appearance; 7 mos.	—	Splitting of nose in median line; extirpation of growth.	No return after 7 months.
6	Erichsen. <i>Lancet</i> , 1864, vol. ii, p. 153.	Stenosis and epistaxis.	Nasal process of superior maxilla.	M.	42	Sarcoma from gross appearance; 3 mos.	Left.	Extirpation by external operation.	No subsequent history given.
7	Fayrer. <i>Med. Times and Gaz.</i> , July 4th, '68, p. 3.	Growth existed for 3 years and gave rise to considerable deformity of nose.	Septum.	F.	30	Consisted of germinal cells; 3 years.	—	Radical operation.	Not published.
8	Rabltsch. <i>Allg. Wien. Med. Zeit.</i> , '69, p. 382.	Epistaxis and interference with respiration.	Upper turbinate body.	F.	15	Branching-celled sarcoma; 5 months.	—	Removal with galvanocautery.	Not published.
9 ^a	Viennois. <i>Lyon Medicale</i> , 1872, No. 18, p. 8.	Fœtid discharge from nose, supra-orbital pain and exophthalmos.	—	F.	43	Myxo sarcoma.	—	Radical operation.	No recurrence at end of 7 years.
9 ^b	Viennois. <i>Lyon Medicale</i> , 1872, No. 18, p. 8.	Intense supra-orbital pain and distortion of features.	—	F.	63	Melano sarcoma.	—	Radical operation.	Death in 8 days of pyæmia.
10	Mason. <i>Med. Times and Gaz.</i> , '75, vol. i., p. 552.	Hemorrhage from nose.	Septum.	F.	60	Myeloid sarcoma.	—	Three separate operations; done thoroughly, removing all the growth; return after first two.	No recurrence from third operation after 4 months.
11	Osio. <i>Rev. de Cien. Med. Barcel.</i> , '75, vol. i., p. 312.	Deformity of external nose, pain, exophthalmos and injection of conjunctiva.	Outer wall of nasal passage.	M.	55	Melanotic sarcoma.	Right.	Radical operation.	Death after 7 days of meningo-encephalitis.
12	Kolaezek. <i>Arch. of Klin. Chir.</i> , Berlin, '75, 18, p. 344.	Distortion of external nose.	Not given.	M.	54	Round-celled sarcoma.	—	Slitting up nose in median line and curettement.	Not given.
13	Welnlechner. <i>Bericht der K. K. Krankenanstalt, Rudolph Stiftung</i> , Wien., '75, p. 350.	Stenosis and exophthalmos; afterward involvement of the pharynx and orbit.	Not given.	M.	14	Sarcoma; 1 year.	—	No operation attempted.	Death as result of growth.
14	Grynfeldt. <i>Montpellier Med.</i> , '76, vol. xxxvii., 307-511.	Repeated attacks of epistaxis and mass in naris	Attached to septum.	F.	26	Mixed round and spindle celled sarcoma.	—	Removed twice with return; the third operation also included part of septum.	Recovery (?) No recurrence (?)

Cases 1 to 41, inclusive, were reported by Bosworth in *Diseases of Nose and Throat*, 1889.

SARCOMA OF NASAL CHAMBERS—(Continued).

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
15	Weinlechner. Bericht der K. K., Krankenanstalt, Rudolph Stifting, Wien., '75, p. 350.	Growth in nose, which had caused some distortion of nose.	Not given.	M.	39	Round-celled sarcoma; 1½ years.	—	Curetted through nose.	No recurrence after 1 month's observation.
16	Weber. Handb. der Allg. und Spec. Chir. Pitha and Billroth, vol. iii., p. 201.	No history given.	Middle turbinate bone.	M.	—	Sarcoma.	Right.	No operation done.	Death.
17	Duplay. Traite Elen de Path. Externe. Par., '77, iii., p. 846.	Growth in nose for 12 years; distention and distortion of nose.	Not given.	F.	52	Fibro sarcoma; 12 years.	—	Slitting open nostril and growth removed.	Cured; no recurrence.
18	Gallozzi. Il Morgagni, 1878, vol. xx., p. 565.	External deformity, with absorption of nasal bones.	External wall.	—	—	Sarcoma; 7 months.	—	Nose divided in median line and growth removed.	Subsequent history not given.
19	Sargent. Thèse de Paris, 1881, No. 316, p. 41.	Nasal polyp for 10 years, which were removed; mass in nose, both anterior and posterior.	Middle turbinate; also antrum.	M.	43	Myxo sarcoma; 10 years.	Left.	Removed with anterior wall of super-maxilla.	Subsequent history not given.
20	Verneuil.	Repeated epistaxis; nasal stenosis; mass in nose.	—	M.	19	Sarcoma; 6 months.	Right.	Local astringents and K. I.	Death from extension to brain through cribriform plate.
21	Richet. Ann. des Mal de l'oreille et du larynx, '81, vii., p. 327-331.	Growth in nose and deformity of nose.	—	M.	19	Sarcoma; 4 years.	Right.	Radical operation and growth removed.	No subsequent history given.
22	Mo. L'Osservatore Gaz. delle Cliniche di Torino, '82, vol. 18, p. 641.	Nasal stenosis, sanious discharge, deformity of nose and neuralgia.	Not given.	F.	22	Fibro sarcoma; 1 year.	—	Radical operation.	No recurrence after 2 months.
23	Hopmann. Arch. für Path. Anat., Berlin, '83, Bd. xciii., 235.	Tumor of nose, stenosis and hemorrhage.	Not given.	M.	44	Sarcomatous; 4 years.	Right.	Growth curetted. Return and radical operation.	No recurrence reported.
24	Trelat. Gaz. des Hopteaux, '83, lvi., p. 210.	Tumor, causing epistaxis and deformity.	Not given.	M.	63	Embryonic and glandular tissue; 2 years.	—	No operation.	Subsequent history not given.
25	Burckhardt. Bericht über die Chir. Abtheilung des Ludwigs-Spital, Charlottenhilfe, im Jahre '84, p. 12.	Nasal stenosis, severe pain and frequent hemorrhage.	Not given.	F.	43	Melano sarcoma.	Both.	Nose split and growth removed with curette and finger.	Recurrence 5 months later.
26	Ferrier. Ann. des Mal de l'oreille et du larynx, '84, x., p. 279.	Nasal stenosis, deformity, foetid discharge and neuralgia.	Not given.	M.	45	Spindle-celled sarcoma; 2 years.	Left.	Nose split and growth removed.	No recurrence after 5 months.
27	Buttni. St. Barthol. Hosp. Reports, '85, No. 21, p. 147-52.	Deformity, stenosis and epistaxis.	Not given.	F.	78	Sarcoma.	—	Portions were removed, never thoroughly.	Subsequent history not given.
28	Lincoln. Trans. Amer. Laryng. Assn., '85-'86, p. 92-94.	Tumor, epistaxis and discharge, with external deformity.	Middle and lower turbs. and floor of nose.	—	—	Melano sarcoma; 3 years.	—	Thoroughly removed under ether; galvano-cautery.	No recurrence.
29	Schmiegelow. Revue Mensuelle de Laryng., '85, p. 421.	Small, pulsating mass in nose.	Septum.	F.	14	Round-celled sarcoma; 2 to 3 weeks.	—	Removed with finger; recurred and removed with galvano-cautery.	No recurrence after 7 months.
30	Schmiegelow. Revue Mensuelle de Laryng., '85, p. 421.	Sarcoma of nasopharynx; polyp of nose, which became sarcomatous.	—	M.	42	Fibro sarcoma.	—	No operation.	Death from hemorrhage.
31	Higgins. Gyns. Hosp. Rep., '84-'85, vol. 33, p. 91-102.	Hemorrhage and tumor of nose.	Not given.	M.	66	Sarcoma; 14 years.	Left.	No operation.	Death from pneumonia.
	Fowler. Lancet, '85, vol. ii., p. 992.	Growth in nose, deformity of nose.	Not given.	M.	16	Alveolar sarcoma; 2 weeks.	—	Snare, with return; then radical operation.	Probably no recurrence; full history not given.
33	Moure. Revue Mensuelle de Laryngol., '86, p. 417.	Epistaxis and discharge from nose.	Middle turbinate.	F.	43	Not given; reported as sarcoma; 1 year.	Right.	Operation and removal with forceps and curette.	No recurrence after 7 months.

SARCOMA OF NASAL CHAMBERS—(Continued).

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
34	Calmettes and Chatellier. Ann. des Mal. de l'oréille, Mar. '87, vol. 13, p. 89.	Tumor of nose size of cherry stone.	Septum.	F.	23	Spindle-celled fibro sarcoma; 7 years.	Left.	Removed; galvano-cautery snare.	No recurrence after 11 months.
35	Weir. N. Y. Med. Jour., '87, vol. 45, p. 282.	Nasal stenosis and epistaxis.	Not given.	M.	42	Fibro sarcoma; 1 year.	Right.	Operation incomplete owing to involvement of sphenoid sinus.	Rapid recurrence and involvement of cranial cavity.
36	Routier. Revue de Chir., '87, p. 62.	Stenosis, loss of smell, hemorrhage, tumor.	Septum.	M.	24	Sarcoma; 1 year.	Left.	Removed with finger and curette.	No recurrence after 1 month; subsequent history not given.
37	Ficano. Gazz. d. osp. Milano, '88, No. 12, p. 90.	Epistaxis and tumor.	Septum.	M.	24	Spindle-celled sarcoma; 3 months.	—	Removed cold snare.	Further history not given.
38	Major. Jour. Laryngol. and Rhinol., vol. iii., p. 164.	Growth in nose.	Septum.	—	—	Spindle-celled sarcoma.	—	Removed with snare.	No recurrence after 4 months.
39	Bosworth. Dis. of Nose and Throat, vol. i., '89, p. 445.	Growth in nose, epistaxis, distortion of nose and offensive discharge.	Perpendicular plate of ethmoid and turbinate bones.	M.	45	Round-celled sarcoma.	Left.	Snared on several different occasions, with return; finally radical oper.	Recurrence and death from exhaustion.
40	Bosworth. Dis. of Nose and Throat, vol. i., '89, p. 445.	Nasal polyp, offensive discharge and hemorrhage.	Middle turb.	M.	48	Angio-myxo sarcoma.	Right.	Cold wire snare and galvano-cautery snare; several sittings.	No recurrence after 1 year.
41	Bosworth. Dis. of Nose and Throat, vol. i., '89, p. 445.	Nasal stenosis, epistaxis, deformity mass extends into naso-pharynx.	Floor and outer wall of nose.	M.	47	Adeno sarcoma; 2 years.	—	Thoroughly removed under ether with finger and curette.	No recurrence after 6 months.
42	Bacon. Jour. Amer. Med. Assn., Mar. 24, '88.	Tumor of nose and difficulty in breathing.	Not given.	M.	21	No microscopical exam. made; 2 years.	Right.	Snared several times and then radical oper., first tying ext. carotid.	No return after 5 months.
43	Brown. Jour. Amer. Med. Assn., Mar. 24, '88.	Tumor of nostril, hemorrhage.	Floor of nose and septum.	M.	45	Sarcoma.	Right.	Removed with galvano-cautery snare.	Probably no return.
44	Heymann. Revue Mens. de Laryngol. d. Otol., Mar. 15, '89.	Rapidly recurring polyp, which finally became malignant.	Septum.	M.	58	Melano sarcoma; 1 year.	Left.	Removed with galvano-cautery snare.	No return after 1 year.
45	Pascale. Oss. di Patol. et Clin. Chr. Nap., '89, p. 143.	Mass in nose, finally spreading to hard palate.	Origin not given; also involved hard palate.	M.	36	—	Left.	Radical oper.; removal of left side of upper jaw.	No return after a short time.
46	Hooper. Jour. Respir. Organs, 1890, vol. iv., p. 62.	Tumor of nose, causing obstruction.	Ant. infer. cartilaginous septum.	M.	62	Fibro sarcoma.	Left.	Cold wire snare.	Not heard from after operation.
47	Hooper. Jour. Respir. Organs, 1890, vol. iv., p. 62.	Tumor of nose.	Ant. superior portion of septum.	M.	65	Myxo sarc.; telangiectoides.	—	Cold wire snare.	No return after 4 months.
48	Michael. Ann. des Mal. de l'oréille, vol. xvi., p. 688.	Growth in nose, some hemorrhage.	Middle and inferior turbinate.	F.	50	—	—	Removed with forceps and base cauterized with galvano-cautery.	No return after 18 months.
49	Knight, C. H. N. Y. Med. Jour., '90, vol. iii., p. 342.	Rapidly recurring tumor of nose; history of blow on nose 12 years previous.	Not given.	M.	42	Fibro sarcoma.	Right.	Snared; rapid recurrence and involvement of ethmoid and sphenoid.	Death from extension.
50	D. Antona. Rev. Clin. della Univ. di Nap., '89.	—	—	—	—	—	—	—	Recovery.
51	Tillaux. Gaz. de Hopteaux, '90, lxxii., 718.	Nasal stenosis and discharge.	—	—	—	Sarcoma.	Left.	—	—
52	Durants. Archiv. de Laryng., '90, iii., p. 150.	Polyps for some time, with stenosis.	—	M.	60	Epithelio sarcoma.	—	Radical operation.	Death in a few days; involvement of brain.

SARCOMA OF NASAL CHAMBERS—(Continued).

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
53	Clark, J. P. Boston Med. & Surg. Jour., '91, vol. 125.	Growth in nose, some pain and hemorrhage.	Middle turbinate.	M.	35	Round-celled sarcoma.	Left.	Removed with cold wire snare; several sittings.	No return after 1 year.
54	Neumann. Ann. of Surg., vol. xiv., p. 1.	Repeated hemorrhage, severe pain, displacement and protrusion of eyeball, somnolence.	Middle and superior turbinate.	M.	64	Small round-celled sarcoma; 16 months.	Left.	No treatment attempted.	Death in 16 mos.
55	Neumann. Ann. of Surg., vol. xiv., p. 1.	Repeated copious hemorrhage, involvement of brain.	Middle turbinate.	M.	46	Round-celled sarcoma; 7 to 8 weeks.	Left.	No treatment attempted.	Death from involvement of brain.
56	Neumann. Ann. of Surg., vol. xiv., p. 1.	Obstruction of nose; dull, aching pain.	Septum.	F.	29	Round-celled sarcoma; 8 weeks.	Right.	Complete extirpation.	No return after 1 year.
57	Reinhold. Inter. Klin., Rundschau, '91. No. 44.	—	—	—	—	Myxo sarcoma.	—	—	Cured; no recurrence.
58	Reinhold. Inter. Klin., Rundschau, '91. No. 44.	—	—	—	—	—	—	—	Cured; no recurrence.
59	Milligan. Trans. Brit. Laryng. & Rhinol. Ass., '92.	Cannot obtain report.	—	—	—	—	—	—	Not known.
60	Gongenheim and Hillary. Annals de Mal de l'oreille, June, '93.	No history given; two cases.	—	—	—	(a) Sarcoma telangiectoides. (b) Endothelial angio sarcoma.	—	Not known.	Not known.
62	Grevart. Soc. of Otol. and Laryngol., Brussels, June 4th, '93.	—	—	—	—	—	—	—	Not known.
63	Clark. Med. News, June 30th, '94.	Tumor size of small cherry, profuse nose-bleed.	Origin not given.	F.	79	No microscop. exam. made; 2 yrs.	Left.	Removed with snare and curette.	Probably recurred; subsequent history not given.
64	D. Aguanno (a). Ann. des Mal de l'oreille du larynx, '93, xix., 814.	Tumor, with obstruction of nares.	Origin not given.	F.	11	Lympho sarcoma.	—	Removed with galvano-cautery snare.	No return after 2 months.
65	Natier. Revue Internat. de Rhin., Otol. et Laryng., '94, iv., 13-19.	Obstruction of nose and tumor, with discharge.	—	M.	38	Sarcoma fascicule; 4 years.	Right.	Radical operation.	No return.
66	Natier. Revue Internat. de Rhin., Otol. et Laryng., '94, iv., 13-19.	Tumor of nose, with obstruction.	—	F.	52	Sarcoma.	Right.	Radical operation.	No return.
67	Natier. Revue Internat. de Rhin., Otol. et Laryng., '94, iv., 13-19.	Tumor of nostril.	—	M.	24	Myxo sarcoma.	Right.	Radical operation.	Not given.
68	Natier. Revue Internat. de Rhin., Otol. et Laryng., '94, iv., 13-19.	Obstruct. of nose, bleeding, etc.	—	M.	50	Sarcoma.	Right.	Radical operation.	Not given.
69	Natier. Revue Internat. de Rhin., Otol. et Laryng., '94, iv., 13-19.	Tumor in nose.	—	F.	56	Sarcoma.	Right.	No operation done.	Death.
70	Natier. Revue Internat. de Rhin., Otol. et Laryng., '94, iv., 13-19.	Nasal obstruction, sero-pus discharge, epistaxis.	—	F.	50	Osteo sarcoma.	Right.	Three operations done; return after each.	Not given.
71	Richardson. Ann. Oph. & Otol., St. Louis, Jan., '94.	Mass in both nares, which also involved the pharynx.	Not given.	C.	5	Myxo sarcoma; 4 months.	Both.	Snare and curette; excision of superior maxilla.	Death from recurrence in neck and pharynx.
72	Mennet. Soc. Anat. Par., July 14th, '94.	—	—	—	—	—	—	—	Not known.
73	Ledermann. Med. News, Nov. 30th, '95.	Nosebleed, headache and stenosis.	Origin not given.	M.	26	Round-celled sarcoma; 3 years.	Right.	Galvano-cautery, Coley's toxins.	Recurrence; operation incomplete.
74	Bonain. Revue de Laryng., '95, vol. xv., 625.	Began as polyps of nose, which were removed on several occasions, always returning.	Inferior turbinate.	M.	13	Myxo-angio sarcoma; 1 yr. 10 mos.	Left.	Removed with snare.	Death in 1 year and 10 months of recurrence.
75	Onodi. Monatschr. f. Orenheit, '95, vol. xxix., p. 77.	Both sides of nose filled with polyps, which became malignant.	—	M.	50	Round-celled sarcoma; 2½ yrs.	Both.	Snare and radical operation.	Death 2 years later of recurrence.

SARCOMA OF NASAL CHAMBERS—(Continued).

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
76	Bull. N. Y. Med. Jour., '95, lxii., 621.	Tumor of face, sphen. antrum, orbit and nose.	Sphenoid sinus.	F.	56	Myxo sarcoma, with round cells; 10 mos.	Right.	Radical operation.	Death from recurrence and exhaustion.
77	Barling, G. Amer. Jour. Surg. & Gynec., '95 & '96, viii., 84.	Tumor of nose, headache and discharge; growth extended into pharynx.	Roof of nasal cavity.	M.	23	Myxo sarcoma.	Left.	Soft palate split and tumor torn away with forceps.	Result good; no return after 1 year.
78	Sendziak (J.). Jour. Laryngol., '96, vol. 10.	Frequent and obstinate hemorrhage from nose.	Septum at the level of middle turbinate.	M.	34	* cavernosum sarcomatoides.	Right.	Removal with galvano-cautery snare.	Not given; probably no recurrence.
79	Finder. Archiv. f. Laryngol., Rhin., Berl., '96, v. 302.	Nasal obstruct.; several operations for polyps.	Not given.	M.	32	Sarcoma; 3 years.	—	Removed with snare.	Not given.
80	Finder. Archiv. f. Laryngol., Rhin., Berl., '96, v. 302.	Nasal obstruct. & hemorrhage.	Not given.	F.	69	Mixed-celled sarcoma.	Right.	Snared several times; returned each time.	Death from recurrence.
81	Finder. Archiv. f. Laryngol., Rhin., Berl., '96, v. 302.	Nasal obstruct.; headache.	Septum.	M.	34	Round-celled sarcoma; 3 months.	Right.	Snared	Not given.
82	Finder. Archiv. f. Laryngol., Rhin., Berl., '96, v. 302.	Nasal obstruct.; hemorrhage.	Septum.	M.	48	Round-celled sarcoma; 8 months.	Right.	Removed with galvano-cautery snare.	No return.
83	Finder. Archiv. f. Laryngol., Rhin., Berl., '96, v. 302.	Nasal obstruct. for some years.	—	F.	59	Spindle-celled sarcoma; 5 or 6 years.	Left.	Removed with snare and 3 years later again removed.	Patient finally died.
84	McBurney (C.). Med. Rec., '96, xlix., p. 204.	Obstruction and tumor in nose.	Left side of body of sphenoid.	M.	16	Spindle-celled fibro-myxo sarcoma.	Left.	Resection of superior max. and mass removed.	Four times returned and operated upon; 3 years since last operation; no return.
85	Boylan. N. Y. Med. Jour., '96, v. lxiv., p. 43.	Nosebleed and tumor, blocking the nasal chamber.	Lateral wall of nose.	M.	45	Spindle-celled sarcoma; 2 years.	Left.	Cold wire snare; 2 sittings.	No return after 2 years.
86	Black (G. M.). N. Y. Med. Jour., '96, v. lxiv., p. 222.	Occlusion of nares, fever & tumor.	Middle turbinate.	F.	38	Alveolar sarcoma; 2 years.	Right.	Cold snare curette and cautery under ether.	No return after 2 years.
87	Bliss. N. Y. Med. Jour., '96, v. lxiv., p. 110.	Nasal polyp for 1 year.	Middle turbinate.	M.	4	Sarcoma; 1 year.	Left.	Snared and finally radical operation.	Death in 6 weeks of recurrence.
88	Bliss. N. Y. Med. Jour., '96, v. lxiv., p. 110.	Growth of nose, producing "frog face."	Middle turbinate.	M.	9	Sarcoma.	Left.	No operation.	Probably death.
89	Scheppegrell. Laryngoscope, '96, v. I., p. 95.	Obstruction of nostril; mass in nose; hemorrhage.	Quadrangular cartilage.	M.	59	Round-celled sarcoma.	Left.	Portion removed with snare.	Both sides became involved; inoperable; death.
90	Haring. Brit. Med. Jour., Feb. 29th, '96.	Nasal obstruction.	Not given.	F.	26	Round-celled fibro sarcoma.	Right.	Repeated curetment; finally removal of ethmoid.	Not known.
91	Smith (Harvey). Manitoba and W. Canada Lancet, '97, v. 137.	Nasal obstruct.; impaired sense of smell; nosebleed; pain in side of face; impairment of general health.	Floor and outer side of nose.	F.	49	Round-celled sarcoma.	Right.	Repeated removal; snare and curette; Coley's toxins (of no benefit); operative measures were successful.	No return after 21 months.
92	Martuscelli. Archiv. Ital. di Laryngol., No. 3, 1897.	Reports five cases of sarcoma in clinic of Massei, Naples.	All were attached to turbinates by pedicles.	—	—	Microscopical examination not given.	—	Not known.	Not known.
93									
94									
95									
96									
97	Green. Med. News, '97, v. lxx., p. 173.	Growth in nose, involving orbit and ethmoid.	Middle and lower turbinates.	F.	32	Mixed sarcoma and carcinoma; 1 year.	Right.	Removed with forceps.	Died 5 months later of recurrence.
98	Nichols. Trans-Amer. Laryng. Soc., '97, p. 155.	Growth in nose, involving antrum and sphenoid.	Nose, antrum & sphenoid cells.	F.	27	Sarcoma.	Left.	No operation.	Death in 3 months.

SARCOMA OF NASAL CHAMBERS—(Continued).

No.	Reporter and Reference.	History.	Seat.	Sex.	Age	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
99	Nichols. Trans-Amer. Laryng. Soc., '97, p. 155.	Growth in nose; discharge; some pain.	Nostril, antrum and ethmoid.	F.	17	Myxo sarcoma; 3 years.	Left.	Removed and cells curetted.	Death in 2 years of recurrence.
100	Barrett, J. W. Intercol. M. J. of Australas., ii., '97, p. 251.	Mass in nose; hemorrhage, especially when growth was touched.	Base of sphenoid.	M.	19	Fibro sarcoma.	Right.	Cold snare and radical operation.	Not known.
101	Van Leyden. Monat. f. Ohren., Berl., '97, xxxi., p. 456.	Nasal obstruction and bloody discharge.	—	M.	70	Spindle-celled sarcoma; 1 year.	Left.	No operation.	Not known.
102	Delie. Rev. Hebdom de Laryngol. d'Otol. et de Rhinol. 18, 1898, No. 2, p. 1479.	Difficulty in breathing; mass present, which bleeds profusely; discharge;	Superior meatus.	F.	—	* * sarcoma.	Right.	Radical operation.	Death.
103	Mackenzie (G. Hunter). Brit. Med. Jour., '98, ii., 81.	Benign polyp in both nostrils, left side finally becoming malignant.	Middle turbinate.	F.	60	Round-celled sarcoma; 1 year.	Left.	Repeated removal with snare; further oper. declined.	Death after 1 year.
104	Levings (A. H.). Amer. Jour. of Surg. and Gynec., '98 and '99, xii., 109.	Growth in nose which was snared several times, only to return each time.	—	M.	6	Round-celled sarcoma.	Right.	Cold snare and radical operation.	No return after 4 years.
105	Levings (A. H.). Amer. Jour. of Surg. and Gynec., '98 and '99, xii., 109.	Growth completely filling the nostril; some pain.	—	F.	24	Fibro sarcoma.	Left.	Radical operation.	No return after 2 years.
106	Clark. N. Y. Med. Jour., '99, vol. lxiv., p. 14.	Growth in nostril; some discharge.	Septum.	F.	42	Myxo sarcoma; 1 year.	Left.	Cold wire snare and then radical operation.	No return 1 year later.
107	Rutten. Ann. des Mal de l'oreille du larynx, '99, xxv., 227.	Pain in face; nasal stenosis; tumor in nose; sanguin. * discharge.	—	M.	22	Fibro sarcoma.	—	Growth removed.	Return and death from extension to brain.
108	Bristow. Brooklyn Med. Jour., 1900, xiv., 814.	Tumor of nares; difficulty in breathing; frequent hemorrhage.	Infer. turb. and septum.	M.	—	Melanotic sarcoma.	Left.	Removed with curette.	No return after 1½ years.
109	Dunbar, Roy. Jour. Amer. Med. Ass., Aug. 10, 1901.	Nasal obstruct.; several polyps removed, only to return again; hemorrhage.	Septum and antrum.	F.	28	Sarcoma; 7 months.	Right.	Removed; return on several occasions; Coley's fluid no benefit; * both external carotids slight benefit.	Death from exhaustion 7 months after first onset.
110	Gibb, Jos. S. Case i.	Nasal stenosis; epistaxis marked; external deformity ("frog face"); impairment of general health.	Middle turbinate, involving ethmoid cells.	F.	48	Sarcoma; 4 years.	Both.	Repeated removal with snare and curette; severe hemorrhage at each operation.	Return after each operation; still living at time of report.
111	Gibb, Jos. S. Case ii.	Nasal stenosis; epistaxis and tumor in the nose, bleeding on slightest touch.	Turbinate and septum.	F.	50	Round-celled sarcoma; 3 years.	Right.	Thorough removal with snare and curette; rapid recurrence on two occasions.	Return each time; still living at time of report.

The following references to sarcoma of nose were found in literature, but the reports were inaccessible.

1. Grünwald (L.): Monatsschr. f. Ohrenh., Berl., '91, xxv., p. 171.
2. Lunin (N.): Tindi Obsh. dietsk. vrach., St. Petersburg, '94, '95, '96, ix., x., 41-46.
3. Boist: Verhandlungen d. Phys. Med. Gesellsch. zu Würzburg, '97, vol. xxxi.
4. Woodburn: Homœop., Eye, Ear and Throat, Jour., N. Y., '98, iv., 23-26.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. No 2.

FEBRUARY, 1902.

\$1.00 PER ANNUM.

A WORD TO OUR MEMBERS.

In December the Publication Committee sent a letter to all our members setting forth the requirements of the Post Office Department in reference to second-class matter. *A legitimate list of subscribers is absolutely necessary.* To secure this list a return postal was enclosed, subscribing to the journal, with the request that each one sign and mail. Many of our members have not complied with this request, and the expense of distributing the JOURNAL is greatly increased. On page xi. may be found a duplicate of that postal card. We urgently request all who have not returned the postal to cut out this application, sign it and forward to the committee.

OUR ADVERTISERS.

The Publication 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 the 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.

THE OSTEOPATHIC BILL.

Argument of E. Eliot Harris, Chairman of the Committee on Legislation, The New York State Medical Association, in opposition to the Brackett Osteopathic Bill No. 64:

Mr. Chairman and Members of the Judiciary Committee: I am here as chairman of the Committee on Legislation of the New York State Medical Association—a body chartered by the Legislature, one of the main objects of which is the maintenance and protection of the public health. My objection to Senate bill No. 64 has for its basis the protection of public health.

This bill is an act "Regulating and legalizing the practice of osteopathy in the State of New York, and fixing the penalty for the violation thereof," grants to certain persons permission to treat diseases by the so-called osteopathic method, and exempts them from the educational qualifications demanded by the Act governing the right to practice medicine in this State, by permitting the so-called osteopaths, who are members of the Osteopathic Society, to be registered and receive a license, without any examination. It allows licensed osteopaths of other States, maintaining standards equal to those provided in this bill to practice in this State, without an examination, on the payment of \$10.

The bill also allows them to sign birth and death certificates and to control contagious diseases, which must be considered as a positive danger to the community at large, because the bill prohibits the osteopaths from using valuable drugs or medicines.

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 the candidates to be examined for a license to practice 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 sepa-

rated 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, and is not entitled to a special examining board. The eye, ear, nose, throat, electrotherapeutic and other specialists do not ask exemption from the examination in the general 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 practice medicine or any branch of medicine, and they do not ask for a special examining board. 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 practice 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 disease 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 the public health demands that no one should be allowed to treat diseases 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 this State.

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 practicing 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 practice of medicine.

Second. Osteopathy should not be made a special branch of medicine, by an Act of the Legislature, but should come under the present State laws, which govern all the special branches as well as the general practice 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, including the use of drugs and other valuable therapeutic agents.

Fourth. If the so-called osteopathic bill becomes a law, all candidates who fail to pass the Regents' examinations to obtain a license to practice 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 college, for instance, does not enjoy.

And finally there would be a deal more right and reason for the Legislature to separate the special branches of criminal and corporation law from the general practice of law and to establish for each of them a special examining board, so as to make it easier for the candidates for admission to the Bar who desired to practice as specialists, than it would be for this Legislature, through this committee, to select one special therapeutic agent used in the treatment of disease and separate it from the general practice of medicine as a panacea for all diseases at the request of those ephemeral enthusiasts who now ask for a special osteopathic examining board.

[After the hearing by the Judiciary Committee the bill was quashed by a vote of 7 to 2. "It died in committee."]

ABSTRACT OF THE BRACKETT OSTEOPATHIC BILL.

An Act "regulating and legalizing the practice of osteopathy in the State of New York, and fixing penalties for the violation thereof."

Osteopathy means that science or system of healing which treats diseases of the human body by manual therapeutics for the stimulation of the vital remedial forces within the body itself, for the correction of misplaced tissue and the removal of obstructions or interferences with the fluids of the body, all without the internal administration of drugs or medicines; osteopathist or osteopath means a person who has been licensed, registered and legally authorized to practice osteopathy in this State.

Sec. 7. The board shall submit to the regents, as required, lists of suitable questions for thorough examination in anatomy, physiology, hygiene, obstetrics, pathology, diagnosis and theory and practice of osteopathy. From these lists the regents shall prepare question papers for all these subjects which at any examination shall be the same for all candidates; and in anatomy, physiology, hygiene, obstetrics and pathology shall be the same as for the candidates

for license to practice medicine. Applicants examined and licensed by other State examining boards, registered by the regents as maintaining standards not lower than those provided by this Act, on payment of \$10 to the regents, shall, on submitting such evidence as they may require, receive from them an endorsement of their licenses conferring all the rights and privileges of a regent's license issued after examination.

Sec. 11. Osteopaths when duly licensed and registered in accordance with this act shall have all the rights and privileges and be subject to the rules and regulations that govern other physicians or medical practitioners in the making and filing of certificates of births and deaths, in the control of contagious diseases, and other matters pertaining to public health; but they shall not be authorized to prescribe drugs for internal use or to perform major surgery.

Any person who at the time of the passage of this Act shall be actually engaged in the practice of osteopathy in this State and who is a reputable graduate of a regularly conducted school of osteopathy and who shall be recommended to the regents by the State Board of Osteopathic Examiners shall upon application, without examination, be granted a license to practice osteopathy, provided application for such license be made within ninety days after the passage of this Act.

THE LUNACY BILL.

This bill is ostensibly designed to centralize responsibility and economize the public money. It provides that the local board of managers of the State Hospitals for the Insane be abolished, and that these hospitals be placed under the immediate jurisdiction of the State Commission in Lunacy. (The amendments proposed by the Assembly Judiciary Committee do not alter this provision in any essential respect.)

The Commission in Lunacy has now all the work it can possibly do. To burden it with greater responsibilities and duties means that the patients under its charge will suffer. After all is said, the chief object and end of the State Hospitals is to properly treat and care for the insane as patients, not as paupers. Whatever tends to raise the standard in this regard demands encouragement; whatever tends to lower it demands equal condemnation.

The former treatment of the insane, under which all types and classes were herded together as one promiscuous mass, practically condemned every inmate to hopeless imbecility. Gradually a system of classification and segregation has been instituted along scientific lines, and from the occasional cure the percentage of recoveries has steadily risen to the encouraging number of 25 per cent. These results can be

obtained only by methods of careful classification and direct personal treatment. To carry this out involves time and increased expense. But it is a wise expenditure, and, in a broad sense, the most economic to the commonwealth, for it restores dependent citizens to self-sustaining and productive employment.

The present *per capita* cost is not excessive, having, by wise economies, which are being still further extended along the same lines, been gradually reduced during the past ten years.

The care of the insane in our State Hospitals at the present time is the best that has ever been attained. The results of enlightened hygienic and medical treatment in the amelioration and care of mental disease are better than were ever known before. There has been no complaint, from those who are competent to judge, regarding the present system, and from no point of view is there any just reason for the change advocated, while every aspect of the bill stamps it as a bad measure. As H. P. C., of the *New York Times*, says: "The money that has been expended by the State has gone thus far to the people for whom the taxpayers meant it—the objects, in other words, of the State's charities. The new method, if adopted, may check some insignificant expenditures for these but it will put vast sums much more conveniently within the reach of the contractors and their like. And that, whether Governor Odell knows it or not, is what his plan means."

The political pressure which this bill makes it possible to bring to bear upon the superintendents will so handicap them in applying the latest-approved methods in caring for the inmates that the steady progress which has characterized the treatment during the past ten years will be converted into an equally rapid retrograde movement. The medical profession should stand solidly against any such legislation. This is Senate Bill No. 40.

THE AMERICAN MEDICAL ASSOCIATION.

The following circular letter has been issued by John A. Wyeth, M.D., president of the American Medical Association:

Every practitioner who believes it necessary and wise to safeguard the material interests of the medical profession, to foster the growth and diffusion of medical knowledge, to promote friendly intercourse among American physicians, to elevate the standard of medical education, to secure the enactment and enforcement of medical laws, to enlighten and direct public opinion in regard to the problems of State medicine, and to represent to the world the practical accomplishments of scientific medicine, and who accepts the most important lesson of human experience that without organization controlled by judicious discipline there can be no co-operation between large groups of men, and no satisfactory or successful outcome to their

labors, should either join, or lend his influence to, the American Medical Association, the one great aim of which is to federate into one compact organization the medical profession of the United States.

He should join it in preference to any sectional medical association, because it is the *only representative national organization of the profession in the Union*. It has representative societies in every State and Territory of the United States. Its comprehensive scheme embraces the formation in every county of a medical society, with a uniform constitution and by-laws, each of which shall belong to the State association, organized and governed with equal uniformity, and all a part of the national body.

In the reorganization at St. Paul in 1901, the question of eligibility to membership in this vast body was referred directly to the primary or county societies. "No person not a member of his local affiliated medical society, provided there be one, shall be eligible to membership, or be allowed to continue as a member in the Association." This ruling dropped temporarily a considerable number who had long been on the roster as permanent members from State or local bodies which, by the by-laws then existing, made them eligible. While this action may, at first glance, seem unnecessarily severe or even unjust to those older members (among whom are many of the most loyal and faithful supporters of the national body), reflection must convince them that not only should they yield to the opinion of the majority, but approve the wisdom of this policy. In no other way could the exclusion of unworthy persons be secured than by having those who are intimately acquainted with the moral character and professional standing of the applicant pass upon his merits.

No other organization can compare with the American Medical Association as a working machine, capable of carrying to successful completion the great work of uniting the medical profession. Its officers are men long trained in a work which requires not only experience, but tact and business ability. It owns not only a surplus fund, which enables it to move with strength and confidence in the accomplishment of its purpose, but it has as its most active agent a weekly medical periodical, the *Journal of the American Medical Association*, which has a larger circulation than any similar periodical in the world. It maintains a National Committee on Medical Legislation, located in Washington City, and in this central committee every State and Territory in the United States has its membership. The State and county legislative sub-committees, reaching to all the Congressional districts and in touch with the affairs of the State, cannot fail to wield a powerful influence in all affairs connected with medical legislation.

To direct legislation in all matters pertaining to the public health, to inter-continental, insular and interstate quarantine, as well as to maintain and

to further improve the laws relating to the practice of medicine, and to the requirements of medical education is the prerogative of the medical profession. It is the plain duty of all to help in bringing about this "consummation devoutly to be wished" by joining the American Medical Association.

JOHN A. WYETH, M. D.

DOCTORS AND BLACKMAILERS.

The *Rochester Democrat* has the following lucid editorial on the recent action taken by the New York County Medical Association, making provision for the defense of its members against blackmailing suits for malpractice. We quote it in full:

The physicians of New York find themselves forced to organize for mutual defense against a class of blackmailers that has long existed in the big city, but has recently become larger and more aggressive than ever before.

The specialty of this class is cooking up charges of malpractice. The operator engages the services of a physician for himself or an accomplice and so manages matters as to provide himself with an ostensible grievance against the physician which he can make the basis of a charge of malpractice. He goes to the physician, threatens a lawsuit and an exposure, and finally accepts such a settlement as the physician is able and willing to make. The victims are generally young members of the medical profession not yet solidly established in practice. The older and better-known men have less reason to fear assaults on their reputation. They are pretty sure to fight a suit, and a fight is the last thing the blackmailers desire.

But the young physician is practically at the mercy of these swindlers. He knows how ready every one is to accept on the slenderest foundation, or no foundation at all, any story that ignorance or prejudice can invent to the discredit of even a well-known physician's professional skill. He feels that he cannot afford to face even a perfectly groundless suit for malpractice and the publicity that would naturally attach to it. Even if he should be vindicated in court the story would long be remembered against him by the very many unreasonable persons who because "where there's so much smoke there must be some fire"—of all idiotic adages the most entirely idiotic—are unable to totally disbelieve any discreditable charge noisily made against anybody. There is always the chance, too, that the jury may blunder into a verdict against him. In either event it will cost him more in money to fight than to settle. So he settles as cheaply as he can and the blackmailers thrive.

This blackmailing industry has become such a menace to young physicians that the New York medical societies have taken the matter up and propose that the physicians shall present a united front to the sharks. The association, it is planned, shall provide funds from which the expenses of defending suits for malpractice shall be paid, while the members of the association shall bind themselves never to settle a claim for damages for malpractice, but to fight every such claim "up to the Court of Appeals and back again," if necessary.

If the medical associations can unite on such a plan and stick to it the malpractice blackmail business will speedily be ruined in New York county. Of course, honest suits for damages for malpractice will continue to be pressed and won, as they should be, but probably not one in a hundred of the claims that young physicians settle, as "the easiest way out of it," is honest or would ever be brought into court if the victim showed a determination to fight.

THE PUBLIC HEALTH LABORATORIES OF NEW YORK CITY AND THEIR PRODUCTS.

At the January meeting of the Medical Association of the County of New York, the Committee on Public Health, of which Dr. N. E. Brill is chairman, made a report of its investigation into the antitoxin and vaccine virus products of the laboratories of the New York City Department of Health. The opinion of the committee, which was approved by the Association, is that these products are absolutely safe.

Dr. Brill began his report by referring to the recent death of a few persons in St. Louis through the administration of antitoxic serum for the purpose of curing diphtheria, which serum was afterward found to contain the poison of tetanus, and to the cases of tetanus toxemia developing after vaccination in Camden, N. J.

"The feeling of public distrust became intensified by a presentation in the lay press of the merits of certain antitoxins and the dangers lurking in those emanating from other sources than those of private manufacturing firms.

"The committee does not believe that it is within its functions to discuss the question whether boards of health should engage in the manufacture and sale of curative sera and vaccine virus. The latter is a question which might give controversialists opportunities for illimitable discussion."

The committee in its work had the co-operation of Dr. William H. Park, who has charge of the department devoted to the production of diphtheria antitoxin. He conducted them through the laboratories and to the stables where the horses and calves are kept. They found that the horses selected for antitoxin production are under nine years of age and perfectly healthy, and are kept in a special building on East 57th street. About two-thirds of the horses had been kept in the basement, and about one-third on the first floor.

In order to prevent criticism, however, all the horses are now kept upstairs. All horses are exercised one hour daily except on very stormy days. The diphtheria toxin used in the injection of horses is produced by a culture obtained by the Department of Health laboratory seven years ago. This toxin has proved so efficient and so safe that it is now used in almost every laboratory of the country and in many of the European laboratories. Before treatment the horses are systematically injected with tetanus antitoxin, so as to prevent the possibility of their contracting tetanus, and since adopting this plan five years ago no horse has developed tetanus.

As to vaccine virus, the calves used, the precautions for cleanliness employed, the care given to the stable and the handling of the virus have been investigated in detail. In a let-

ter to the committee Dr. Park says that the change in removing all the horses to the first floor, where they will be kept "from now on," was made at their suggestion. He says in part:

"To the best of my belief the production of diphtheria antitoxin and of vaccine virus in the New York City Health Department is carried on in such a way that it is almost impossible to conceive of these products carrying any danger. The only possible change that I could suggest would be to have the laboratories somewhere in the country. To this there is one great objection—it would be very difficult to have as capable men supervising all the steps as is now possible. The distance the men would have to travel daily to reach a country place would almost prevent the best class of men from undertaking the work."

The committee, which comprised Drs. Brill, J. F. Erdmann, F. P. Hammond and J. J. Nutt, concluded its report by saying that it is "unanimously agreed that the character, professional qualifications and standing of the men engaged in the supervision and control of the manufacture of these products of the laboratory of the Health Department, none other than skilled help carrying out the details, are more than sufficient guarantee as to the quality of the curative sera and vaccine virus. These men represent the highest professional and scientific skill to be found in this city in these departments, as is well known to the entire profession. The methods which are used, and which you have had presented, are beyond criticism.

In conclusion it is most worthy of remark that the committee has been unable to find any recorded cases of tetanus in New York following the use of antitoxin or vaccine virus, and that it is their opinion that these products of the laboratory of the Department of Health are absolutely safe.

BILLS BEFORE THE LEGISLATURE.

Senate Bill No. 16. Introduced by Senator Hill. An Act to amend the Public Health Law and acts amendatory thereof in relation to pharmacy.

Senate Bill No. 40. Introduced by Senator Brackett. An Act to amend the insanity law, relating to the management of State Hospitals, abolishing the boards of managers and creating boards of visitation therefor and extending the powers and duties of the State Commission in Lunacy.

Senate Bill No. 115. Introduced by Senator Slater to prevent the adulteration of and deception in the sale of drugs, chemicals and other substances.

Copies of these bills may be had by any of our readers by applying to the senator or legislator from his district.

The Association.

The Kings County Medical Association held its regular monthly meeting on Tuesday evening, January 14th, with the president, Dr. H. Arrowsmith, in the chair and about forty members and guests present.

This being the annual meeting, after the minutes were read the secretary was authorized to cast an affirmative ballot for the following ticket for officers, fellows and alternates for 1902:

For President—Hubert Arrowsmith.

For Vice-president—George H. Treadwell.

For Recording Secretary—Frank C. Raynor.

For Corresponding Secretary—George F. Maddock.

For Treasurer—Edward H. Squibb.

For Members of the Executive Committee—James Cole Hancock, John O. Polak (to fill vacancy).

For Member of the Nominating Committee of the Fifth District Branch—Charles P. Gildersleeve.

For Fellows of the State Association—H. B. Bayles, A. C. Brush, G. W. Colby, W. D. Davis, A. W. Ford, O. Joerg, F. B. Keleher, T. M. Lloyd, T. A. McGoldrick, J. F. O'Connell, J. J. O'Connell, B. Onuf, S. C. Pettit, V. A. Robertson, W. S. Shattuck, H. M. Smith, W. H. Steers, J. D. Sullivan, G. W. Welty, M. G. White.

For Alternates—L. C. Ager, L. A. W. Alleman, H. C. Anderson, H. Arrowsmith, L. G. Baldwin, E. M. Bullwinkel, J. W. Ingalls, L. T. Jackman, G. F. Maddock, D. W. Meyer, P. J. Prendergast, N. P. Rathbun, D. D. Roberts, J. P. Rowan, J. F. Todd, T. J. Trueman, J. S. Waterman, J. S. Wood, E. E. Woolworth, R. M. Wyckoff.

Dr. S. J. McNamara presented three patients illustrating his report on "Three Cases of Obstetrical Paralysis." The cases were two babies in arms and a young girl. The paralysis in the babies was in the right arm in each case. In the young girl it was in the left arm. After presenting his short report on the cases, they were exhibited and the young girl went through several motions of her arm to show how embarrassed it was in its use. The cases were discussed by Drs. William H. Haines, B. Onuf and J. O. Polak.

Dr. A. C. Brush then read his paper on "Traumatic Conditions of the Spine and Cord." In opening the discussion Dr. C. F. Barber presented some preserved specimens of sections of the spine, illustrating the points he wished to emphasize. The paper was further discussed by Dr. William Browning.

Dr. F. C. Raynor presented a paper on "Malignant Growth of the Uvula." Dr. Archibald Murray, who had assisted in the microscopical examination of the tissue, discussed the paper, and Dr. Jonathan Wright emphasized the fact of the rarity of this growth.

Dr. Joseph F. Todd made a few remarks on a case of a man well along in years, from whom he removed several needles from the urethra. He presented the needles in a small vial for examination. As the interest in the scientific part of the meeting had taken up so much time, the other reports to be made were postponed until the next stated meeting.

Before adjourning for social intercourse the following alteration in the by-laws was offered and placed in the hands of the secretary to lie over according to the rules:

"The Executive Committee shall hold regular meetings at not more than seventeen nor less than five days before each stated meeting of the Association, and shall hold special meetings when called by the president."

The Orange County Medical Association held its annual meeting and election of officers for the ensuing year, Wednesday afternoon, at the residence of Dr. Conner, on South street, Middletown, N. Y.

Preceding the business meeting a scientific session was held, at which Dr. Charles E. Quimby, of New York, gave a short address on the "Physical Diagnosis of Pulmonary Diseases Based on Acoustics." His remarks were listened to with great interest by those present and a hearty vote of thanks tendered the doctor at the close of the session. Those present were as follows: Drs. Conner, Douglas, Purdy and Redfield, of Middletown; Drs. Evans and Distler, of Westtown; Dr. F. D. Myers, of Slate Hill; Dr. F. W. Dennis, of Unionville; Dr. E. D. Woodhull, of Monroe; Dr. H. E. Wise, of Turners; Dr. W. S. Russell, of Highland Mills, and Dr. Edward A. Sharp, of the "Falkirk," Central Valley.

The executive session was opened by Dr. Conner, president of the Association, with an appropriate address, reviewing the work of the Association during the past year. He stated that the membership had increased steadily each month, also that speakers had been present from four of the States of the Union, as well as many prominent men from New York City. Ten meetings had been held, including one held at Newburgh under the auspices of the Fifth District Branch of the New York State Medical Association. At these meetings subjects both medical and surgical had been brought up and freely discussed by those present. Dr. C. I. Redfield, secretary and treasurer, followed with the secretary and treasurer's report. He stated that the average attendance

at each meeting had been ten. Invitations had been sent out monthly to the members of the profession in this county and many had accepted the opportunity to be present. Scientific addresses had been delivered by Drs. Wyeth, Wiggin, Sayre, Gouley, Syms, Mayer, Pollitzer, Goffe, Harris, Deaver, Guiteras and others.

The treasurer reported the finances of the Association in excellent condition.

The Association gave a vote of thanks to Dr. Conner for his liberality in providing such excellent speakers during the year and for entertaining them at his residence. Also to Dr. Redfield for his services as secretary and treasurer, and to Dr. William E. Douglas for formulating and presenting to the Association printed copies of the by-laws.

Dr. Edward A. Sharp, of the "Falkirk," Central Valley, was elected to membership, and Dr. J. B. Hulett, of Middletown, was reinstated as a member.

The Association then elected officers for the ensuing year as follows:

President—Dr. M. C. Conner.

Vice-president—Dr. F. W. Dennis.

Secretary and Treasurer—Dr. C. I. Redfield.

Delegate to the American Medical Association Meeting at Saratoga Springs in June—Dr. E. D. Woodhull, of Monroe.

Alternate—Dr. Charles E. Townsend, of Newburgh.

Member of the Council of the New York State Association—Dr. William E. Douglas.

* * *

Chautauqua County Medical Association held its annual meeting January 21st, with twenty-five members present.

PROGRAM.

President's annual address, with obituary of Dr. H. J. Dean—Dr. Thomas D. Strong, Westfield, N. Y.

The Etiology and Treatment of Atony of the Stomach—Dr. Allen A. Jones, Buffalo, N. Y.

A Record of Cases—Dr. E. S. Rich, Kennedy, N. Y.

Report of Cases of Abdominal Surgery—Dr. E. M. Scofield, Jamestown, N. Y.

Artificial Infant Feeding—Dr. A. Austin Becker, Jamestown, N. Y.

Some Demonstrations with the X-Ray Machine—Dr. Livingston, Jamestown, N. Y.

Report of Interesting Cases—By Members.

The following officers were elected:

President—Dr. William M. Bemus, Jamestown, N. Y.

First Vice-president—Dr. O. C. Shaw, Cassadaga, N. Y.

Second Vice-president—Dr. E. M. Scofield, Jamestown, N. Y.

Secretary-Treasurer—Dr. H. A. Eastman, Jamestown, N. Y.

Member of Executive Committee—Dr. H. Francis Hunt, Dewittville.

Fellows—Drs. Walter Stuart, Westfield; Thos. D. Strong, Westfield; H. A. Eastman, Jamestown.

Alternates—Drs. M. N. Bemus, E. S. Rich, J. R. Smith.

Member Nominating Committee Fourth District—Dr. E. M. Scofield, Jamestown; Alternate, Dr. V. D. Bozousky, Dunkirk.

Dr. L. H. Snow was elected member of the Association.

The next meeting will be held at Chautauqua July 1st, just prior to the Fourth District meeting, which will be held the same day and at the same place.

* * *

The Cortland County Medical Association held its regular monthly meeting at the office of Dr. Higgins, Friday evening, January 16th. Dr. Carpenter read a paper on diphtheria, confining his thoughts to diagnosis and treatment. The paper was both practical and timely, as at present there are a few cases of diphtheria in our midst. It is the opinion of all, or all who had used it, that antitoxin or serum treatment is of great value.

A motion was made and carried that our county meeting be held the first Friday of each month instead of the third in order that a report can reach the Publishing Committee in time to appear in THE NEW YORK STATE JOURNAL OF MEDICINE. On motion, it was decided that \$12 of the funds in the treasurer's hands be contributed to the State fund for entertaining the American Medical Association meeting at Saratoga in June. At the same time each member may contribute as he sees fit personally.

The following officers were elected for 1902:

President—Dr. F. D. Reese, Cortland, N. Y.

Vice-president—Dr. H. C. Hendrick, McGraw, N. Y.

Secretary—Dr. P. M. Neary, Cortland, N. Y.

Executive Member—Dr. C. D. Vernooy, Cortland, N. Y.

Fellow—Dr. Higgins, Cortland, N. Y.

Alternate—Dr. F. D. Reese, Cortland, N. Y.

Treasurer—Dr. T. W. Higgins, Cortland, N. Y.

* * *

The Otsego County Medical Association held a meeting January 15th, perfected its organization and adopted by-laws. The following officers were elected for the ensuing year:

President—Dr. Julian C. Smith.

Vice-President—Dr. S. G. Pomeroy.

Secretary—Dr. A. H. Brownell.

Treasurer—Dr. F. L. Winsor.

It was decided that the regular meeting in May should be the annual meeting.

The Rockland County Medical Association held its annual meeting at Nyack, N. Y., January 15th, at 3 P. M., at St. George's Hotel.

The meeting was an enthusiastic one. Three new members were admitted—Dr. James A. Dingman, Spring Valley; Dr. John W. Sansom, Sparkhill, and Dr. John C. Slawson, Nyack. The scientific session was made very interesting by the presentation of two papers on malignant growths of the kidney. Dr. Parker Syms, of New York, read a paper on the indications for operations upon the kidney, nephrectomy, nephrotomy and nephropexy, illustrating by cases of nephrolithiasis, pyonephrosis and carcinoma.

Dr. George A. Leitner, of Piermont, presented two specimens of adeno-carcinoma of the kidney. He read the history of the cases and operations, and presented one of the patients for inspection.

The officers elected for the ensuing year are as follows:

President—Dr. Gerrit F. Blauvelt, Nyack.

Vice-president—Dr. D. Burr Van Wagenen, Suffern.

Secretary and Treasurer—Dr. N. B. Bayley, Haverstraw.

Fellow—Dr. S. W. S. Toms, Nyack.

Alternate—Dr. Charles D. Kline, Nyack.

The Society passed resolutions asking the Assemblyman from Rockland County and the State Senator from this district in the Legislature to use their influence and vote against any relaxing of the requirements for the practice of medicine now demanded by the State of all who are regular graduates.

The next meeting will be held at Suffern on the third Wednesday in April.

* * *

Dutchess County Meeting.—The annual meeting of the Dutchess County Medical Association was held at Vassar Hospital, Poughkeepsie, January 8th, Dr. I. D. LeRoy, of Pleasant Valley, president, in the chair. Dr. Emil Mayer, of New York, who was present by invitation delivered an address. By-laws were adopted and officers elected for the ensuing year as follows:

President—Dr. I. D. LeRoy, Pleasant Valley.

Vice-president—Dr. Edwin Barnes, Pleasant Plains.

Secretary—Dr. J. W. Atwood, Fishkill-on-Hudson.

Treasurer—Dr. L. C. Wood, Poughkeepsie.

The following were elected to membership in the Association at this meeting:

Dr. L. C. Wood, Dr. Grace N. Kimball, Dr. Elizabeth B. Thelberg, all of Poughkeepsie.

The next meeting will be held at Vassar Hospital, April 23d.

Book Reviews.

A TREATISE ON SURGERY.—By American Authors. For Students and Practitioners. Edited by Roswell Park, A. M., M. D., Professor of the Principles and Practice of Surgery and of Clinical Surgery in the Medical Department of the University of Buffalo, N. Y.; Member of the Congress of German Surgeons; Fellow of the American Surgical Association; ex-President of the Medical Society of the State of New York; Surgeon to the Buffalo General Hospital. Third Edition. Enlarged and thoroughly revised; with 692 engravings and 64 full-page plates in colors and monochrome. Lea Bros. & Co., New York and Philadelphia. 1901. PP. 1408. Octavo.

The editors and publishers of this work are to be congratulated on the promptness with which this third edition has been called for, as it is distinctly complimentary to both.

It contains a complete presentation of surgery as it is practiced at the beginning of the twentieth century, including the special surgery of the eye, ear, nose and throat, and gynecic surgery. While it is inevitable that a volume in which so many distinguished men collaborate should present many variations in the merit and clearness of its component parts, nevertheless the average is very high, and there is much less overlapping and conflict of opinion than one would expect. Many of the unique features that rendered the preceding edition so popular have been continued in this one, and no review would be complete without a reference to the illustrations which are, as a rule, numerous, well selected and beautifully executed. The publishers doubtless had good reasons for issuing so large a work in one volume, but at first sight it would certainly seem that convenience in handling and increased durability would have more than offset the slight increase in cost of binding in two volumes.

Part I. is devoted to surgical pathology, and among other things contains chapters on hyperemia and inflammation by Park and a chapter by Irving Lyon on blood examination as applied to surgery, which is handsomely illustrated.

Part II., on surgical diseases, is very largely contributed by Park, the exceptions being a chapter on syphilis by Fordyce and one on gonorrhoea by Belfield.

Part III. contains a very clear chapter on anesthesia by Hare and two on minor surgery, which include less than half a page of text on spinal anesthesia by Parmenter, of Buffalo.

Part IV., containing the chapters devoted to injury and repair, are all contributed by Nancrede, of the University of Michigan, and include a careful study of gunshot wounds.

Part V. is devoted to surgical affections of the tissues and opens with a chapter on tumors by the editor. As might be expected, he is firmly wedded to the infectious theory of cancer and presents many of the conclusions recently published by Gaylord under his supervision. This part also contains chapters on joint surgery and diagnosis by Ransohoff, of Cincinnati, which are very complete, though sometimes rather obscure, and on fractures and dislocations by the late Professor Mudd, of St. Louis.

Part VI. on special surgery cannot be referred to in detail. While it is hardly to be expected that the contributors should be full enough on each subject to satisfy the specialist, they are ample for purposes of diagnosis and serve to give an adequate idea of the resources which modern surgery can command. In this part abdominal surgery, including hernia, is contributed by Maurice Richardson, rectal diseases by Kelsey, genito-urinary diseases by Belfield, gynecic surgery by Crockett, orthopedic surgery by Lovett, and the surgery of the eye by Bull.

As a whole, the book has both the merits and defects of all the so-called "systems." It gains by the

fact that each chapter is written by a specially qualified man and loses because an author rarely works in collaboration as carefully as when his reputation stands or falls by itself alone. The value of any given chapter, therefore, must be estimated by the personal equation of its author, whether he is optimistic or pessimistic, radical or conservative, and whether his strong point is differential diagnosis or pathological anatomy or treatment.

VENEREAL DISEASES—A Manual for Students and Practitioners, by James R. Hayden, M. D., Chief of Clinic and Instructor in Genito-Urinary Diseases at the College of Physicians and Surgeons, New York; Assistant Visiting Genito-Urinary Surgeon to Bellevue Hospital. Third and Revised Edition. Lea Bros. & Co., Philadelphia and New York.

In the third edition of this little volume, which is designed for the use of students, as well as general practitioners, the author has endeavored to give in a clear and compact form a practical working knowledge of gonorrhoea, syphilis and chancroid, and he seems to us to have succeeded admirably. In no department of medicine has there been a greater manifestation of literary activity with less actual progress, and our author deserves great credit for his conservatism in a day when fads and extremes are fashionable.

This moderation is shown particularly in his discussion of the etiology of gonorrhoea and the doubtful value of microscopic diagnosis in many cases. The same conservative, scientific spirit appears in his estimate of the irrigation treatment, which he considers a fad, and of the various proprietary silver salts, which owe their vogue to persistent advertising rather than to any preponderating merit.

The chapters on syphilis include hereditary syphilis and syphilis as it affects the various tissues and organs of the body, and, if it is hardly possible in a book of this size to contribute anything new on the subject, the author may congratulate himself upon a very clear presentation of a subject which is often very imperfectly understood.

The descriptions of disease, including many of the surgical methods involved in their proper treatment, are clear and beautifully condensed, and the therapeutics, while undoubtedly conservative, are not likely to arouse expectations which cannot be realized in actual practice.

Correspondence.

THE TREATMENT OF CONSUMPTIVES AT LIBERTY.

LIBERTY, N. Y., Jan. 20, 1902.

To the Editor of the JOURNAL:

Dear Doctor—In the January issue of the JOURNAL you devote much valuable space in editorial comments on certain reports that have recently been widely circulated in the public press. These reports allege in substance that Liberty is waging relentless war on consumptives, with the object of driving them from her borders.

In the interests of truth I beg to state that we are not guilty. There is not an iota of truth in any of these reports. They are "pipe dreams" of yellow journalism. The only laws in force here concerning consumptives is one prohibiting promiscuous expectoration and another prohibiting the maintenance of sanitarium within the village limits. The law concerning expectoration is very generally observed. Only four (4) persons have ever been fined here for violating it.

The law concerning sanitarium was recently violated and the offending parties quickly brought to time.

There is no widespread prejudice against or fear of consumptives in this community. On the contrary, the majority of our citizens cater to this class of health-seekers the greater part of the year. In justice to all concerned I trust you will give this statement as prominent a place in the JOURNAL as you did the reports which inspired it. Consumptives will be received in Liberty in the future as they have been in the past, with every consideration which self-interest and humanity can dictate.

J. L. C. WHITCOMB, M. D.

We are gratified to know that the enforcement of the laws is confined to the prohibition of expectoration and the "maintenance of sanitarium." There might be some uncertainty as to when hotels filled with permanent consumptive guests shall be regarded as sanitarium.

TETANUS FOLLOWING VACCINATION.

Jan. 21, 1902.

TO THE NEW YORK STATE JOURNAL OF MEDICINE:

Gentlemen—I will be greatly obliged to any of your readers who may have had or know of cases of tetanus following vaccination if they will communicate with me concerning them. I am engaged in a critical analysis of such cases in the hope of determining their etiology, and desire to secure all the data possible.

Respectfully yours,

JOSEPH MCFARLAND, M. D.

17th and Cherry Streets,
Philadelphia.

Deaths.

Dr. F. M. Barrows, Clinton, died December 28th.

Dr. James Hervey Bell, New York City, died December 3d.

Dr. John E. Beers, Danby, died December 5th.

Dr. Conrad J. Crouse, Clarksville, died December 12th.

Dr. Rush Shippen Huidekoper, New York City, died December 17th.

Dr. Hiram Leonard Ives, Troy, died December 17th.

Dr. LeRoy E. Jones, Buffalo, died January 6th.

Dr. S. Seabury Jones, New York City, died January 21st.

Dr. Isaac T. Monroe, Granville, died December 29th.

Dr. Charles B. Osborne, South Waterloo, died December 2d.

Dr. William A. Pierrepont, Brooklyn, died January 6th.

Dr. Charles H. G. Steinsieck, New York City, died December 3d.

Dr. Francis A. Utter, New York City, died December 10th.

Dr. Samuel C. Webb, Homer, died December 29th.

Dr. James S. Whedon, Jordan, died January 6th.

Dr. William H. Williams, Brooklyn, died January 3d.

Dr. John D. Young, Starkville, died January, 1902.

ORGANIZED MEDICAL DEFENSE.

The question has frequently been asked whether it would be feasible, practical and for the best interest of our profession for medical societies to take on themselves the defense of their members when sued for alleged malpractice, etc. On the ground that what affects the honor and standing of one member affects the honor and standing of the entire profession, it would seem that the question should be answered in the affirmative. This view was taken by the New York County Medical Association at its meeting last month, when it adopted a plan for the defense of its members in such suits. There seems to be no good reason why the outcome of the plan should not be as favorable as its projectors anticipate. There is certainly no question but that an organized effort on the part of the profession will have a tendency to deter blackmailers from bringing suits and will discourage pettifogging lawyers from working up such practice among the ignorant or dishonest classes. The public, too, will obtain a different impression as to the motives that usually instigate such suits.

While it is true that suits for malpractice are more commonly brought against surgeons, yet physicians are continually subject to these worse than annoyances. And, without doubt, this class of suits is becoming more frequent, for, unfortunately, those who have attempted this form of blackmail have found the general practitioner an easy prey. The physician attacked is too often ready to compromise regardless of the fact that he knows he has done only what is right. This compromise is made from the feeling that a legal defense would entail financial sacrifices, and the average physician in such a predicament would rather settle the case by the payment of a small sum or by giving up the collection of a just debt. By so doing he thinks that he would be avoiding an unprofitable and unpleasant notoriety at least.

If this compromising affected only the individual who compromised it would not be such a serious matter. But the fact is that every case so settled is an encouragement to the bringing of other similar suits and a breeder of other blackmailing schemes. It thus becomes a question of medical polity, something which concerns the profession as a whole. From this point of view—and it is the correct one—the physician or surgeon who compromises these claims is doing a positive injury to other members of the profession as well as to himself. If the result of these suits is something that affects the many, the many must step in and unitedly defend them. An organized defense is the only feasible way of meeting the rapidly growing number of blackmailing threats and alleged malpractice suits. This new departure in association helpfulness will, therefore, be watched with interest by other societies.—*Jour. A. M. Ass.*

Original Articles.

PROGNOSIS AND TREATMENT OF DIABETES MELLITUS.*

BY ABRAHAM MAYER, M.D.,

New York,

Visiting Physician to Lebanon Hospital, etc.

PROGNOSIS.—The prognosis of diabetes depends upon the degree of the disturbances of metabolism. The greater these disturbances the more pronounced are the various symptoms and the more unfavorable the diagnosis. When the disease begins in the severe form, with a great excretion of acetone and increased ammonia, the prognosis is especially unfavorable, for in such cases the tolerance for carbohydrates is abolished. Where there is some tolerance for carbohydrates the conditions are decidedly better. The age of the patient is of great prognostic worth; when the disease begins in childhood it is rapidly fatal as a rule. The more advanced the age of the patient at the commencement of the disease, the more favorable is the prognosis. Such complications as tuberculosis and gangrene are decidedly unfavorable. So also when arteriosclerosis complicates the disease, on account of the danger of rupture of the smaller vessels in the brain and other organs. More favorable is the traumatic or syphilitic origin of the disease.

Among the favorable symptoms and conditions may be mentioned:

1. Advanced age at the commencement of the disease.
2. Long duration of the disease without the occurrence of serious complications, or much wasting.
3. Traumatic origin.
4. Syphilitic origin.
5. The occurrence only of the mild form of the disease in other members of the family.
6. Obesity, uric acid diathesis and gout, associated with diabetes.
7. A mild form of glycosuria, with tolerance for a certain amount of carbohydrates.
8. Rapid diminution of the amount of excreted sugar, with increasing tolerance for carbohydrates.
9. Absence of acetone and no increase of ammonia excretion.
10. Favorable conditions of life, allowing thorough dietetic and hygienic régime.
11. Onset of the disease about the time of the menopause.
12. Transition of diabetes mellitus into diabetes insipidus (very rare).

*Read before the New York State Medical Association, N. Y. County, January 20, 1902.

The unfavorable symptoms and conditions are :

1. Early age at the commencement of the disease, especially infancy and childhood.
2. Short duration with great wasting and loss of strength.
3. Severe general symptoms, such as of the gastro-intestinal tract.
4. The occurrence of gangrene.
5. The occurrence of the severe form of diabetes in other members of the family.
6. The occurrence of K \ddot{u} lz casts in the urine.
7. Severe form of glycosuria, absence of any tolerance for carbohydrates.
8. Phthisis or nephritis, complicating diabetes, especially if the sugar entirely disappears from the urine.
9. Large and continued excretion of acetone and increased ammonia.
10. Unfavorable conditions of life which do not allow a dietetic and hygienic r \acute{e} gime.
11. Organic disease of the pancreas.

TREATMENT OF DIABETES MELLITUS.—John Rollo, an English surgeon, in the year 1797, was the first to call attention to the diet in the treatment of diabetes mellitus. He observed the action of animal foods and fats in this disease, and advised their use. He also noticed, when carbohydrates were given, that the symptoms became aggravated, and hence counseled against them. He, however, was too severe in excluding vegetable food of every kind, but wisely saw the use of the administration of alkalies and laxatives.

Since Rollo's time the question of diet in diabetes has been studied by clinicians, more so during the past two decades by such men as Cantani, Pavy, Seegen, K \ddot{u} lz, Ebstein, Naunyn, von Noorden, Williamson, Hirschfeld and a host of others who have given this subject the closest attention. So that to-day this important therapeutic measure has been thoroughly systematized. Rubner has given us in tables the caloric requirements of individuals of different weights and occupations; and Koenig has analyzed the different foods, dividing them into their component parts of albumins, carbohydrates and fats, so that their exact caloric equivalents can be exactly computed.

Knowing the exact excretion of sugar of a diabetic and his weight, his nutritive needs are readily ascertained from these tables.

Chemists have come to our aid in preparing aleuronat and almond flour, which, notwithstanding the disagreeable taste of the former, in some measure replace wheaten flour, and they have given us such comparatively harmless coal-tar products as saccharine and crystallose, to replace the sugars, the two foods so harmful in diabetes and for which patients so longingly crave. From almond meal very palatable cakes, containing a very small quantity of carbohydrates, can be produced, and champagnes and wines containing one-half per cent. or less of sugar can be

found on sale. The formula of an artificial milk containing but a minute quantity of lactose was first published by Williamson in England. So that to-day the diet of a diabetic can be made so various and palatable that, excluding those who must be placed on a very rigid diet, the majority are thoroughly content with their menus, an advantage which both patients and practitioners will recognize.

Inasmuch as the exact cause of diabetes mellitus is still an unsettled question, our chief endeavor has been and is to combat the symptoms as they present themselves. Where syphilis or neurasthenia can be defined as the cause, special treatment must be directed against them, but whatever the etiological factor or factors may be, our whole aim must be to increase the power of the system for oxidizing carbohydrates and to diminish the hyperglycemia—in other words, to make our patient aglycosuric, or sugar-free.

To do so, no method which excludes dietetic treatment is of any avail. I am a believer in the efficacy of medicines in this disease; to the dietary they are important adjuncts.

For purposes of treatment, diabetes may be divided into mild, medium severe, severe and very severe forms, and it is important to determine under which head a patient should be classified. To do so, a patient is gradually or at once placed on a standard, rigid diet, which consists of the following table :

TABLE No. 1.

STANDARD DIET.

BREAKFAST.—Coffee or tea, with saccharine or crystallose and two or three teaspoonfuls of thick cream. Fatty meats, such as ham, tongue, goose breast, or sausages free from carbohydrates. Two scrambled eggs, in lots of butter.

10 A. M.—A small piece of smoked salmon or some sardines; or two hard-boiled eggs, with much butter and seasoned to taste. A small glass of brandy, or perhaps some Rhine wine.

DINNER.—Soup, with green vegetables, such as young green string beans, asparagus tips, sprouts, etc.; or a cup of bouillon, with two yolks of eggs. One to three courses of meat, fish, game or poultry. Lettuce, endive, cucumbers or canned asparagus, with a little malt vinegar and lots of olive oil. Green vegetables, with butter or sweet cream. Swiss cheese, with butter. Black coffee. Some Rhine wine.

4 P. M.—Cup of coffee, with one egg, or a cup of tea, with a little cream. A little cheese, with butter, or a few sardines in oil; or smoked fish.

SUPPER.—One or two courses of meats or fish. Salads, with a little malt vinegar and oil. Green vegetables, with butter. Scrambled eggs, with lard or butter. A small glass of brandy or some light, sugarless wine.

If a patient has the disease in the mild form he will, on this diet, at once become sugar-free; certainly at the end of four or five days no sugar will appear in the urine. In the medium severe form it may be necessary, besides putting the patient on this rigid diet, to reduce the nitrogenous foods very considerably in order to make the urine sugar-free. Between these two classifications a number of divisions may be made, but in all of them the tolerance of carbohydrates becomes re-established. In the severe form the urine shows the ingestion of the minutest quantity of carbohydrates, or it may contain sugar when no carbohydrates are taken at all. For in these severe cases in the metabolism of proteids at least one-third is converted into glucose in the system, and this is at once excreted. For this reason it is necessary to reduce the ingestion of nitrogenous foods to a very small quantity. In the very severe form, not only have we the conditions of the previous division, but it is possible for the organism to produce sugar from its own albumins, and in the urine are found such products as B-oxybutyric acid, diacetic acid, acetone and increased ammonia.

There are two axioms formulated by Naunyn which have a special bearing on this subject, and which are based on a law of Hoffman: When a weakened functional action is rested it recuperates and regains its original normal condition; secondly and conversely, overtaxing a weakened function produces a permanent diseased condition. In other words, when a diabetic is made sugar-free and continues to remain so for a certain length of time his tolerance for carbohydrates increases, and, secondly, when a diabetic continues to excrete sugar for some time this weakened function becomes permanent and his tolerance for carbohydrates diminishes. Let me illustrate these axioms. A diabetic who requires 2,500 calories can assimilate 30 grams of carbohydrate without any glucose appearing in the urine. If now, by diet and other means, you make him aglycosuric, and keep him so for three or four weeks, perhaps as many months, you will find that he will be able to assimilate 50, 60 or even 100 grams of carbohydrates without any glucose appearing in the urine. His tolerance for carbohydrates has greatly increased.

Given the same patient requiring the same caloric needs, he ingests 40 or 50 grams of carbohydrates instead of the 30 grams, and hence excretes the excess 10 or 20 grams in the urine. In a very short time it will be found that even the original quantity of 30 grams will cause a decided increase of sugar in his urine; in other words, his weakened function has been overtaxed; his tolerance for carbohydrates is therefore greatly diminished. These facts form the basis of the rational dietetic treatment.

Not only is it important that a diabetic be carefully nourished, but his nutritive needs must be exactly calculated and the character of his food carefully selected. Not only the quality, but

the quantity of the various foods he is to receive must be carefully estimated. I have found that diabetics suffer from overfeeding and badly-prepared foods in the majority of cases. Occasionally it becomes necessary for the physician to underfeed his patient in order to get him sugar-free, and this, of course, is followed by a decrease in weight. Naunyn and von Noorden even occasionally order a fast day in the dietetic régime, making the patient use up his own body fat and albumins. For, as we have seen in severe cases, 30 or more per cent. of the ingested albumins may be converted into glucose in the body by the splitting up of the albumin molecule. Von Noorden occasionally allows a patient on these fast days some green vegetables, prepared with lots of oil or butter and fluid *ad libitum*, the reason being that oils and butter have a high nutritious value and replace the loss of weight. Fats are not supposed to form glucose in the system. He calls these "vegetable days," and prescribes them once in two or three weeks. I have found this a very good procedure.

I annex in tables a brief list of foods, which can properly be given to a diabetic: Table No. 2, foods that can be given to all diabetics; Table No. 3, foods that can be conditionally given, and to offset these two, Table No. 4, foods which must be avoided.

Foods are divided into three general classes—albumins, carbohydrates and fats. Each has a specific caloric equivalent. As a rule fats and albumins constitute the foods a diabetic must receive. Carbohydrates are excluded altogether or are used only in carefully measured quantities.

TABLE No. 2.

FOODS ALLOWED.

Fresh meats, preserved, smoked or salted meats; sausages free from carbohydrates; pâté of goose liver.

Fresh, smoked or salted fish; fish preserved in oil; lobsters, crabs, shrimps, clams, mussels, turtle, terrapin.

Meat extracts; meat peptones; manufactured albumin foods; eggs; preserved fish eggs; fats; oils; butters; cream, 10 to 12 ounces daily to prepare sauces, etc.; cream cheeses.

Fresh green vegetables, as young string beans, Savoy, sprouts, cauliflower, asparagus. Must be parboiled first and then boiled in salt water and served with much butter; some spices, pickles and mixed pickles; meat soups and bouillon; custards prepared with saccharine or crystallose.

Natural and carbonated waters; lemonade with saccharine; whiskey; cognac; Rhine wine and other sugarless wines.

TABLE No. 3.

FOODS MODERATELY ALLOWED, BUT EXCLUDED IN RIGID DIET.

- One tablespoonful dried beans, split or green peas; two tablespoonfuls turnips, carrots, pumpkin and oyster plant; one small potato, apple, pear, peach, apricot or tomato.
- One tablespoonful currants, raspberries, or strawberries; ten walnuts or Brazil nuts; twenty almonds.

TABLE No. 4.

FOODS FORBIDDEN.

Sugars, all farinaceous foods and starches; pies, puddings; flour, bread, biscuits; rice, sago, arrowroot, barley, oatmeal, tapioca; macaroni; potatoes, beets, large onions; all sweet and dried fruits; honey; levulose; all sweet wines, liquors, syrups; beer, ale, stout, porter; cocoa or chocolate; condensed milk.

If you will refer to these tables and remember that, according to Rubner, an individual requires to sustain his own nutritive equilibrium 30 to 35 calories per kilogram of weight, and also that the caloric equivalent of albumin is 4, that of fats 9, carbohydrates 4, it will be a simple matter to prescribe, not only the diet of a patient, but the exact quantity he must receive. The nutritive needs of the diabetic who has become sugar-free is exactly the same as a normal individual.

TABLE No. 5.

Example of a rigid diet for a day for an individual weighing 60 kilograms and requiring 2,400 calories.

250 grams of white fish at 3 calories per gram.....	= 750 calories.
100 grams of boiled mutton at 3 calories per gram.....	= 300 "
100 grams of lean ham at 4 calories per gram.....	= 400 "
50 grams of cheese at 4 calories per gram.....	= 200 "
5 eggs, each 80 calories.....	= 400 "
	<hr/>
	2,050 calories.
Add for oil on salad, asparagus, cucumbers, spinach or cauliflower	350 "
	<hr/>
Total	2,400 calories.

It is not so difficult to map out the diet of a diabetic providing we have classified his form of disease. Thus it is easy to remember that an egg represents between 70 and 80 calories; raw, lean

beef or fish as many calories as its weight in grams; very fat beef or mutton, three times as many calories as its weight in grams; fatty meats like ham, 4 calories per gram; butter, 8 calories per gram; olive oil, 9 calories per gram; wheat bread, 2½ times as many calories as its weight in grams, 50 per cent. being carbohydrates, and alcohol, about 7 calories per gram. In addition to the above, the caloric value of other articles may be found in any of the recent works on this subject. I refer to the following two tables, from my previous article on this subject, giving briefly the diet and bill of fare for a day of two patients of different type and weight:

TABLE No. 6.

Example of a mixed diet for a day of an individual weighing 70 kilograms and requiring 2,630 calories.

30 grams of cheese at 4 calories per gram.....	= 120 calories.
100 grams of smoked tongue at 4 calories per gram.....	= 400 "
100 grams of veal at 1½ calories per gram.....	= 150 "
50 grams of ham at 4 calories per gram.....	= 200 "
200 grams of pompano at 2 calories per gram.....	= 400 "
2 eggs, each 80 calories.....	= 160 "
	<hr/>
	1,430 calories.
Add for butter and oil on salad..	350 "
Add for 1 pint milk.....	350 "
Add for vegetables and bread..	500 "
	<hr/>
Total	2,630 calories.

To either of these bills of fare a little brandy or pint of wine may advantageously be added, the caloric value of which will compensate somewhat for that lost by the excreted sugar. Patients suffer most from a rigid exclusion of bread, and even though aleuronat and almond breads may be taken for a short time, their taste is so insipid that patients would rather do without them. I have found walnuts to replace bread with some patients, and they soon get accustomed to eat six or eight walnuts with their steaks and roasts, with evident relish.

In the mild and medium severe forms, when the patient has become sugar-free, I begin to estimate his tolerance for carbohydrates by giving him 40 or 50 grams of milk two or three times a day. If sugar does not appear in the urine, I increase the total quantity to 250 or 300 grams per day. If with this quantity he still remains sugar-free, I substitute for the milk, or for some portion of it, an equivalent of bread, remembering that 10 grams of bread are equivalent to 130 grams of milk, and in this way gradually increase the quantity of carbohydrates. If sugar appears in the urine I cut down the quantity of

carbohydrates, and sometimes go back to the rigid diet again for a short time. In the severe form our object should be to change the character of the disease to that of the medium-severe or mild form. Very gradually placing the patient on a rigid diet, and, as we have seen before, reducing the quantity of animal food, introducing fast and vegetable days into the régime, will frequently lead to success. The nutritive balance of these cases must be constantly watched, for there is a continual tendency to rapid emaciation. Here the fats form the mainstay in the diet of the patient. As much as 150 grams or more must be given in 24 hours, best with the addition of 50 to 70 grams of alcohol, in the shape of sugarless wines and cognac. It is a well-known fact that alcohol aids the digestion of fats.

By this method of dieting, too, we may be able to avert the tendency to phthisis and coma. In the very severe forms, which show the excretion of B-Oxybutyric acid, diacetic acid, acetone and increased ammonia, carbohydrates must be given in the diet, not only because they lessen the acid intoxication and prevent destructive proteid metabolism, but because they improve the digestive functions of the patient, a very important point in these cases. From 100 to 150 grams of bread, or, better, its equivalent in milk, should be given daily. Here, as also in the severe form, alkalies should be administered. The large quantities of bicarbonate of soda advocated by Stadelmann cannot be continued for any great length of time without seriously impairing the digestive organs. From 10 to 20 grams of soda, however, can easily be given daily without detriment.

In the various forms the condition of the bowels and the whole digestive tract must receive careful attention. Constipation must be overcome by such laxatives as rhubarb or aloes, or by daily enemata. The patient's mind must be kept at ease; he must have no worries or anxieties; his surroundings made as cheerful as possible, and everything done to lighten business and other cares. He should be warmly clad, keep his skin moist and active by warm baths; sea baths ought not to be taken, while carbonic acid baths are very invigorating. Exercise is very important; it diminishes the excretion of sugar, and hence should be ordered, but fatigue must be avoided. Massage is always indicated, excepting in the very severe forms. In the mild forms a journey to some of the celebrated spas may be advised. The waters of such resorts as Carlsbad correct many a faulty stomach and sluggish bowels, while the mode of life at the spas, the surroundings, the absence of all care, tend to improve the physical and mental condition of the patient.

MEDICINAL TREATMENT.—Medical literature abounds with articles descriptive of drugs which have been advised for the treatment of diabetes. Fortunately the great majority have fallen into disuse. Especially in this disease, drugs are used either symptomatically, or for their efficacy

in increasing the power for assimilating and oxidizing carbohydrates in the economy or, thirdly, for their action in inhibiting the course of the disease. The use of opium and its alkaloids for its beneficial effect on thirst and the patient's physical and mental condition cannot be gainsaid. That it has a decided effect in reducing the excretion of sugar was even observed by Rollo over one hundred years ago, and this effect has been confirmed by all writers of the present day. Especially in the mild cases, when the excretion of sugar has been reduced to a minimum by dieting, it has been observed that the administration of opium will continue the beneficial effect of the dietetic treatment and often cause the sugar to disappear entirely. It improves the assimilation of food, allays nervous irritability and the annoying pruritus. It is especially useful in the diabetes of neurasthenics and of individuals deeply engrossed in business, with its attendant worries. Begin with half a grain three times a day about an hour after meals, and very cautiously increase this amount, for the tolerance for opium in diabetes is very great. Its constipating effects must be overcome by cascara and the like.

Arsenic, too, is of great value in the mild form of the disease, and it frequently increases the limit of assimilation for carbohydrates, diminishes the glycosuria, and acts as an excellent tonic, especially in those patients who are very anæmic. In conjunction with diet, or even after a diet and opium treatment, it has given me happy results. I never use it in the severe forms, and in the diabetes of old age, associated with arteriosclerosis, it is harmful. Used in the form of the solution of the arsenite of bromine, or, as I prefer, the salt of the tri-bromide of arsenic, in doses of 1-30 to 1-10 or even 1-5 of a grain three times a day. Mixing it with the tri-bromide of gold does not increase its efficacy.

Several years ago I expressed the opinion that diabetes may be of bacterial origin. This view was based on the observation of cases for more than twenty years. Thus I frequently noticed how suddenly the disease began, especially in individuals who were high livers, *bon vivants*, with an excess of adipose tissue, who paid much attention to their palate and stomach and little to their bowels; how frequently the disease occurred in both husband and wife living under similar conditions. It is well known that micrococci and other germs from the intestinal tract may invade any organism of the body. For instance, in typhoid fever, the Eberth bacillus in migrating from the intestine not infrequently produces a cholecystitis or a cholangitis, and the amoeba coli in amoebic dysentery may migrate to the liver, producing pathological changes there. So I also conceived the idea that bacteria from the intestinal tract might easily invade the pancreas through its duct or other channels, producing such functional or pathological changes which result in the production of glycosuria. Körte, in his excellent monograph on diseases of the

pancreas, not only admits the probability of invasion of the pancreas by intestinal bacteria producing inflammatory changes, but also reports five cases in which such invasion produced supuration of the pancreas, followed by glycosuria.

Acting on this idea, I administered bactericides with gratifying results. The drug which proved most efficacious was the bichloride of mercury. This I administer now in smaller doses than formerly, getting the same effect with the 1-16 or 1-12 of a grain as I did with the 1-8 or 1-6 of a grain, three times a day. It must be given directly after meals, with a large draught of water. The rationale of the treatment of this form of the disease is similar to that of other infectious diseases, and although the bichloride does not ameliorate every case of diabetes, in those in which I assume the bacterial origin of the disease, it has given me better and more lasting results than any other medicinal treatment.

In concluding, let me say one word about coma. In impending coma, as shown by Kussmaul respiration, etc., alkalis must be given in large quantities, either by mouth or rectal injection. The patient should be put to bed at once, and an ounce of whiskey or brandy given, or a few hypodermics of ether. Warm applications should be applied to the chest, and such artificial means resorted to as tend to keep up the body warmth.

Glyconic acid, a higher oxidation product of glucose, has been found of excellent value in averting coma, or coma having appeared, in restoring the patient to his former condition. And I have found the various compounds of ammonia with formaldehyde to have given me such excellent results, that I advise their use in the place of glyconic acid, which as yet cannot be procured in this country.

THE MANAGEMENT AND TREATMENT OF ARTERIO-SCLEROSIS.

BY EGBERT LE FEVRE, M. D.,
New York.

THE frequency of the diagnosis of cardiac failure, of cerebral apoplexy, or thrombosis, as a cause of death is sufficient reason for the consideration of the degenerative changes that occur in the circulatory system. The use of the term "cardiac failure" shows that the profession at large has recognized a form of fatal cardiac exhaustion, but has failed to appreciate its true relation to the primary changes that have occurred in the arterial system. Interesting as is the pathology of these changes, still more so to us, as practicing physicians, are the questions: "How can we prevent their occurrence? What can be done to check their progress? How can we put off the inevitable end when once they have begun?"

The successful management and treatment of a case of arterio-sclerosis depends upon a proper appreciation of all the factors that have induced the disease in that individual case.

By far too much has been the tendency to class all cases of hard arteries and high-blood pressure associated with cardiac hypertrophy under one name and then to treat them on a general routine plan. The pathologists have given an added bias to this tendency by considering atheroma and arterio-sclerosis as differing only in degree.

The most important factor in the etiology of arterio-sclerosis is age. After forty-five years of age more or less change in the blood vessels is natural. While arterial changes always occur in old age, "arterio-sclerosis" is not an inevitable sequence. A factor that is too frequently lost sight of or ignored in the prophylactic treatment of arterio-sclerosis is heredity. The laity speak of heart disease (the term being used in a general sense) as running in families; and while the profession appreciates the tendency for cardio-vascular disease to show itself at about the same age in members of a family, very little effort is made to prevent its occurrence, and treatment is only begun when the subjective symptoms force the patient to seek the aid of his physician.

Family resemblance or likeness is not limited to outward forms and features alone, but every tissue of the body bears this impress, and the nutritive processes follow the groove worn deep by preceding generations and family tendency (heredity) shows itself earlier in each succeeding generation, unless checked by treatment or modified by the introduction of new tendencies.

The special family weakness may be an inactive liver, kidneys unable to adapt themselves to the extra demands of a particular mode of life, a digestive apparatus that while it tolerates an overabundance of food is unable to properly elaborate it, an irritable sympathetic nervous system that responds inordinately to slight disturbing causes. The tendency of the vital processes to be disturbed by the ordinary wear and tear of life, or to be influenced unduly by accidental circumstances, acute disease or toxic agents, early causes disturbance of the cardio-vascular system. The toxemia resulting from the improper elaboration of food, retention in the blood of waste products, alcohol, lead, etc., causes spasm of the arterio-capillary system with resulting high arterial tension. The attacks of arterial spasm may be transient, at first, and associated with a sick headache, an attack of indigestion, or a neuralgic storm. Abstinence from food, rest and simple medicinal treatment restore the normal equilibrium and the patient rapidly recovers. The tendency is for these attacks to become more frequent and more violent during the active period of life. During this period of active nutritive processes these attacks are self-curative, and no permanent damage may result. As the patient grows older the reaction to altered blood condition is not as energetic. A condition of sub-acute or chronic toxemia occurs. The arterial spasm lasts

longer; increased pressure in the blood vessels causes the work of the heart to be augmented, and there is secondary cardiac hypertrophy, and the sclerotic change is present in the blood vessels. The patient now begins to complain of forcible action of the heart after a full meal; exercise causes the cardiac systole to be felt in the vessels of the head; there is more or less despondency, the disposition becomes irritable, and when the cardiac symptoms are markedly present the patient may become apprehensive.

In the development of arterio-sclerosis, three stages can be recognized. The treatment of these stages differs widely. The first stage is one of toxemia and constitutes the curative stage. It is characterized by attacks of arterial spasm. There is but slight pathological change in the blood vessels themselves, although there is beginning hypertrophy of the muscular coats when the hereditary tendency is marked. This change may occur early in life but usually the onset is after forty-five years of age. It is at this period of life that the habits of the patient have the greatest influence. The individual becomes less active, his habits more sedentary, his digestive processes less ample. All these factors cause the blood to become altered and increases the stress upon the cardio-vascular system. The management and treatment of this stage is especially important and is largely prophylactic. It must take into account all the details of daily life; exercise, food and all those things that are apt to react upon the arterial system. When there is marked hereditary tendency to the degeneration of the blood vessels, it may be necessary to control the mode of life of the susceptible subject from puberty. In certain families this is just as important as when pulmonary tuberculosis is a family taint. The occupation of such susceptible persons should be active without being laborious; it should be free from excessive worry and anxiety; his life should be passed in the open air; in fact, should be as nearly ideal as possible. The lack of occupation is as much to be avoided as over-exertion.

When the patient is seen for the first time later in life and the premonitory symptoms are present as shown by the attacks of nausea, vomiting, and sick headache, periods of depression with urine of high specific gravity and associated with pulse of high tension and over cardiac action, the mode of life and the habits of the individual should be thoroughly controlled. The symptoms that have just been described have been named lithemia, latent or masked gout, etc., and are expressive of attacks of toxemia of some kind. The patient should be encouraged to take exercise in the open air, but over-violent exercise, athletic sports or pastimes should be prohibited, as the cardio-vascular system at this stage is frequently injured by the strain that is put upon it. If the patient's life is extremely active, as that of a laborer or

soldier, it may be necessary for him to change his occupation, as physical stress is often sufficient to set up sclerotic changes in the arteries.

The so-called idiopathic cardiac hypertrophy in a patient under forty-five years of age is always an important symptom of impending arterio-sclerosis. It shows a peculiar vulnerability and irritability of the blood vessels with tendency to arterial spasm. The development of an irritable and slightly hypertrophied heart under athletic sports, in a young person with strong family history of vascular disease should always be sufficient reason to forbid all such exercise. It is not sufficient to merely give general direction as to exercise, but it should be absolutely controlled.

The diet of such an individual should also receive attention. Usually this is the most difficult phase of the treatment to manage. No general rule can be made, but each case must be considered individually. The tendency in most of these cases is toward over-alimentation. After forty-five years of age the digestive process fails, imperceptibly the habits of life change, becoming more sedentary and luxurious, there is less demand for food, while at the same time the craving of the individual is for richer food and the depression that is induced by the resultant toxemia causes craving for stimulants. At this stage, to control the individual in regard to his diet is most difficult. The symptoms that he complains of are indefinite; he does not appreciate the dangers that are ahead; he seeks relief merely for an attack of indigestion or for some ill-defined sensation. Many of these cases later develop well-marked attacks of arthritic gout, and this calls their attention sharply to their condition and places it in the power of the physician to insist on his directions being carried out. Unfortunately the majority of the cases do not have this storm signal and they drift into the second stage of the disease.

The early stage of arterio-sclerosis in women differs to some extent from that in men on account of the difference in their daily life. Their symptoms are still more indefinite, and with the feeling of depression or of debility, they become more and more loath to take the proper amount of exercise in the open air, while at the same time they do not restrict the amount of food. Arthritic attacks of gout are comparatively rare in the female, while the symptoms referable to the genito-urinary system and, later, to the arterial tract are more pronounced.

The diet of this stage of the disease should be simple and wholesome. All alcoholic beverages should be prohibited, especially the heavy wines and malt liquors. If the patient insists upon having alcoholic stimulants of some kind, he should be restricted to whisky. The amount of meat should be limited and he should be encouraged to live upon the succulent vegetables.

Although the diet is controlled, care must be taken that the nutrition of the patient is kept up to the normal. Marked loss in weight always calls for change in diet. The medicinal treatment of this stage is largely directed toward increasing the activity of the emunctories. A dose of calomel or blue pill followed by a saline cathartic is all that may be needed. Where the condition of toxemia is more or less chronic, it may be necessary for the patient to take a saline cathartic systematically. I have found in these cases that a combination of mercury in the form of gray powder with quinine is especially efficacious. A capsule containing three grains each of gray powder and quinine is taken in the morning on arising with a laxative dose of one of the mineral waters, of Carlsbad salts or phosphate of soda. The gray powder and quinine may be given for two or three mornings in succession at periods of two weeks to a month apart. For more obstinate cases a course of an alkaline purgative water at some spa is beneficial.

The second stage of arterio-capillary fibrosis is characterized by marked obstruction in the arterial system and a compensating cardiac hypertrophy. The early portion of this stage may be passed without the patient being conscious of any change in his general health. He notices that on exertion his cardiac action is slightly increased, he feels the thumping of the heart against the chest wall, but it is not sufficient to alarm him or attract his attention particularly and he considers his symptoms due to indigestion. When the patient in such a condition consults his physician, the therapeutic problems to be solved are first, to lessen the obstruction in the arteries and, second, to control and sustain the compensating cardiac hypertrophy and put off the inevitable period of cardiac failure. Unless controlled by treatment, there is a constant reaction between the arterial changes and those produced in the heart secondarily. Increased obstruction in the arteries demands increased cardiac power, which in its turn forces the blood into the arteries with greater force, causing a certain amount of traumatism and exciting spasm of the muscular coat of the arteries.

In the early portion of this stage the cardiac hypertrophy is met by a corresponding hypertrophy of the muscular tissue in the arteries, which in turn again augments the work of the heart through its tendency to contract spasmodically. It is surprising what can be accomplished during this stage of arterio-sclerosis by proper management and treatment.

All the factors that were present during the prodromal stage are much more active in causing disturbance of the cardio-vascular system during the second stage of the disease, and it is, therefore, necessary to control still more strictly the exercise, daily life and diet of the patient. Oertel has shown us the effect of exercise upon

the cardio-vascular system, but mountain climbing and violent sports and pastimes should be approached with caution.

The diet of the patient should be simple in the extreme but at the same time nutritious. There should be no overloading of the stomach. Intercurrent attacks of indigestion with the resulting toxemia are apt to occur and should be avoided by careful diet and should be relieved by purgation and abstinence from food.

When outlining the treatment for a case of arterio-sclerosis, with high tension, it is necessary to determine to what extent the obstruction in the arteries is due to sclerotic changes in the vessels and how much is due to spasm of the muscular coats.

In the early period the spasmodic element largely predominates and according as we are able to control it is our power to check the advance of the disease in the arteries, and ease the labor of the heart and protect it from sudden strain.

It must be kept in mind that arterio-sclerosis does not affect the entire arterial tract uniformly. In order to maintain a general high-blood pressure, it is necessary for the muscular tissue in the arteries least affected to undergo a compensating hypertrophy. The work of the heart may be relieved by the use of those drugs that widen the arterial path by depression of the vaso-constrictor center, or the nerve ending and muscles of the arterioles, as: Nitrite of amyl, the nitrate of sodium and potash, nitro-glycerine (glonoin), erythrol tetra-nitrate.

The action of these drugs is very transient. That of nitrite of amyl passing off in ten to twenty minutes. That of nitro-glycerine and sodium nitrite reaches its height in ten and twenty-five to thirty minutes respectively, after which its action gradually subsides and at the end of two hours it has entirely passed.

Relief from these drugs is only temporary and followed by a reaction as shown by increased arterial spasm under slight reflex irritation or physical exertion. I cannot too strongly insist on the cautious use of these drugs in the treatment of all stages of arterio-sclerosis. Their action is rapid, they give immediate relief of certain symptoms, but I am convinced that when used in excess, as they are too frequently at the present time, their action is deleterious and that they hasten the stage of cardiac failure, and that the giving of large doses at comparatively short intervals is a bad practice. Their use should be limited to the emergencies that arise during the course of the disease. Pain and dyspnoea are nature's danger signals of an overtaxed heart, and when we, by the use of these drugs, allow our patients to overexert themselves without this warning we are only hastening the fatal issue.

Iodine or its salts have long had the reputation of giving relief in disease of the arteries. It has been called the "medicine of arteries." Al-

though the pharmacologists deny that it has any specific action over the blood vessels, clinical experience has demonstrated that in diseased condition, especially arterio-sclerosis, it has the power to lower the blood pressure and that it does it without diminishing the force of the cardiac systole. Time does not permit me to give an account of observations made on a number of patients in all stages of arterio-sclerosis to determine the effect on blood pressure of the iodide of potash, soda and syrup of hydriodic acid. It is sufficient to say that when the salts were given in five to fifteen-grain doses, three times a day, the blood pressure was lowered and that it remained more constant than before its use. The blood pressure was not disturbed as readily or to the same extent by reflex irritations and in the later stage of the disease, when slight exertion induced attacks of anginal pain, the attacks were controlled, and patients were able to exercise much more freely than before. Many clinicians claim that this result was due to the action of the iodides on the sclerotic changes, but it seems to me that it has some influence over the arteries beyond this and that it controls the muscular spasm of the arteries and arterioles.

The condition of the heart determines which of the three preparations of iodine to use.

As the potash salt is the most depressing, it is not used if there is cardiac insufficiency, but it is indicated where the cardiac hypertrophy is excessive. The syrup of hydriodic acid is the least depressing, and has the added advantage of not disturbing the stomach. Beginning with drachm doses it can be gradually increased up to four drachms.

In order that the beneficial effects of the iodides be obtained it is necessary that the use be continued for some time, but all symptoms of iodism should be avoided by regulation of dosage and stoppage for a week or ten days at regular intervals.

As was mentioned before, the second great therapeutic problem in the treatment of a case of arterio-capillary fibrosis is to control and sustain the compensating cardiac hypertrophy. Cardiac hypertrophy in this disease is not a pathological condition, but a conservative process; it is nature's attempt to adjust the circulatory mechanism, and when she succeeds the patient goes on the even tenor of his way unconscious of the fact that he has a heart until the balance between supply of and demand for cardiac power is destroyed. Occasionally Nature is too prodigal, and the compensatory hypertrophy becomes excessive and the heart is irritable and overacts. This condition calls for prompt treatment. All causes of reflex irritation as dyspepsia, constipation, etc., should be removed. The cardiac action should be controlled by small doses of aconite, two to five minims every four to six hours, and if the attacks of palpitation are persistent it may be

necessary to put the patient to bed and apply cold (ice bag) over pericardium. Spartein sulphate in one-fourth to one-half grain dose every six to eight hours acts as a cardiac sedative in these cases.

The unceasing and increasing demands upon the heart in obstructive disease of the arteries calls for a corresponding increase in the cardiac power. Muscle hypertrophy keeps pace with the work as long as the supply of nutrition is sufficient.

Our object should be to maintain the nutritive process at the highest possible point. Whenever the patient's general condition retrogrades, the cause should be looked for, removed if possible and the patient built up by suitable means. It is only necessary to mention cod-liver oil, iron, arsenic, the bitter tonic, as adjuvants to good food and fresh air.

The use of the cardiac stimulants of the digitalis group: (digitalis, strophanthus, convalleria, etc.), in all stages of arterio-sclerosis calls for special consideration.

Too commonly it is the custom as soon as a diagnosis of any form of cardiac disease is made to administer one of this group on "general principles," without any regard to the individual case and without any well-defined idea why it is given.

In arterio-sclerosis they should be given with great care and for a definite purpose as their action in this disease differs in several particulars from that which obtains in valvular disease of the heart.

On account of the marked hypertrophy and irritability of the arterial muscular tissue, a full therapeutic dose of digitalis acts much more energetically on the arteries than on the heart, and increases the obstruction in the blood vessels to a greater degree than it augments the cardiac power.

During the stage of *perfect* compensating hypertrophy, digitalis and all members of the group are contra-indicated. But there is a time when it is of inestimable value—when it acts not as a stimulant but as a true restorative of cardiac power. Sooner or later the time comes when cardiac hypertrophy fails to keep pace with the progressive obstruction in the arteries, and nutrition of the myocardium begins to fail. The heart begins to falter in its work, at first only as a result of unusual demands on it, but later slighter causes disturb it.

This is always a critical period in the disease from a prognostic and therapeutic standpoint. The case may pass into the third stage of the disease, *i. e.*, permanent cardiac insufficiency, or, under proper management and treatment, compensating hypertrophy may be re-established.

When properly given, digitalis has the power of increasing not only the working power of the heart but its nutrition also.

The patient should be put to bed or confined to one floor, according to the severity of the

breakdown. The bowels should be freely moved and the diet should be nutritious but of small bulk and dry. For the first few days, full stimulant doses of digitalis or strophanthus in conjunction with spiritus etheris nitrosi (3 j) or the iodides (gr. 2) every two hours should be given until the heart power is brought to equal the demand. The use of the drug is then stopped for a week or ten days, when it is resumed in the following manner: Two or four drops of the tincture or half a grain to a grain of the leaves are given at bed time. In mild cases a course of a week may be sufficient, others may demand it for a month before compensation is perfect. After compensation has been ruptured and restored by the use of digitalis, it is necessary that nutrition of the heart be maintained by giving the small nightly dose from time to time. In some cases two or three nights a week is sufficient. Again, the treatment must continue longer, with longer intermission, one week each month; while some cases need almost constant treatment. I have one patient of fifty-eight years of age whose compensation has been preserved for the past three years by nightly doses of two drops of digitalis, twenty nights out of each month. Digitalis does not act thus happily in all cases demanding cardiac stimulation. It frequently disturbs the stomach or overacts on the blood vessels even when guarded by the vasomotor dilators or the iodides. In these cases, I am accustomed to administer tr. strophanthus in three to five drop doses combined with two to four drachms of Mist. Basham U. S. P.

The third or terminal stage of arterio-sclerosis is characterized by permanent cardiac incompetency.

Our chief problems are (1) to adapt the mode of life to the failing heart; (2) regulate the diet; (3) conserve the cardiac power.

We should explain to the patient the need of his carrying out the instructions and urge the importance of and reason for change in his mode of life, business, pleasure, diet and rest. He should delegate to others the exacting and worrying details of his business, but it is not always wise to relieve absolutely from usual occupation. He should be at liberty to go and come as he pleases. As the mind is withdrawn from business it should have some agreeable diversion. Exercise and all physical exertion should be adapted to the cardiac power. Everything that induces intense dyspnea or augments pain is overtaxing the heart and the patient should take the symptoms as his guides.

The diet should consist of food that is nutritious and easily digested and not liable to induce flatulency. The diet should be concentrated and dry; not over a pint or a pint and a half of fluid a day should be taken. Taking of a large quantity of fluid is dangerous, as its rapid absorption from the intestinal tract is fre-

quently sufficient to raise the blood pressure beyond the power of the heart.

I cannot refrain from saying a word of caution about sending patients with advanced arterio-sclerosis and failing heart to the various mineral springs and allow them to drink the water *ad libitum*.

The patient should have his meals at stated intervals and not less than four, better five hours apart. The principal meal should be in the middle of the day, and no solid food of any kind should be taken between meals. If patient has been accustomed to taking stimulants it is not always wise to withdraw it entirely. Tobacco should be forbidden, as it will further disturb the weak and irregular heart.

When the cardiac power becomes permanently inadequate, the left ventricle dilates, the mitral valves are incompetent and general oedema occurs. The treatment is that applicable to cardiac valvular disease in general, and is beyond the scope set for this paper.

THE TREATMENT OF CARCINOMATOUS GROWTHS BY CAUSTICS.

BY A. R. ROBINSON, M.D.,

New York;

Professor of Dermatology at the New York Polyclinic.

WHATEVER theory concerning the cause of malignant epitheliomata be correct, both clinical and microscopical observations teach that for the removal of the disease it is absolutely necessary that all of the pathological epithelial cells be removed, or destroyed, or changed in their molecular constitution, so that they do not proliferate in an atypical manner; and that if such a condition be obtained, a cure is the result.

Admitting this view to be correct, it is necessary that we carefully study the manner in which cancer epithelia extend, and invade foreign tissue, and the probable extent and direction of the invasion in any case.

On this occasion the limited time makes it necessary that I confine my remarks to "cutaneous cancers," as this is the subject with which I have had the largest experience, and upon which I have made careful observations; it is especially in the treatment of these cases that I join issue with the majority of surgeons as to the best methods to be employed in their treatment.

A study of the manner of growth and extension in the simple tumors, such as fibroma, enchondroma, lipoma, shows that as they increase in size by centric growth, the surrounding connective tissue is compressed and forms a capsule, within which capsule lies all that is pathological tissue, while with the peripheral extension in cancer the surrounding tissue is infiltrated by the pathological epithelia to a greater or less extent, so that there is no sharp, well-defined line of separation of the tumor from the normal

tissue; but there is a large area in which both normal and pathological tissues are present, and the limit of the infiltration cannot be recognized by the naked eye appearance; hence it does not follow, either from the origin or mode of extension, that carcinomata should be treated in the same manner as the simple tumors.

Let us consider the manner in which a carcinoma extends at the seat of the primary growth in the terminal acinus of a mammary gland. The lumen fills with proliferating epithelium, the basement membrane of the acinus at its blind extremity is destroyed, and the surrounding tissue invaded by the epithelial cells by way of the lymph channels. The nearer the gland, the larger the columns of invading epithelium; while at the periphery the cells may appear as isolated elements or columns arranged in single file. The disease spreads in the most gradual manner, losing itself in the healthy tissue.

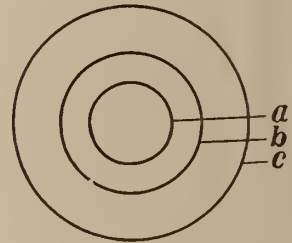
In cutaneous cancers—cutaneous malignant epitheliomata—the same methods of growth and extension occur. There is, however, a decided difference in the various cases of cutaneous cancer, as to the extent and the direction of extension of the epithelial invasion of the foreign territory; and no case of cutaneous cancer can be treated correctly and intelligently with caustics or otherwise, unless the probable extent and direction of the infiltration is carefully considered.

Cancers of the skin are usually described as occurring in three clinical forms: The superficial discoid, the papillary and the deep and infiltrating. This division is of some importance from a clinical standpoint, but it is not a correct one, as a primarily superficial cancer may become a deeply seated one; and one primarily deep may change to superficial; and both these forms may become papillomatous. The clinical form depends upon the seat of growth, the rapidity of epithelial proliferation, the direction of extension of the infiltration, and the inflammatory and other changes in the part. In every case there is an abnormal and typical proliferation of the epithelium, with the production of a poison that injures tissues, and this epithelium invades the surrounding tissues by way of the lymph channels.

In the deep-seated cancers the invasion is likely to occur early and extend more rapidly, especially in the deeper tissues, than is the case in the superficial forms; hence operative measures must be based on this tendency.

In the superficial forms the *pars reticularis corii* frequently offers resistance to invasion, and generally there is a tendency to infiltration in a horizontal direction in the upper part of the corium. In time, however, either from the natural course of the disease, or from injury by traumatism, such as scratching, or the use of mild caustics, the deeper parts may become invaded.

There is a point in the manner of spreading of the disease that requires mention; it is this: that the epithelium of the general surface does not always proliferate and invade the corium in the affected area. In cases of superficial serpigino cancer, for instance, this proliferation and invasion of the corium by the general surface epithelium often does not take place, although naked eye appearances would lead one to think so. The whole tumor may be formed from the epithelium from the seat of the primary tumor, and the changes in the rest of the cutaneous epithelium be of a degenerative character; hence the disease extends much further in the corium than would be supposed from naked-eye appearances.



I will now make use of this diagram to illustrate what is the condition present in all cases of cutaneous cancer, and what is required by any method of operation for removal of the disease. The cancer is represented, according to naked-eye appearances, as occupying the area within a circle A. We know, however, both from clinical experience and microscopical studies, that there is always pathological epithelium beyond this line, the infiltration diminishing in amount from within, outward. Let us assume that the infiltration extends to, but not beyond, the circle C, the area between B and C containing only few epithelia. We must remember that this circle of limitation is always of very considerable extent from the circle A, and, judging from the frequent recurrences of the disease after operation, much greater than is usually supposed by the operator. It must also be borne in mind that the extension of the disease is downward as well as horizontal, although not always to the same degree; and that therefore these circles are supposed to represent a more or less rounded mass, with the disease as having started in the center of A.

To remove such a tumor with the knife alone it is necessary to make the incision at C, for if it be made at B there will be a recurrence of the disease, especially if the wound is treated on aseptic principles. An incision at C would remove the disease, but the resulting scar deformity on some parts of the face, for instance, in cases of tumor of some extent, would necessarily be very great and a permanent annoyance to the bearer thereof.

If caustics are employed what result can be obtained? Can the pathological tissue be de-

stroyed, or removed, or changed in molecular constitution by the use of caustics; and if so, how do these results compare with those from excision?

These agents have been used for many years both by ethical members of the profession and by those who advertise. In my own opinion certain caustics, judiciously chosen and properly used, are, in the majority of cases of cutaneous cancer, far superior to the knife as a surgical measure, both as regards the complete removal of the disease and the subsequent deformity from the operation. He who sneers at the use of caustics in any and every case has either no experience to amount to anything in that direction, or the cases that have come under his observation have not been treated upon correct principles.

All caustics act as injuring agents upon the tissues, and the amount of injurious action depends upon the caustic employed, the strength of the agent, the duration of its action and the vulnerability of the tissues acted upon. No caustic should be employed that does not, directly or indirectly, *quickly* destroy the morbid tissue. Some caustics destroy by chemical action, others by killing the vitality of the tissues. As the former destroys normal and pathological tissues about equally it follows that the caustic that acts upon the vitality of the tissues is preferable if the law be true that pathological tissue is destroyed more quickly than the normal by such agents.

We will see from this standpoint that with our present knowledge arsenious acid is the agent that usually gives the best results, enabling the disease to be removed with the slightest amount of deformity from the operation.

The caustic agents which have been most generally employed in this disease are nitrate of silver, nitric, sulphuric and hydrochloric acids, acid nitrate of mercury, arsenious acid, chloride of zinc and caustic potash.

With these agents tissue can be destroyed to a greater or less extent, according to the agent employed. Some of them, such as nitrate of silver, act very slowly and very superficially, while others, such as caustic potash, act quickly and deeply. Mild escharotics should not be employed for the following reasons: With the nitrate of silver, for instance, only a portion of the tumor within A can be destroyed at one operation. As the tissue of the tumor area outside the necrosed part soon recovers from the injury a condition of reaction after injury occurs. There is more blood in the part and the lymph channels are enlarged; that is, the condition is favorable for increased proliferation of the epithelial cells and their further invasion of the tissues. The same reasoning holds true of all the mild caustics. Such treatment leaves the patient in a worse condition than if no treatment had been employed.

The three strong escharotics, chloride of zinc,

caustic potash and arsenious acid, differ in their action; but with any one of them all of the pathological tissues within C can be destroyed.

Chloride of zinc alone or in combination, as in Bougard's paste, for instance, has considerable diffusive power and great affinity for the water of the tissues, thus in a short time producing a dry necrosis of considerable extent. The greater part of the necrosed tissue can be removed with a scalpel the following day, a new application of the paste made and the treatment continued until all the tissue within C has been acted upon and necrosed.

The disadvantage of this caustic is that it destroys normal tissue almost as quickly as the pathological, and on this account in tumors of considerable extent should only be used to destroy the main mass of the cancer and its use be followed by other agents. It is very valuable in papillomatous epitheliomata, as its use is not accompanied by hemorrhage. In this form of cancer, when the area outside of B is reached, other agents should be employed.

Caustic potash has great diffusive power, has strong affinity for the water of the tissues and produces a rapid necrosis with liquefaction of the tissues acted upon. The necrosed tissue is permeable, and so the action of the caustic continues for some time after the application has been made. This prolonged action must be taken into consideration and utilized when treating a case. The rapid liquefaction of the tissue enables the operator to easily remove the softened necrosed mass and continue the use of the potash until he believes the required action is obtained for the complete removal of the disease—viz., a complete necrosis extending considerably beyond A. As a result of the caustic potash the tissues in the immediate neighborhood become very rapidly infiltrated with serum and the lymph channels greatly dilated. This acute inflammatory process tends to destroy the pathological tissue sooner than normal, so that the pathological epithelial cells in the area between A and C are very likely to be destroyed, while the normal tissues to a great extent, and certainly all between B and C, are able to retain their vitality.

The sudden unfavorable nutritive condition from the flooding of the lymph channels must react injuriously upon the cancer cells lying in these channels (and they all lie there as far as the outer zone is concerned) and destroy them. In addition it is possible that tox-albumin is formed from the necrosed tissue, and that this aids the other conditions in the destruction of the pathological tissue.

With caustic potash, then, one can destroy all pathological tissue within C without destroying normal tissue beyond B, and even without destroying *all* such tissues between A and B. Thus you can accomplish the same results as regards removal of the disease as is accomplished by the knife when the incision is made at C; therefore,

in all such cases where caustic potash is a suitable destroying agent it is much more conservative than the knife.

Personally, I generally use about a 50 per cent. solution, so as to get slower liquefaction of tissue and comparatively more of the inflammatory and toxic action than when the caustic is used of full strength and thus save as much normal tissue as possible. It is an absolutely reliable agent in all lesions of small extent, and the operation in these cases does not require longer than a few minutes.

For epithelioma of the ear lobe it is the best caustic, and within the last few months I have treated successfully a number of cases of small extent near the region of the eye. For superficial forms of the lip not markedly papillomatous it should always be employed, as there is sometimes no deformity whatever following its use; but for the deeply seated ones the *knife* or the *knife and cautery* should be resorted to.

Arsenious acid is probably used more frequently than any other agent by those who employ caustics in cancer. Probably the majority of those who prefer the use of this agent in cancer believe that it possesses above all other caustics employed in this disease a special elective injurious action on the pathological tissue; a special antagonism to the epithelial structures comprising the new growth (or possibly the microbes if cancer be a parasitic affection).

Usually a paste is made by adding sufficient water to equal parts by weight of arsenious acid and powdered gum acacia to give it the consistency of butter. I use a watery solution of cocaine, 20 to 40 grains to an ounce of water. This is spread on muslin or adhesive plaster to the thickness of at least one-eighth of an inch and applied to the whole area within C. Such an application, supposing the case to be one of ordinary serpiginous epithelioma, will cause, as a rule, within a period of from ten to fifteen hours a complete necrosis of all the tissues within A and a slight amount beyond this line, provided the part is in such condition as to allow the paste to act upon the pathological tissue. This condition exists when a raw surface is present and the cancer does not lie beneath normal epithelium. Such is the amount of action required, and just so long must the application be made and no longer. A stronger paste, such as two parts arsenious acid and one part of gum acacia, would cause the same amount of destruction in a shorter period of time, perhaps in from six to ten hours, and where deep action is desired this strength is preferable. The operator must know the amount of destruction required in a given case, and he must know when the desired action has been obtained, otherwise the result would be unsatisfactory. In some cases the area within A is completely necrosed in from eight to ten hours and in others not in twenty-four hours, but this amount of necrosis *can* and *should* be produced by the paste.

The part to which the paste is to be applied must be in a condition to allow of the action of the caustic; for instance, if the epithelioma be a deeply seated one, with fairly normal epidermis overlying. This epithelium must first be destroyed by caustic potash or other agent before applying the paste, for arsenious acid does not act upon normal skin.

With such necrosis of the area within A there is invariably an acute inflammatory process extending much beyond C, and increasing in intensity the nearer it is to A, since the tissue increases in vulnerability as the latter circle is approached. Even with small cancers not larger than a pea and situated on the lower part of the nose or middle of the cheek the inflammatory process is often sufficient to close the eye on the same side and sometimes also to partly close the other eye.

With such action from the caustic as I have described as necessarily occurring, clinical experience teaches that in the great majority of cases there is complete destruction of all the pathological tissue, a removal of the disease with the preservation of all the normal tissue outside of B and a considerable part of that between A and B.

The favorable results depend probably upon several factors, the acute inflammatory process destroying pathological tissue more quickly than normal tissue, the elective action of arsenious acid in this disease for the pathological epithelia and the action of the tox-albumins. The long duration of the application gives opportunity both for the inflammatory action and the elective action of the arsenic to save the normal tissue more than could be done by one of the rapidly acting caustics.

For the same reason, when it is necessary to save as much normal tissue as possible (and that includes almost all cancers of the face), the weaker paste should be employed. By the use of this paste deeply lying pathological epithelia that could not be removed by the knife or such caustics as chloride of zinc can sometimes be destroyed.

I beg you to observe that it is not alone from the direct action of the caustic that the good results are obtained, but also especially from the inflammatory action which destroys outlying epithelia without destroying the normal tissue, thus enabling one to remove a cancer with so little resulting deformity, and to remove it, too, from parts inaccessible to other means.

It will be easily seen that by the use of this agent many cases of cutaneous cancer can be cured with every slight deformity, as compared with cutting operations; in fact, the scar often can be recognized only by close inspection. (I refer, of course, to cancers not larger than a 50-cent piece.)

There are also many cases quite amenable to this treatment that could not be operated upon by the knife, or rather should not be when such

caustic agents can be employed. For instance, I make bold to state that no epithelioma of the nose of any extent should be excised, as they can be removed by caustics without, in the majority of cases, producing any appreciable deformity whatever.

Naturally, if the case is seen at a late stage and the normal tissue is already destroyed to a considerable extent, deformity will be present; but in all cases the disease can be removed from the whole area within C by causing a necrosis that extends but little beyond A.

The employment of arsenious acid by the method recommended by Czerny and Trunczek has given good results in some cases; but in my experience the paste is, in the great majority of cases, the best form of application.

In almost all cases of cutaneous cancer, if the proper caustic and the proper strength of caustic be used and the proper amount of necrosis and inflammation produced, the disease can be removed with very little, if any, deformity following. To accomplish all this it is true that the operator should know the pathological anatomy of the disease, the anatomy of the affected part and the technique of the operation; and if he does not he should leave the case alone.

The time limit for this paper prevents me from going minutely into the technique required in the different forms of the disease, but I have endeavored to give the general principles and you must apply them to individual cases.

It can be safely said that if cutaneous cancer cases were seen early and treated correctly, either by caustics or the knife, or both, as the case may require, the disease would be anything but the necessarily fatal one it is too generally believed to be by the medical profession—a belief that has been the cause of much dangerous advice to the patients. If the lymphatic glands are infected this method is useless and the knife or cautery must be used. I trust I have made clear the theory upon which I base my belief that the majority of cases of cutaneous cancer should be treated by caustics and not by excision.

I have given the *modus operandi* of some of the most frequently employed caustics, but the list of agents that can be employed successfully, either as caustics or as agents that would change the molecular character of the pathological cells, or those that might possibly act as anti-parasitic agents, could be greatly increased. Some of these agents are of special value in certain forms of the disease and should have preference over those whose action I have described. In some of the very superficial pearly epitheliomata, covering a large area, as in this case covering the entire forehead, curetting and the application of a 20 per cent. ointment of pyrogallic acid for a period long enough to produce the requisite necrosis of the pathological epithelia—usually ten to fifteen days—is sometimes preferable to arsenious acid; but curetting and

the arsenious acid paste will certainly effect a cure, and if that be true surely no surgeon would think of excision.

The treatment in all cases after the requisite necrosis is produced is the use of a mild boric acid or bismuth ointment, allowing the part to heal slowly by granulation tissue.

The actual cautery is a reliable agent in some cases, as shown by many writers, and I have been informed by Mr. Malcolm Morris, of London, that in the X-ray we have an agent that can cure in a marvelous manner many cases of deep rodent ulcer that have hitherto been regarded as incurable by either knife or caustics.

In conclusion I wish to remark that if I have shown clearly that a cutaneous epithelioma can be removed by caustics, that it can be removed by completely necrosing only a small part of the area invaded by the disease, then I trust that I have convinced you that excision by the knife should be employed only when the case cannot be treated by caustics alone (a very rare occurrence in cutaneous cancers), or where the operation would cause no deformity, as on the scrotum. For deeply seated rodent ulcers and possibly for cancer of the penis the Roentgen ray should be tried.

I have not discussed the question of pain from caustics, as usually it is not a source of complaint, nor the objections to the use of an anesthetic, especially by physicians, or of those unable to take an anesthetic for physical reasons, but lay the claim for caustics in the majority of cases on the ground that the deformity following the operation is so much less than after excision, but especially that reappearance of the disease is rare after their proper use.

FEBRUARY MEETINGS OF COUNTY ASSOCIATIONS.

The following meetings of the County Associations in the Fifth District Branch are to be held in the month of February:

Kings County, 315 Washington street, Brooklyn, N. Y., February 11th, Dr. Hubert Arrowsmith, president.

New York County, 17 West 43d street, February 17th, Dr. Parker Syms, president.

Orange County, Middletown, N. Y., February 19th, Dr. M. C. Conner, president.

Ulster County, Kingston, N. Y., February 10th, Dr. F. Huhne, president.

Medical Colleges to Credit Each Other.—

Dr. Victor C. Vaughan, Chairman of the National Committee for the Affiliation of Courses, announces that the committee expects the German credit system to be in operation in the large medical colleges of the country by September, 1902. By this system a student can go from one college to another without the complication and delay that is experienced at the present time.

MALIGNANT DISEASE OF THE NOSE AND ACCESSORY SINUSES.

BY JOSEPH S. GIBB, M.D.,

Professor of Diseases of the Throat and Nose, Philadelphia Polyclinic.

(Concluded.)

CARCINOMA OF THE NOSE.

The favorite site of primary carcinoma of the nose seems to be in the proximity of the ethmoid and sphenoid cells at a point high up in the nasal chamber. In thirty cases in which the site seems to be actually determined fourteen took their origin at or in the vicinity of the outlet of the sphenoid and ethmoid cells. The remainder were variously located as arising from the septum, lower turbinate or the external wall of the nose.

As in sarcoma, cases are observed at such a late period of the disease as to make it difficult and often impossible to determine the actual starting point of the morbid process.

Progress and Duration.—The progress and duration of carcinoma of the nose varies with the character of the growth. The medullary and adeno-carcinomata are the least malignant and of the longest duration.

Nendorfer (Bosworth's list) reports a case which had existed for eleven years. The microscope confirmed the diagnosis of a medullary carcinoma. Heurtaux (Bosworth's list) reports a case of tubular epithelioma which had lasted fourteen years. Bosworth regards this type as the cylindrical epithelioma of Billroth. Hopkins reports a case of adeno-carcinoma which had existed twelve years. All other varieties of carcinoma of the nose are of rapid growth. The shortest duration noted are the cases (1) Pepper and Shakespeare, in which death took place seven months after the patient was first seen, which was only a few months after the first symptoms of nasal trouble began. (2) Bosworth's case died three months after he first saw him, and his first symptoms antedated this period by six months, making a total duration of nine months. These two were unusually rapid cases. The average duration is about one and a half years.

The progress of carcinoma is rapid and the rapidity of its growth is undoubtedly accelerated by surgical interference which stops short of complete eradication of the morbid growth. Unlike sarcoma, carcinoma spares no tissue, nor does it confine its ravages to the nasal chamber. It spreads rapidly into the sinuses. It involves both the soft and hard tissues. Breaking through the walls of the antrum, it appears on the cheek, in the orbit or in the roof of the mouth. In the sphenoid and ethmoid sinuses it has been found to involve and finally break through the wall into the cranial cavity.

The progress of the disease is marked as is cancer in other parts of the body by excruciating pain.

The photograph which I here show well portrays the ravages of carcinoma of the nose. The history of this case is as follows. Seventeen months ago (May, 1900) the patient noticed a growth in the left nostril. Previous to this time he had had no symptoms. He immediately consulted a physician, who made an attempt to remove the growth by the snare, believing it to be an ordinary mucus polyp. The hemorrhage was so severe he desisted in his efforts and advised the patient to come to the Episcopal Hospital. I saw the patient here for the first time in June, 1900. From its vascularity and ap-



FIG. 2. CARCINOMA OF NOSE.

pearance malignancy was suspected. The growth seemed to be confined within the nasal chamber, springing from a point in the neighborhood of the middle turbinate bone, and it did not seem to offer serious obstacles to its thorough removal. After snaring off a piece and ascertaining its epitheliomatous nature by the microscope an attempt at removal was made by means of the snare and large size bone curette. Every visible portion of the growth was removed. It recurred, however, again and again, until within a few months it had passed beyond the confines of the nasal chamber and involved the antrum and orbit. Dr. John B. Roberts now made an attempt at a radical operation, but he found the growth had ex-

tended to such an extent as to make it practically inoperable. No further operative measures have been attempted. The photograph taken two weeks ago shows the rapidity with which the growth has extended.

His suffering is intense, requiring the frequent use of narcotics to keep him in any way comfortable.

Symptoms.—The early symptoms of carcinoma are similar in many respects to all growths in the nasal chamber. There is the same stenosis, the same irritative discharge.

The two symptoms which should put us on our guard in a doubtful case are the vascularity and pain. Pain is the most characteristic symptom. Very early in the disease it is present. It is of the same unmistakable lancinating character observed in cancer in every region of the body.

Diagnosis.—The diagnosis of carcinoma is not difficult when the disease is well advanced. In the early stages it is more troublesome. The symptoms already enumerated give us the clue to the diagnosis. After the growth becomes distinctive it is in most cases unmistakable. The one disease with which it might be confounded in appearance is sarcoma.

Sarcoma presents to the eye a reddish, flesh-like mass, filling and distending the nasal chamber. Carcinoma, on the other hand, seems to arise somewhere from the upper portion of the nasal chamber and project into the chamber. Not until very late does it fill and distend the chamber, and when it does so has probably involved other surrounding regions.

In gross appearance it is very different from sarcoma. The mass presents more the appearance of an ordinary mucus polypus, though totally different from the latter, both in consistence and vascularity. It is hard and unyielding and bleeds at the slightest touch.

As before stated, we are not long left in doubt, for it very quickly involves the adjoining sinuses and tissues. An aid to the diagnosis exists in the early involvement of the cervical lymphatic glands.

Prognosis.—There is but one variety of carcinoma which, with our present light, offers the least ground for favorable prognosis.

The so-called cylindroma of Billroth shows little tendency to recur after removal; therefore, if a growth of this nature exists in the nasal chamber at a site favorable for complete removal the prognosis is favorable. These cases are few, and all the other forms admit of no ground for a favorable opinion.

Treatment.—Little can be said of the treatment. The larger one's experience grows the less disposed one feels to interfere in a surgical way with carcinoma of the nose.

As stated repeatedly, unless we feel reasonably sure of eradicating the disease in its entirety, it were better not to meddle, for we may be sure if the eradication is not complete the

progress of the disease will be accelerated and the fatal issue hastened.

NASO-PHARYNX.

No study of malignancy of the nasal chamber is complete without reference to the contiguous spaces and cavities.

Malignant disease of the nose we have seen to be rare; that of the naso-pharyngeal space is much more so.

SARCOMA OF THE NASO-PHARYNX.

Record has been found of twelve cases of sarcoma primarily attacking the naso-pharyngeal region. In nearly all the cases the growth was definitely located as springing from the vault of the pharynx. Of these twelve cases eight were males, three were females, and in one the sex was not mentioned.

Unlike sarcoma of the nares this disease seems to show a preference for the earlier periods of life. The youngest was at the age of 4 and the eldest 40 years. There were six cases between 10 and 20 years; three between 30 and 40. Two cases were under 5 years, and in one case the age is not noted.

Naso-pharyngeal sarcoma gives rise to few symptoms until it has arrived at the stage where the presence of a foreign body in the fauces becomes noticeable. In a number of the cases reported there were indefinite symptoms, such as difficulty of nasal respiration, increasing deafness, pain in the fauces and epistaxis.

In many the earliest symptoms noted was the presence of an obstruction in the fauces. So soon as the mass attains sufficient size to be noticed by the patient it progresses with remarkable rapidity.

Nasal respiration becomes progressively worse from extension of the growth into the nasal chamber. Hemorrhage from the nose and mouth are of frequent occurrence, and in a few of the cases pain was pronounced.

The diagnosis must rest upon the character and peculiarity of the growth already adverted to under the head of sarcoma of the nose.

Of the twelve cases we have positive evidence of six cases in which death took place. Of the remaining six the subsequent history is not satisfactory. Recurrence after operation takes place almost immediately, and the activity of the growth is increased after each operation.

There is mention of four cases in which recurrence took place after operation, and of these in three or more operations were done. The subsequent history of these cases is so meager as to leave doubt as to their ultimate outcome. The probability, however, is that recurrence continued until the end was reached. There are but two cases of the list in which no recurrence had taken place when the report was made, but as will be seen the interval was too brief to base conclusions.

Lennox Browne (Burnett's system) reports the removal of a spindle-cell sarcoma from the

naso-pharynx by means of the galvano-cautery and no recurrence after the lapse of a year.

A. H. Leving's (*Am. Journal Surgery and Gynæcology*) reports the removal of a mixed cell sarcoma by radical operation and no return after four months. From this imperfect data we must conclude that sarcoma of the naso-pharyngeal space is an exceedingly grave disease and the prognosis is bad.

Treatment.—The only satisfactory results we can hope for by treatment is in an entire removal of the growth at a very early period of the disease.

CARCINOMA OF THE NASO-PHARYNX.

Carcinoma in this locality, if we can rely on the literature of the subject, is slightly less frequent than sarcoma. Nine cases are reported; of these six were males and three females. The earliest age at which it has been observed is 14 years and the latest 63 years. There was one case between 20 and 30 years, one between 30 and 40 years, one between 50 and 60 years and four between 40 and 50 years.

In these cases the origin of the growth was either from the lateral wall of the pharynx or the vault. The symptoms presented in addition to those usual to morbid growths in the naso-pharynx were almost uniformly pain referred to the frontal region and in the ear.

The progress of the growth is rapid, as is also recurrence after removal. Not one of the cases extended over a period of two years, with the exception of the case of Kuh's (*Med. Record*, 1897), which is reported to have been cured by injection of alcohol into the growth combined with the internal administration of iodide of potash.

The case of Chevalier Jackson reported at the last meeting of the American Medical Association, in which the growth was entirely eradicated by the cold snare, curette and forceps and which had not recurred when the report was made (one and a half years after the incipency) is not included, as obviously sufficient time has not elapsed to base any conclusion.

The result of these nine cases as may be imagined from the nature of the growth and the region involved is melancholy. Five deaths are reported at periods varying from one to five years. The case which lasted for five years is somewhat remarkable. Dr. E. J. Brown (*Laryngoscope*, 1898) is the reporter. Two operations were performed. After the first a period of three and a half years elapsed before there was recurrence. Death occurred from recurrence one and one-half years after the second operation. All the other cases died in from one to two years. In two the cases were not followed up. In one the case of Kuh's, already adverted to, recovery is reported after the free use of iodide of potash and injection of alcohol into the growth. Dr. Kuh emphasizes the fact there was no specific history, and the microscope showed epithelioma.

The last case—that of Jackson's, as already stated—is too recent to form any conclusion.

This record speaks for itself and admits of no comment as to the prognosis.

In regard to the treatment, this can be only palliative. The case of Brown's is interesting in this connection from the fact that life seems to have been prolonged for five years by a more or less complete removal of the growth and gives some warrant for operative interference, if for no other object than that of palliation.

ACCESSORY SINUSES.

Primary malignant disease of the accessory sinuses, if we are to judge by the record of reported cases, is the rarest form of malignancy of the upper respiratory tract.

After a careful search record is found of five cases of carcinoma and three of sarcoma. I feel sure, however, that this does not represent the relative frequency of these conditions. Personally, I am cognizant of two unpublished cases of osteo-sarcoma of the antrum, and I have little doubt that every surgeon of experience has seen these cases.

CARCINOMA OF ACCESSORY SINUSES.

Of the five cases of carcinoma of which we have accurate record, three occurred in males and two in females. Four were between 50 and 60 years old and one was 69 years old, bearing out the well-known tendency of carcinoma to prevail at the later periods of life.

Of the five cases three were fatal. In one no subsequent history could be obtained, and in one case of Dr. Wendell Phillips there was no recurrence after thorough curettement through an opening into the antrum after fourteen months. In three of these cases complete eradication was attempted by removal of the entire superior maxilla. Two of these ended fatally by recurrence within a year. In the third no subsequent history could be obtained.

In every case save that of Dombrowski (*Am. Journal Opthal.*, 1895) the carcinoma originated in the antrum of Highmore. Dombrowski believes that in his case the growth had its origin in the sphenoidal cells, but since there was no autopsy the exact site must remain in doubt.

The symptoms presented by a malignant growth in the accessory sinuses are pain in the affected side, soon followed by swelling and deformity of the face, encroachment upon the orbit and displacement of the eyeball, bulging of the hard palate and often extension of the growth into the nasal chamber.

The diagnosis of a suspected case may be aided by transillumination. This test will show the antrum to be occupied by an opaque body and an exploratory tapping of the sinus through the inferior meatus will demonstrate whether this opacity is due to a solid or fluid.

The diagnosis as between sarcoma and carcinoma must rest upon the appearances, or if every other method fails, the removal of a portion for microscopic examination.

The prognosis, of course, is bad. The only form of treatment which offers the least possible chance of success is a surgical one, and nothing short of complete removal of the superior maxilla and every particle of suspicious growth. If this be true, it is only very early in the disease, before the growth has become extensive and before adjoining lymphatics are infected, that so severe an operation should be considered.

SARCOMA OF ACCESSORY SINUSES.

Three cases of sarcoma are reported, two of which originated in the maxillary sinus. The third case took its origin from the frontal and ethmoid sinuses. Dr. Levy, of Denver, reports a case of large, round cell sarcoma of the antrum in a male patient 62 years of age, whose symptoms were offensive discharge from nose for three years, pain in the head and loss of smell, facial paralysis and deformity. A polyp was removed from nose and the antrum was opened through an alveolus, giving exit to pus

and broken-down sarcomatous tissue. Death took place from recurrence.

The other case of sarcoma of the antrum is reported by Lamphear and is interesting. It seems to prove the value of complete radical operation. This case was a male 32 years of age. The symptoms were simply tumor of the face. The operation consisted of complete removal of the superior maxilla, the turbinate, the palate, the vomer and part of the ethmoid and malar bones. There was no recurrence after eight years. The growth was an osteo-sarcoma.

The third case of sarcoma of the accessory cavities is reported by S. M. Burnett. The patient was a male, aged 57 years. The symptoms were tumor of the face and pain. The growth originated in the frontal and ethmoid sinuses. A radical operation was done. Recurrence and death took place in five months.

In the preparation of this paper, and especially for the search of literature and the arrangement of the tables, I am greatly indebted to Dr. Charles C. Biedert.

CARCINOMA (PRIMARY) OF ANTRUM.

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
1	Dombrowski, Amer. Jour. Ophthal., '95, vol. xii., 225.	Impaired vision, headache, tumor in nose.	Sphenoidal cells.	F.	50	Papillary carcinoma; 2 years.	—	Partial oper. with curette; radical oper. refused.	Death from recurrence.
2	Bolan, R. A. Jour. Path. and Bact., '98, v., 65-68.	Swelling of upper jaw, large tumor.	Antrum.	M.	69	Carcinoma; 14 months.	Left.	Excision of upper jaw.	Return and death in 10 months.
3	Bolan, R. A. Jour. Path. and Bact., '98, v., 65-68.	Swelling of upper jaw for 3 months.	Antrum.	F.	54	Carcinoma; 12 months.	—	Excision of upper jaw.	Return and death in 12 months.
4	Bolan, R. A. Jour. Path. and Bact., '98, v., 65-68.	Tumor of face.	Antrum.	M.	57	Carcinoma.	—	Excision of upper jaw.	Further history not given.
5	Phillips, Wendell. Abs. Ann. Otol., Rhin. and Laryng., '98, vii., 271-273.	Pain in side of face; opening had been made into antrum through alveolus; growth around opening.	Antrum.	M.	58	Carcinoma; 1½ years.	Right.	Growth curetted out through the alveolus.	No return after 1 year and 2 months.

The following reference found in literature, but the report inaccessible:
Lichtwitz: Arch. Internat. de Laryngol., Par., 1900, xiii., p. 358-359.

SARCOMA (PRIMARY) OF ANTRUM AND SINUSES.

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected	Treatment.	Result.
1	Levy, Robt. N.Y. Med. Jour., '94, lix., 335.	Offensive discharge from nose for 3 years, loss of smell, pain in head, facial paralysis and deformity.	Antrum, with nasal polyps.	M.	62	Large rounded sarcoma; 3 years.	Left.	Polyps removed; antrum opened through alveolus; much pus.	Death from recurrence and exhaustion.
2	Lamphear (E.). Amer. Jour. of Surg. and Gynec., 1900, xiii., 107.	Tumor of face.	Antrum anterior wall.	M.	32	Osteo sarcoma.	Left.	Radical oper.; removal of upper jaw, turbinates, palate, vomer and parts of ethmoid and malar.	No recurrence after 8 years.
3	Burnett, S. M. Ztschr. f. Ohrenh., Wiesb., 1900, xxvii., 141.	Tumor of face, pain, etc.	Frontal and ethmoid sinuses.	M.	57	Sarcoma.	—	Radical operation	Return and death 5 months later.

The following reference found in literature, but the report inaccessible:
Della Vedova: Gior. d. Ist. Nicolai, Milano, 1894-'95, vol. ii., No. 2, p. 9-18.

CARCINOMA OF NASAL CHAMBERS.

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
1	Seelinger, quoted by Bosworth. Dis. of Nose and Throat, 1889.	Growth in nose for 3 months, stenosis, discharge, facial neuralgia and epistaxis.	Not given.	M.	60	Carcinoma, from clinical history; 1 year.	Left.	No operation.	Death.
2	Earle. London Med. Gaz., 1827-'28, vol. i., p. 159-161.	Epistaxis and tumor in the nose and external deformity.	Vomer and superior turbinate (at autopsy)	M.	48	Carcinoma; secondary deposits found in other organs; 2 years.	Not given.	Removed with forceps 21 times; finally radical operation.	Death 40 days after operation.
3	Hecker. Arch. für Physiologische Heilkunde, 1844, iii., p. 260.	Pain, discharge and nasal stenosis.	Septum.	F.	46	Carcinoma; 3 years.	Not given.	Removed several times; finally radical operation.	Recurrence and probable death.
4	Pemberton. ^{ov} Pr. Jocial Med. and Surg. ur., 1850, p. 519.	Polyps protuding from both nares.	Middle turbinate, involving sinuses.	M.	5	Carcinoma, medullary (?) (No microscopical examination).	Both sides	Removed with forceps several times; finally radical operation.	Death on table.
5	Lawrence. Lancet, 1856, vol. i., p. 455.	Growth in nose, obstruction and external deformity.	Not given.	M.	64	Carcinoma, from gross appearances; 8 months.	Both sides	Radical operation.	Recurrence; further history not given.
6	Neudörfer. Oesterreich. Zeitsch. für prakt. Heilk., Wien, 1858, iv., p. 305.	Nasal stenosis, with external deformity, deafness and anosmia.	Septum.	F.	31	Medullary carcinoma; 11 years.	Both.	Radical external operation.	Further history not given.
7	Liebl. Allg. Wien Med. Zeit., 1861, vol. vi., p. 188.	Growth in nose, pain, external deformity, stenosis and exophthalmos.	Not given.	M.	50	Medullary carcinoma, from gross appearances.	Right.	Radical external operation.	Subsequent history not given.
8	Fleury. Gaz. de Hop., 1863, p. 522.	Pain, stenosis, exophthalmos and tumor.	Ethmoid and sphenoid (autopsy).	M.	20	Carcinoma, from gross appearances.	Right.	No operation.	Death, the result of septic infection.
9	Gosselin. Gaz. de Hop., 1865, vol. 38, p. 46.	Tumor and epistaxis, external deformity and stenosis.	Not given.	M.	58	Carcinoma, from gross appearances.	Not given.	Radical operation.	Subsequent history not given.
10	Waldeyer. Virchow's Archiv., 1872, vol. lv., p. 93.	Tumor of nose.	Septum.	F.	50	Typical carcinoma.	Not given.	Not given.	Subsequent history not given.
11	Watson. Dis. of Nose, Lond., 1875, p. 287.	Nasal polyp for some years, mucopurulent discharge, exophthalmos.	Not given.	F.	60	Epitheloid 1 year.	Not given.	Piece removed; no radical operation.	Death in 1 year.
12	Watson. Dis. of Nose, Lond., 1875, p. 287.	—	Not given.	M.	4	—	—	Growth involved other parts of body.	Death in 6 months.
13	Agnew. Lancet, '76, vol. ii., p. 85.	Nasal tumor, external deformity, exophthalmos, etc.	Not given.	M.	8	Encephaloid cancer; 1 month.	—	Portions removed with forceps.	Subsequent history not given.
14	Peau. Cited by Casabonica.	Nasal tumor, epistaxis, pain, etc.	Frontal sinus involved.	F.	42	Carcinoma, also metastasis; 18 months.	—	Radical operation.	Death from recurrence and involvement of brain.
15	Casabonica. Thèse de Paris, 1877.	Prominence of nostril, pain and discharge.	Not given.	M.	52	Carcinoma; 18 months.	Left.	Nose opened and tumor removed.	Recurrence and death.
16	Peau. Thésés de Paris, 1877.	Tumor of nose, stenosis, sneezing and anosmia.	Septum.	F.	64	Carcinoma; 1 year.	Right.	Nose opened and growth removed; second oper. 2 months later.	Death from recurrence.
17	Eder. Aerzt. Bericht der Priv. Heil-Anstalt, 1877-'78, p. 46.	Exophthalmos, double vision, anosmia, epistaxis.	Septum.	M.	66	Melanotic carcinoma; 1 year.	Left.	Curetted.	Death from meningitis.

Cases 1 to 30, inclusive are reported by Bosworth in Diseases of Throat and Nose, 1889.

CARCINOMA OF NASAL CHAMBERS—(Continued).

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected	Treatment.	Result.
18	Weinlechner. Bericht der K. K. Krankenanstalt, R. Stifting, Wien, '77-'78, p. 315.	Nasal stenosis, epistaxis and exophthalmos.	Outer wall of nose.	M.	56	Melanotic carcinoma; 3 years.	Not given.	Two radical operations by external method.	Recurrence; subsequent history not given.
19	Heurtaux. Bull. Soc. Anat. de Nantes, Par., 1879, p. 87.	Nasal growth, repeated attacks of epistaxis.	Not given.	M.	40	Encephaloid cancer; 1 year.	Not given.	Removed through nasal cavity.	Not given.
20	Heurtaux. Bull. Soc. Anat. de Nantes, Par., 1879, p. 87.	Tumor of nostril.	Septum.	—	—	Lobulated carcinoma.	Left.	—	—
21	Pepper and Shakespeare. Trans. Path. Soc. of Phila., '80, v. ix., p. 138-144.	Sero-sang., discharge and growth in nose.	Sphenoid and ethmoid cells.	F.	73	Lobulated carcinoma; 6 mos.	Right.	Injections of ergot.	Death.
22	Campbell. Brit. Med. Jour., 1880, v. i., p. 325.	Tumor of nose, foetid discharge.	Upper portion of nasal chamber.	M.	54	Glandular carcinoma; 3 years.	—	Radical operation.	Not given.
23	Heurtaux. Bull. Soc. de Nantes, Paris, 81, p. 96.	Pathological specimen of tumor shown.	Nasal cavity.	F.	56	Tubular epithelioma; 14 years.	—	—	Death.
24	Schaffer. Quoted by Schmiegelow and Bosworth.	—	Ant. nares.	M.	45	Carcinoma; 1 year.	—	Curetted.	Death in 1 year.
25		—	Inferior turb.	M.	28	Carcinoma; 1 year.	Left.	Operation.	Death.
26		—	—	M.	57	Carcinoma.	Right.	—	—
27	Delstanche. Annal de Mal de l'oreille, July, '84, No. 3, vol. x., p. 129.	Nasal stenosis and deafness.	Roof of nasal cavity.	M.	59	Epithelioma; 18 months.	Left.	No operation.	Death.
28	Buttin. St. Bartholomew's Reports, vol. xxi., '85, p. 147-152.	Growth in nose.	Alæ of nose.	M.	44	Squamous epithelioma.	—	Snared off; return; removal of alæ.	Subsequent history not given.
29	Schmiegelow. Rev. Mens. de Laryngologie, 1885, v. 421.	Nasal stenosis, acid discharge, etc.	Lower turbinate; also middle turbinate.	M.	51	Glandular carcinoma.	Left.	Removed with cold wire snare.	No return after 4 months.
30	Bosworth. Dis. of Nose and Throat, New York, '89, p. 459.	Pains in head; stenosis, with sanguinolent discharge; growth in nose.	Middle turbinate and vomer.	M.	56	Schirrus carcinoma; 6 months.	Left.	No operation.	Death 3 months after first seen.
31	Barker. Trans. Path. Soc. of Lond., '90-'91, xlii., 293.	Polyp in left side of nose; bled freely on removal.	Attached high up in nose.	F.	40	Carcinoma myxomatoides; 1 year.	Left.	Removal with snare and forceps; returned and was again removed; much hemorrhage.	Death from recurrence.
32	Newman. Annals of Surg., '91, vol. 14.	Bleeding and difficult breathing	Inferior turb. from broad base.	M.	47	Adeno carcinoma; 16 months.	Left.	Pieces removed for examination; then thorough removal.	Return and death in 3 months.
33	Newman. Annals of Surg., '91, vol. 14.	Obstruct. of nostril; no pain; some hemorrhage.	Middle turbinate.	M.	61	Myxo carcinoma; 1 year.	Right.	Pieces removed for examination; then thorough removal.	No return after 1 year.
34	Dreyfuss. Archiv. Internat. de Laryng., '92, v. 65-88.	Old, chronic; purulent rhinitis and empyema.	Superior portion of nasal chamber.	F.	64	Carcinoma.	—	Symptomatic.	Death from involvement of brain and meningitis.
35	Lyonnet. Ann. des Mal de l'oreille du larynx, '93, xix., 197.	Began with trouble with vision and exophthalmos; paralysis of olfactory and optic nerves.	Began in nose and finally involved sphenoid.	F.	37	Carcinoma.	—	No operation.	Death from meningitis.
36	Kisselbach. Archiv. f. Path. Anat., Berl., '93, cxxxii., 371-376.	Stenosis, due at first to polyps, which finally became malignant.	—	M.	50	Papillary carcinoma; 7 years.	—	Not known.	Not known.

CARCINOMA OF NASAL CHAMBERS—(Continued).

No.	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
37	Pinder. Archiv. f. Laryngol., Rhin., Berl., '96, v. 302.	Nasal obstruction and hemorrhage.	Septum.	F.	50	Epithelioma.	Left.	Not known.	Not known.
38	Shorter, J. H. J. Amer. Med. Assn., '96, xxvii., 644.	Tumor in nose.	Attached to ethmoid.	M.	—	Carcinoma; 8 months.	Left.	Remov'd through nose.	Death in 6 months of recurrence.
39	Douglass. Med. Rec., '96, l., p. 210.	Hemorrhage and pain in left side of face for past 3 months; external deformity.	Lower turbinate; superficial ulceration.	F.	31	Carcinoma; 4 months.	Left.	Pieces removed for patholog. report.	Subsequent history not given.
40	Leland, G. A. N. Y. Med. Jour., '97, lxvi., 663.	Obstruct. of nares for 1 year; pain and epistaxis; mass in nose.	At autopsy tumor was found attached to ethmoid.	F.	50	Adeno carcinoma; 1 year.	Right and finally left.	Piece removed for exam.; no further operation.	Death from extension.
41	Hopkins, J. D. N. Y. Med. Jour., '97, lxvii., 657.	Nasal obstruct.; occlusion of (l) nostril.	Not given.	M.	83	Adeno carcinoma; 12 years.	Left.	Removal with snare; return; this was repeated 7 or 8 times.	Not given.
42	Thorner, Max. Laryngoscope, '98, p. 43.	Tumor of nose.	Middle meatus.	M.	47	Adeno carcinoma; 1½ years.	Left.	Removal with snare; return; this was repeated 7 or 8 times.	Death from recurrence.
43	Reynolds, N. G. Brooklyn Med. Jour., '98, xii., p. 748.	Severe pain in head; offensive breath; foul discharge and tumor in nasal chamber.	Probably fr'm ethmoid cells.	F.	65	Cylindrioma.	—	Radical operat., thoroughly removing all diseased tissue.	Death 2 days later from shock and meningitis.
44	Ripault. Ann. des Mal de l'orielle du larynx, '99, xxv., 227.	Elephantiasis of nose and growth in nose.	—	M.	54	Epithelioma.	—	Growth removed with forceps and curette.	No return after a short time.
45	Bertemes. Revue heb. de laryngol., 1900, ii., 318-325.	Obstruct. of nose with polyps; became malign.	Not given.	—	—	Epithelioma.	—	Operation refused.	Not known.
46	Bertemes. Revue heb. de laryngol., 1900, ii., 318-325.	Began as polyps, which finally became malign.	Not given.	—	—	Cylindrical epithelioma.	—	Not known.	Not known.
47	Goodale. Jour. Amer. Med. Ass., 1900, xxxiv., 276.	Nasal polyp for past 33 years; lately pain in eye and hemorrhage.	Septum and external wall.	M.	51	Carcinoma; duration 15 months after malignant nature was proved.	Left.	Frequent removal with cold wire snare.	Death in 15 months; no radical oper. done.
48	Gibb, J. S.	Growth in nose for past 17 mos.; no spontaneous bleeding, but bleeds copiously when touched; nasal stenosis; severe pain in head and left eye; tumor of face.	In the vicinity of the middle turbinate.	M.	67	Carcinoma; 17 months.	Left.	Thorough removal by curettement; rapid recurrence; radical operat. attempted and abandoned because of extent of the growth.	Still living; gradually failing; intense suffering.

The following references to carcinoma of nose were found in literature, but the reports were inaccessible:

1. Duret: Bull. Soc. Anat. Clin. de Lille, '86, ii., 177.
2. Delstanche: Presse Méd. Belge. Brux., '86, xxxviii., 313-321.
3. Heurtaux: Jour. de Med. de l'onest Nantes, '86, xx., 373.
4. Coomes, F. M.: South West M. Gaz., '88, ii., 252.
5. —: Jahrest d Chr. Abth. d Spit zu Basel, '91-'92, p. 19.
6. Dunn, W. A.: Jour. Ophth. Otol. and Laryngol., '93, lviii., 752.
7. Murzin, L. N.: Bolintsch Gaz. Botkina, St. Petersburg, '94, 457-461.
8. Krasnobajeff: Med. Obozr. Mosk., '94, xli., p. 1,121.
9. Ascerbi: Archiv. Ital. de Laringol., Napoli, '96, xvi., p. 109.
10. Polyak: Orvosi Hetil, Budapest, 1898, xliii., p. 309.
11. Gabanas: Oto Rino-Laringol., Espan., Madrid, 1900, iii., 8-13, p. 24-26.
12. Herzfeld (J.): Berl. Klin. Uchnsch, 1900, xxxvii., 796-798.

SARCOMA (PRIMARY) NASO-PHARYNX.

No.	Reporter and Reference.	History.	Seat.	Sex.	Age	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
1	Brown, Lennox. <i>Burnett's System of Ear, Nose and Throat.</i>	Mass in the naso-pharynx.	Vault.	M.	18	Round-celled sarcoma; 10 months.	—	No operation.	Death in 9 months.
2	Brown, Lennox. <i>Burnett's System of Ear, Nose and Throat.</i>	Difficulty in speaking and stifling sensation in throat; large mass in pharynx.	Pharyngeal wall	F.	33	Spindle-celled sarcoma; 3 years.	—	Galvano-cautery snare.	No recurrence after 1 year.
3	Annandale. <i>Lancet</i> , '89, p. 162.	Large growth in naso-pharynx.	Vault.	M.	20	Sarcoma.	—	Removal; radical operation.	Return in short time; further history not given.
4	Bennett. <i>Trans. Clin. Soc. of Lond.</i> , '90, xxiii., 271.	Large tumor of pharynx.	Vault.	M.	—	Mixed spindle-celled and myeloid sarcoma; 24 years.	—	Three radical operations, two for recurrence.	After each operation malignancy increased; death.
5	Ingals. <i>Internat. Clinics</i> , '91, iii., 336.	Severe pain in head, obstruct. of nose, deafness and loss of weight.	Pharyngeal wall; some ulceration	M.	39	Fibro sarcoma.	—	Radical operation on several different occasions for return.	Not given
6	Report of Superv. Gen. U. S. Marine Hosp., '91, p. 151.	Fulness and soreness of throat, increasing difficulty in breathing and swallowing, hemorrhage.	Growth totally occluding the pharynx attached to left side.	M.	40	Small round-celled sarcoma; 3 months.	Left.	None.	Death; autopsy showed involvement of sphenoidal cells, ethmoid and brain.
7	Levings, A. H. <i>Amer. Jour. Surg. and Gynec.</i> , '98-'99, xii., 109.	Hemorrhage from nose and mouth.	Growth sessile attached to roof of pharynx	M.	13	Mixed-celled sarcoma.	—	Snared off; returned and radical oper. done.	Death from shock and loss of blood.
8	Levings, A. H. <i>Amer. Jour. Surg. and Gynec.</i> , '98-'99, xii., 109.	Growth in naso-pharynx.	Vault.	F.	11	Mixed-celled sarcoma.	—	Removed twice; returned each time; finally radical oper.	No return after 4 months.
9	Paige. <i>Boston Med. and Surg. Jour.</i> , vol. 128-645.	Pear-shaped tumor extending into mouth, touching epiglottis.	Vault.	M.	4	Myxo sarcoma.	—	Removal under cocaine; return.	Death from inanition.
10	Coolidge (A.), Jr. <i>Bost. Med. and Surg. Jour.</i> , '98, vol. 139, p. 491.	Growth in phar., with prolongation through left naris.	Vault.	M.	16	Fibro sarcoma.	Left.	Removal with snare through nose; return, and again removed in 1 year.	No return after the second operation.
11	Brault (J.). <i>Ann. des Mal de l'oreille du larynx, Par.</i> , '98, xxiv., p. 476.	Difficulty in breathing, deform. of face, exophthalmos, blocking of lacrymal canal, tumor in pharynx.	Vault.	F.	3	Round-celled sarcoma.	Right.	Radical operation and tumor removed.	Further history not given.
12	Hengst. <i>Laryngoscope</i> , vol. v., '98, p. 43.	Headache, difficulty in breathing, deafness.	Walls of pharynx, soft palate.	M.	14	Small round-celled sarcoma.	Right.	Radical operation; rapid recurrence.	Death 25 days after operation.

The following references to sarcoma of naso-pharynx were found in literature, but the reports were inaccessible:

1. Ferreri: *Archiv. Ital. di otol.*, etc., Torino-Palermo, '93, vol. i., 29-47.
2. Halstead: *Tr. Amer. Laryng. Rhin. and Otol. Soc.*, '97-'98, iii., 62-66.
3. Gallet: *Ann. Soc. Belge de Chir.*, Brux., 1900, viii., 233.

CARCINOMA (PRIMARY) IN NASO-PHARYNX.

No	Reporter and Reference.	History.	Seat.	Sex.	Age.	Nature of Growth and Duration.	Side Affected.	Treatment.	Result.
1	Fox, S. Allan. N. Y. Med. Jour., vol. li. '90, 259.	Frontal and vertex headache; stoppage of nose; rumbling in ears; fetid discharge.	Lateral and posterior walls of pharynx; orifices of eustachian tubes.	M.	40	Epithelioma; 2 years.	Both.	Radical oper; splitting of hard and soft palate; growth thoroughly removed.	Death 1 month later of recurrence and extension to brain.
2	McBride. Brit. Med. Jour., '91, vol. ii., 1,310.	Pain in left ear; loss of smell in left nostril; difficulty in breathing on left side.	Roof and post wall of pharynx.	F.	56	Epithelioma; 1 year.	Principally the left.	No operation.	No subsequent history given.
3	Roncalli. Archiv. Ital. di otologia, laringolog. et Rhin., '93, i., p. 162.	Bloody discharge; otalgia; mucopurulent; discharge and epistaxis.	Vault.	M.	42	Telangiectatic carcinoma; 1 year.	Both.	Removed with galvano-cautery.	Death from hemorrhage.
4	Kuh, E. J. Med. Rec., '97, li., 548.	Nasal obstruct. and discharge; thick speech.	The whole post nasal space.	M.	37	Epithelioma (?) according to microscope.	Both.	Operation; return; injections into growth of alcohol; administration of K. I.	Recovery; no specific history; case regarded as epithelioma.
5	Brown, E. J. Laryngoscope, '98, vol. v., 219.	Tinnitus aurium; right nasal stenosis.	Vault.	M.	40	Carcinoma; 5 years.	Mostly the right.	Operation; return in 3½ years; second operation and again returned.	Death 1½ years after second operation.
<i>The following quoted by Ch. Jackson:</i>									
6	St. Mary's Hosp., Cat. vi., Inter. Otol. Cong., Lond., 1899, p. 144.	Left nasal stenosis and headache; bloody muco-purulent discharge; epistaxis.	Left wall of pharynx.	M.	45	Carcinoma; 2 years.	Left.	Not given.	Death.
7	McBride (P.). Nose, Throat and Ear, 1900, p. 85-387.	Pain in ear and throat; bloody expectoration.	Right lateral wall.	F.	63	Epithelioma; 1 year.	Right.	No operation.	Not given.
8	Elder, J. M. Montreal Med. Jour., Dec., 1900, p. 900.	Pain in head and muco-purulent discharge.	Vault.	M.	14	Schirrus carcinoma; 2 years.	Both.	Lymph glands extirpated.	Death in 2 months.
9	Jackson, Ch. Jour. Amer. Med. Ass., Aug. 10, 1901.	Pain in right cheek and ear; muco-purulent discharge.	Right wall.	F.	23	Glandular-celled carcinoma; 1½ years to date of report.	Right.	Removed with cold snare, curette and forceps.	No return to date of report; result good.

The following reference found in literature, but the report was inaccessible:
Jacques: Revue Méd. de l'Est, Nancy, 1900, xxxii., p. 16.

Aids to Diagnosis.—Jonathan Hutchinson, F.R.S., General Secretary of the New Sydenham Society, has requested Messrs. P. Blakiston's Son & Co., of Philadelphia, the American agents of the Society, to announce the publication of "An Atlas of Clinical Medicine, Surgery and Pathology," selected and arranged with the design to afford, in as complete a manner as possible, aids to diagnosis in all departments of practice. It is proposed to complete the work in five years, in fasciculi form, eight to ten plates issued every three months in connection with the regular publications of the Society. The New Sydenham Society was established in 1858, with the object of publishing essays, monographs and translations of works which could not be otherwise issued. Its list of publications numbers upward of 170 volumes of the greatest scientific value. An effort is now being made to increase the membership, in order to extend its work.

The Commission Evil: A Remedy.—The division of fees between consultant and family physician and the auctioneering of his case by the general physician among rival surgeons and specialists is an evil that flourishes to such a degree that it can no longer be ignored. If not stopped it will surely undermine all professional ethics and *esprit de corps* and bring us as a whole to irremediable disgrace. The remedy plainly lies in the hands of medical societies. Let them expel a member who is convicted. When the shameless transaction exists it cannot be long hidden and evidence of guilt can easily be secured. House of Delegates of the American Medical Association at its next meeting should come to some determination upon this subject and should set the example for all smaller and less powerful organizations. A decisive command upon the part of our National Society would constitute the beginning of the end of this professional scandal.—*American Medicine.*

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. No 3.

MARCH, 1902.

\$1.00 PER ANNUM.

UNIFICATION OF THE PROFESSION—PROGRESS OF THE WORK.

The following copies of the official letters between the respective organizations present more fully and satisfactorily than can be done in any other way the action that has been taken toward restoring the harmony and consolidation of the profession of the State:

ALBANY, N. Y., Feb. 5, 1902.

DR. ALVIN A. HUBBELL, President of the New York State Medical Association, Buffalo:

Dear Sir—At the recent meeting of the Medical Society of the State of New York, held in Albany January 28th to 30th, the following recommendation contained in the inaugural address of the then president, Dr. Henry L. Elsner, of Syracuse, and indorsed by the Committee upon Recommendations in the inaugural address, was adopted:

"That the Medical Society of the State of New York appoint a committee of five to confer with an equal number representing the New York State Medical Association, for the purpose of formulating a plan which shall have for its object the reorganization of the regular medical profession of this State, which body shall be in affiliation with the American Medical Association, and that the committee report the result of its labors at the next meeting of the Medical Society of the State of New York."

I trust that the purport of this action of our Society is clear and that it may meet with a response from the Association of which you are president. I am, dear sir, Yours very respectfully,
(Signed) F. C. CURTISS, Secretary.

ALBANY, N. Y., Feb. 7, 1902.

DR. A. A. HUBBELL, President of the New York State Medical Association, Buffalo:

Dear Sir—I would add to my letter of the 5th inst., reporting to you the action of the Medical Society of the State of New York in proposing to appoint a committee of conference, with one to be appointed by the Association of which you are the president, that the following committee has been appointed: Dr. Henry L. Elsner, of Syracuse; Dr. A. Jacobi, of New York; Dr. A.

VanderVeer, of Albany; Dr. A. M. Phelps, of New York, and Dr. George Ryerson Fowler, of Brooklyn.

Yours very truly,
(Signed) F. C. CURTISS, Secretary.

212 FRANKLIN STREET,
BUFFALO, N. Y., Feb. 8, 1902.

FREDERICK C. CURTISS, Secretary, of the Medical Society of the State of New York, Albany:

Dear Doctor—The action of the Medical Society of the State of New York, as set forth in your communication of the 5th inst., has been referred by me to the Council of the New York State Medical Association, and it has appointed the following committee of conference: E. Eliot Harris, chairman, 33 West 93d street, New York City; Frederick Holme Wiggin, 55 West 36th street, New York City; Emil Mayer, 25 East 77th street, New York City; Parker Syms, 50 West 47th street, New York City; William H. Biggam, 1197 Dean street, Brooklyn, N. Y.

You will kindly inform your committee of this appointment, and state that our committee is now ready to act in accordance with the purposes proposed, and may be addressed through the chairman, Dr. E. E. Harris.

Yours of the 7th inst., announcing the committee of the State Society, is received, and I have sent the names to Dr. Harris. Yours truly,

(Signed) ALVIN A. HUBBELL,
President of the New York State Medical Assoc.

ALBANY, N. Y., Feb. 12.

DR. ALVIN A. HUBBELL, President of the New York State Medical Association:

Dear Doctor—I beg to acknowledge the receipt of your favor of the 10th inst., in which you name the committee appointed by the Council of your Association to confer with the committee of our Society, to whom I will at once communicate the same. Yours very truly,

(Signed) F. C. CURTISS, Secretary.

It may be of interest to present here the resolution to the Council of the State Medical Association appointing the committee:

Whereas, The Medical Society of the State of New York, having appointed a committee to con-

fer with a similar committee from the New York State Medical Association, with a view to a union of the two organizations, and notice of such creation of a committee having been officially given to our president, together with the request that a corresponding committee be appointed by us; therefore be it

Resolved, That this Council (the Executive Board of the Association) appoint for the purpose of the conference in question a committee of five, to which committee the president is added as a member *ex-officio*.

THE SMALLPOX VERSUS DR. PFEIFFER.

No more instructive object lesson in regard to the contagiousness of smallpox can be found in medical literature than the recent experience of Dr. Pfeiffer. Taken in connection with the fact that the attending staff, the house staff and the nurses at the Boston Smallpox Hospital are daily exposed, with impunity because they have been vaccinated, to the same or greater extent than Dr. Pfeiffer was, the story is most convincing. It is also most opportune at this time. Every doctor in the land should make himself familiar with the salient points of this story and rehearse them repeatedly and often to his patients. With this object in view we reproduce in full the following interesting editorial from the *Medical News*:

"A smallpox case destined to be famous in the history of the progressive victory of therapeutic science over the ranks of ignorance, prejudice, quackery and sentimentalism is that of Immanuel Pfeiffer, M.D., of Boston and of Bedford, Mass. This physician was certainly one of the most vigorous and intelligent of the anti-vaccinationists, yet he was very certain, in his own mind, that smallpox is not a contagious disease, but that it is rather the product of bad hygiene and evil diathesis. This belief in the mind of a medical man properly ratable as of average intelligence is in itself a striking illustration of a wise and ancient proverb—'There are none so blind as those who won't see'; and at the same time it is a notable index of the status of the 'antis' in general—'agin' the gov'ment,' whatever its complexion, dissatisfied with the actual order of events, with 'things as they are.'

"Dr. Pfeiffer has been for many years emphatic in his denunciation of vaccination. He deemed it always an injury and never a benefit, but he denounced it especially because he considered compulsory vaccination a violation of the rights of the individual, however strikingly oblivious such rights may be of the undoubted rights of others, far more numerous, in their demand to be protected by the State from all preventable disease.

"Dr. Pfeiffer, to his honor be it said, had the courage of his convictions on this subject, and in this respect at least he differed from the great majority of his cult. During a recent antivacci-

national hearing before a committee of the Massachusetts Legislature he undoubtedly determined to prove that to a person in vigorous health, as he himself then was, smallpox is not a contagious disease. This fact he hoped to demonstrate and he chose the means best adapted certainly to make his expected demonstration publicly emphatic. To obtain permission from the Boston Board of Health to visit the numerous patients in the city's smallpox hospital on Gallop's Island was for him, as for other physicians, a comparatively easy matter, and Dr. Samuel H. Durgin, chairman of the Board, showed at once his wisdom and his scientific foresight by allowing Dr. Pfeiffer to make this visit unvaccinated, although of course against the rules. Criticized for this exception in the light of the event, Dr. Durgin has ably defended himself on the one principle which is valid always and everywhere, the principle of utilitarianism, of the greatest good to the greatest number. Rather than be vaccinated, Dr. Pfeiffer unquestionably would have stayed away, and an experiment of great practical value to the world would have been missed. But, to indicate an example of the unquestionable and often deceitful means in the employ of the antivaccinationists, let us rehearse the reasons given by the Doctor for desiring permission to make this visit, remembering that at the very time he was publicly urging the non-contagiousness of this disease, but with adequate evidence lacking. To the chairman of the Board of Health he wrote:

"Referring to our conversation of recent date, and your request to my representative that I write you a letter asking permission to visit the smallpox hospital at Gallop's Island, for the purpose of scientifically looking into the disease in all its various forms, and with close observation be able to get such facts, which will enable a physician to diagnose smallpox cases with as much certainty as possible, and also to get the facts in regard to the most successful treatment, I would say that I have already considerable experience, gathered in Europe, and am anxious to increase my knowledge.'

"On this representation the permission was readily granted, and on January 23d, well escorted by officials of the Board, he visited the hospital. He thoroughly examined the institution, and went to the bedside of many of the patients, and he took all the precautions which other visitors take to avoid infection (such as wearing of a close-bound gown and cap, washing the hands, beard, hair, etc., on leaving), save that of vaccination.

"For the next ten days, more or less unknown to himself, he was watched and attended by physicians from the Board of Health in order that the public might be protected from infection from his anticipated disease. During these ten days he was at his office and in the antivaccination hearings, as was his wont. But on February

3d, ten days after his visit to the hospital, when the officer called at his professional office on Washington street, Dr. Pfeiffer was not to be found, nor did he appear at the State House hearing. In answer to inquiries his assistant stated that he was 'out of the State' and he volunteered the information that he had seen the Doctor in Philadelphia on the previous day; one of Dr. Pfeiffer's clerks said that she had received a letter from him on January 27th, having on it the New York City postmark. The presumption certainly was to any one unfamiliar with anti-vaccinational methods that Dr. Pfeiffer had been and still was 'out of the State.' Naturally enough, the Board of Health suspected him to be much nearer home than New York and they even feared that he might be coming down with smallpox. Soon it became known that he had been seen about Charlestown, a part of Boston, but at his office it was denied. This denial was made by a woman clerk in Dr. Pfeiffer's office, yet within an hour thereafter this same woman, accompanied by a doctor, descended a back stairway to a narrow alley, and so reached a side street and a closed carriage that was there in waiting. This carriage, it was learned, conveyed its occupants to the office of a physician on Chambers street; and there the positive information of the Health Board ended. This physician has since, it is understood, denied that he had any such patient. This was on Thursday, February 6th.

"On the following Saturday, fifteen days after the visit to Gallop's Island, the Boston Board of Health received notice from a physician that Dr. Pfeiffer was ill at his home in Bedford with what was probably smallpox, and asking expert diagnosis, the case having been reported by Dr. Pfeiffer's son to the Selectmen of that town. Experts went at once to Bedford and found Dr. Pfeiffer suffering from a very bad attack of the disease. The patient's wife stated that he had arrived home on Thursday night in a carriage, saying he thought he had the grip, but his son said that the Doctor had come home on Friday night directly from New York. The patient himself was too ill to make explanations and to set right this strange and unaccountable discrepancy as regards his movements.

"This is an outline of this interesting series of events up to this date. Had Dr. Pfeiffer employed all his energy in advocating skilfully, instead of opposing, vaccination, he could have had influence only insignificant in comparison with that which his grave plight has had and will have on the public. Nothing instructs the average man, especially in masses, so easily and so effectually as an object lesson, and here is a demonstration arranged to instruct as a medical lecturer sets up an apparatus in the amphitheater. As a prominent Health Board official said to the writer, 'This is a case in a hundred years for the cause of the prevention of smallpox.' That the people of Boston have benefited from this lesson

is already seen in the difference in the welcome accorded the 150 vaccinating physicians now at work in the West End of Boston. But the influence of the dangerous experiment made by Dr. Pfeiffer will, it is hoped, extend wherever its lesson is needed.

"The latest news from the bedside of this for once useful antivaccinationist is that he may recover, although he is suffering from the confluent type of the disease. All hope that such will be the case. In the event that his wretched malady leaves him alive, we may perhaps expect from him one of three things—either that he will deny that his disease was smallpox, or that he will relinquish his public opposition to a world of demonstrated medical wisdom; or that he will admit that smallpox is contagious and that the public therefore needs protection from its awful ravages by any and every feasible means."

A NEW DEPARTURE.

Under this caption our contemporary, the *Medical Times* (formerly known as a homeopathic exponent), makes the following comment:

"The *American Homeopathist* has changed its name to the *American Physician*, and it is a most sensible thing to do. Now, Brother Kraft, let us state our facts and let our readers interpret them to suit themselves.

"The use of the terms homeopathic and allopathic is obsolete, and it would be better if they were never used.

"Hahnemann says in his 'Lesser Writings,' page 363, that 'The rallying motto of the sectarian name is incapable of exciting to sober, calm, scientific investigation; it only rouses the explosive spirit of accusations of heresy to a fierce volcanic flame. Truth and weal of humanity should be the only motto of the genuine elucidators of the art, and the watchword of the brotherly, peaceful bond of reunion, without slavish adherence to any sectarian leader, if we would not see the little good that we know completely sacrificed to party spirit and discord.' Thus saith the patron saint of the homeopathic school, and as to how faithfully his professional followers have accepted this dictum it is not necessary for us to answer.

"We could say much more along this line, but we desist for the sake of harmony. We again assert, as we have so often done, that the sectarian title is the only barrier to complete unification of the profession.

"Thus the *American Homeopathist* becomes the 'nondescript' *American Physician*, and the act brings us one point nearer the goal which is sure to be reached. The homeopathic school has nothing left but its name, all else having been absorbed by the broad-minded physician of today, who will not tolerate sectarian designation any more than Hahnemann would. Why not at once take the advice of the sage of Köthen, so

that we may start the century with a single school in medicine?"

We congratulate the *Medical Times* and the *American Homeopathist* on this advanced and broad-minded attitude. Such acts and declarations are great educators of the rank and file. "American Physician" is a title under which all men and women who practice scientific medicine should be proud to serve. It may be well in this connection to recall the action taken at its last meeting by the New York State Medical Association in reference to eligibility to membership.

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 practice upon exclusive dogma, and who maintain no professional relation with organizations or institutions representing such dogma."

BILLS BEFORE THE LEGISLATURE.

Senate Bill No. 336, introduced by Senator Slaton: "An act prohibiting the use of poisonous or harmful substances in dairy or other food products, and the sale of the same."

Senate Bill No. 460, introduced by Senator Wilcox: "An act to protect public health by preventing the sale and manufacture of cigarettes."

Senate Bill No. 250, introduced by Senator 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."

Senate Bill No. 384, introduced by Senator Mills: "An act amending Section 829 of the code of civil procedure by adding thereto, at the end thereof, the following: Nothing in this section contained shall prevent a physician from testifying concerning his services rendered to a deceased person, in his or her lifetime, and the value thereof."

Senate Bill No. 506, introduced by Senator McCabe: "An act to amend Section 200, Chapter 661 of the laws of 1893, authorizing and empowering the State Board of Health and local Boards of Health to require vaccination or revaccination."

Senate Bill No. 665, introduced by Senator Marshall: "An act to preserve the public health and to prevent accident and mistake in the handling of poison."

Assembly Bill No. 714, introduced by Mr. Pendry: "An act regulating the sanitary condition of bathing establishments."

Assembly Bill No. 353, introduced by Mr. Fisher: "An act to establish a State hospital in some suitable location in the Adirondacks for the

treatment of incipient pulmonary tuberculosis, and making an appropriation therefor, in relation to the reception and maintenance of free patients."

Assembly Bill No. 129, introduced by Mr. Nye: "An act to amend the public health law, relating to the practice of pharmacy by physicians and surgeons."

Assembly Bill No. 676, introduced by Mr. Sanders: "An act to amend the insurance law relating to corporations agreeing to furnish burial in case of death, and medical attendance in case of sickness."

In writing to your Senator or Assemblyman for copies of these bills, please designate them by name, number and title.

THE PRESENT STATUS OF VACCINATION.

Report of a Special Committee of the New York County Medical Association appointed to report upon the advisability of presenting a bill to the State Legislature regulating vaccination in this State. F. W. Loughran, M.D., Chairman Committee.

It is perhaps unnecessary to state here the benefits to be derived from vaccination. It has long been known that smallpox can be prevented or modified by vaccination. It is now believed that the widespread epidemic of the disease can be attributed only to the equally widespread ignorance and selfishness concerning smallpox and its prevention by vaccination.

Why vaccinate? Because unmodified smallpox is so deadly a disease and because the prevention of a specific disease is in harmony with the natural law of "survival of the fittest."

In times past the dangerous communicable diseases have been permitted to make almost the entire human race unfit to survive. Leprosy, smallpox, consumption and scarlet fever, each and all of these leave indelible scars, permanent injuries and defects on many of the people. Each of the last-mentioned three diseases thus impairs the majority of the people, and before the era of vaccination smallpox was so common that few escaped it. It was then said of it: "Among those who outlived it many either totally or partially lost their sight or hearing, many are left consumptive, weakly, sickly or maimed. Many are disfigured for life by horrid scars, thus becoming shocking objects to those who approach them."

During its prevalence, without vaccination, it is impossible to prevent its spread. It is communicated by articles received in the mail, or from stores and shops, and in various other ways any one at any time may, without knowing it, be exposed to smallpox. It becomes imperative, so far as possible, without injury to the health, to render every person incapable of taking the disease. This may be done so perfectly by vaccination and revaccination with genuine bovine vaccine virus that no question of ordinary expense or trouble should be allowed to prevent the careful vaccination of every man, woman and child in the State and revaccination

of every one who has not been vaccinated within five years. It is a well-established fact that those who have been properly vaccinated are far less likely to take smallpox, if exposed to it, and that the very few who have been properly vaccinated and have smallpox have it in a much lighter form and are much less disfigured by it than those who have not been thus vaccinated.

We will not weary you with an array of figures. Let us, however, cite one instance. Vaccination was introduced in England near the beginning of the present century, and since 1853 compulsory vaccination has been attempted. In England the number of deaths each year from smallpox, per 1,000,000 inhabitants, was, at the close of the last century, 3,000, and from 1841 to 1853, 304; from 1854 to 1863, 171, and in the Bavarian army, where revaccination has been compulsory since 1843, not even a single case of unmodified smallpox occurred, and it is a well-known fact that it is indeed a rarity for the attendants of smallpox hospitals, who are, of course, vaccinated and revaccinated, to contract the disease.

From a careful examination of the literature prepared by the antivaccinationists we are convinced that the causes of death due to vaccination are, with very few exceptions, erroneous. It is true that while humanized virus was in vogue erysipelas, syphilis and perhaps tuberculosis were sometimes communicated to the persons thus vaccinated. The objections thus urged against vaccination now are null and void.

Surgeon-General Wyman, in a recent letter to this committee, says: "Vaccination has been robbed of much of its former inconvenience and pain since the introduction of glycerinized or sterile vaccine lymph, and this excuse no longer remains for the neglect of universal vaccination."

For many years vaccination and revaccination have been compulsory in the German Empire, the law requiring the vaccination of all infants within the first year of life, revaccination of all children upon first entering school, and all recruits are again vaccinated upon presenting themselves to begin their compulsory military service. This insures that between birth and the age of 18 all males are vaccinated three times and all females at least twice. The same practice obtains in the Empire of Austria-Hungary. Italy requires vaccination within the first year of life, and again all recruits are vaccinated upon presenting themselves to begin their compulsory military service. Somewhat similar measures obtain in France, with differences in detail.

The difficulties which obtain in the United Kingdom in regard to compulsory vaccination are too well known to you to require more than passing comment here. The provision of the law exempting from vaccination all adults and the children of all parents who make an oath as to conscientious scruples against vaccinations

certainly militates against a system of universal compulsory vaccination.

What has been the result in Germany, in Italy, in Austria and France? Smallpox has become almost entirely unknown.

Your committee has obtained the laws relating to vaccination from all our States, and upon careful perusal we find that the State of New York is almost the only one in which vaccination cannot be enforced during the prevalence of an epidemic.

We would suggest that a bill be presented to the State Legislature covering the following points: All boards of health of every city and town should furnish the means of free vaccination and revaccination to all of the inhabitants. The State Board of Health should have the authority to enforce vaccination during the prevalence of an epidemic.

All inmates of a house where a case of smallpox has existed and any person who has been directly exposed to the contagion must be vaccinated.

No child should be admitted to any school who has not been vaccinated within a period of five years.

All public institutions, such as almshouses, State reform schools, insane asylums and prisons, should have their inmates vaccinated upon entrance. All members of the National Guard who have not been vaccinated within five years should be required to be vaccinated.

All firms and corporations employing more than ten persons; all employees of city departments, such as policemen, firemen and laborers, should be required to be vaccinated.

Exceptions, however, to these sections should be made, providing that the person may present a certificate, signed by a regular physician, that he has twice vaccinated the said person, and that vaccinal insusceptibility exists.

In order that the law should be effective a penalty must be imposed on those who resist vaccination and revaccination when ordered by the proper authorities. This entails a fine of not less than \$50 and not more than \$100 or confinement in jail for not more than thirty days. Such fine and imprisonment shall not stand in lieu of vaccination and quarantine.

We are confident that such a law would be constitutional. Each of these sections has been tested in the proper courts in various States and has been declared legal.

We ask for a most thorough discussion of this question, and that you recommend it to the State associations for its adoption. We are also confident that with the assistance of all the members of the various county associations that this can be made a law. It would require, however, unremitting work on the part of every physician in the State, by personal application of each and every one to the various members of the Assembly and Senate, which we have no doubt you can reach.

The Association.

Kings County Association.—The regular monthly meeting was held on Tuesday evening, February 11th, the president in the chair. About thirty members were present. An amendment to the by-laws in relation to the meeting of the Executive Committee was adopted.

The treasurer read his annual report, showing a balance on hand, January 1st, of \$117.35.

The Committee on Legislation reported in regard to the Osteopathic bill and the lesson to be learned from it as follows:

The Legislative Committee have the honor to report that Senate bill 64, known as the Osteopathic bill, was successfully opposed before a joint hearing by the Judiciary Committees of the Senate and Assembly on January 29, 1902. So far the battle has been won, but is it not time that we should take warning from the oft-repeated lessons of the past? Every year we have to encounter these attacks upon the medical laws of our State by the disciples of some fad who wish to practice medicine without being qualified to do so, and every year finds us unprepared to meet them. The fault lies right in the medical profession itself. By this I mean the indifference of the average physician to his business interests. As I have found the profession, the average physician lives too much in the scientific atmosphere of his profession, and when such attacks are made is content to leave the burden of the battle to a committee appointed from some organization. Now the influence exerted by such a committee is really very small and the amount of detail work thrown upon them is immense. You must remember that our enemies have for months been preparing for the attack, and the time allowed to us after we have discovered the proposed assault is very short—not more than two or three weeks. The committee in these cases is only the general who directs the battle; but what we lack is the efforts of the individual members of the profession, no matter how small, who are the soldiers in the fight. We should copy the tactics of our opponents, where each individual devotes himself enthusiastically to the cause, and you know with what success. These attacks will continue in the future, for the reason that the supporters of these fads are not the ignorant class, but the intellectual and influential, such as judges, lawyers, business men, legislators and writers—persons whose nervous systems are under a constant strain and who are repeatedly breaking down. These people have come to us for permanent relief, and not finding more than

temporary are constantly trying new means for alleviation.

Now, how are these conditions to be met? First, it must be remembered that the committee can only direct, but it remains with each individual to do his part, no matter how small it may seem to be. By this I mean that he should do all he can to bring his influence to bear either directly, or, better yet, through his friends or patients, upon the influential members of the Legislature and upon the public press; second, it should be the duty of each member to communicate with the committee just what he is willing to try to do, and from them receive the facts and data against the proposed legislation; third, the committee should furnish these data to the press for editorials, and the individual can assist by writing letters to the papers. Thus we can influence public opinion; and remember that we must not base our arguments on personal, but on public grounds. In this last struggle we have found the public press willing, with the exception of one or two journals, to aid us when the case was presented to them on this basis; fourth, if each individual would report to his committee the failures from the so-called treatment by the pretenders of which he may happen to have knowledge, a mass of facts might be collected which would simply overwhelm them; just as the spread of Christian Science has been checked by the publication of the deaths occurring under its care, and which in reality form only a small part of the evils arising from its malpractice; fifth, I believe that, like our adversaries, we should in some way publish our successes. By this I do not mean naming individuals, but at the same time letting the public know what we are doing and what our worth really is.

ARTHUR C. BRUSH, M.D., Chairman.

The report of the Biographical Committee on the late Dr. Williams was read and ordered sent to the *STATE JOURNAL*.

The president reported the death of Dr. Bodkin and appointed Drs. O'Connell and Griffin to draw up a biographical notice.

After some discussion the Association authorized the Executive Committee to appoint a counsel.

A communication from the Greater New York Medical Association in regard to the suppression of quackery was referred to the Executive Committee with power.

The president announced that the State Association had appointed a committee of five to meet the similar committee of the State Society to confer in regard to an amalgamation of the two organizations.

After a paper by Dr. L. E. Eiste, entitled "An Historical Résumé of the Relation of Germs to Disease," the meeting adjourned for the usual collation.

The Orange County Association held its regular monthly meeting at the office of Dr. M. C. Conner, Middletown, at 2 p. m., Wednesday, February 19, 1902.

There were present Drs. Conner, Douglas, Hulett, Purdy, Redfield, Preston and Lent, of Middletown; Dr. Distler, of Westtown, and Dr. Dennis, of Unionville. Owing to the blizzard weather and delayed trains, Dr. E. D. Ferguson, of Troy, who was to be present and address the meeting, could not attend.

The scientific session was opened by the president, Dr. Conner, who announced as the subject for discussion: Personal Experiences Regarding the Practical Value of X-rays in Diagnosis.

All the gentlemen present gave interesting accounts of cases where the X-ray had been of great value, mainly as a diagnostic help in fractures and dislocations, location of foreign bodies, etc., but regarding the diagnosis of disease of the internal organs, except in the case of urinary calculi, many were skeptical, as the most modern apparatus often fails to show anything of value to aid in the diagnosis already established by other well-known methods.

The fact was mentioned that the medical profession of Middletown had used the X-ray almost from the time it was first brought forward, especially through the kindness of Harry C. Ogden, of the drug firm of Ogden & Shrener, who very early commenced experiments with the X-ray, and had thus given the profession here an opportunity to use this valuable agent.

Dr. Hulett also stated that, through the liberality of the Ontario & Western Railroad, Thrall Hospital at Middletown was soon to be equipped with a thoroughly up-to-date X-ray apparatus, which would be at the service of the profession to examine any patient needing it for diagnosis.

Regarding the value of the X-ray in the treatment of diseases, all those present agreed that it was never intended as a cure for diseases except as it has been found valuable in epitheliomatous growths and lupus. Like all wonderful discoveries, many properties had been attributed to it which it never had and never could be made to fulfil. Likewise many unprincipled men have made use of the X-ray as a means of revenue to themselves, thereby bringing great discredit to it and the regular medical profession, also lessening its value as a diagnostic instrument in the eyes of the general public. This lowers the value of all medical advances in such a way that the confidence of the people in physicians is shaken. Following this discussion many interesting cases were reported.

Dr. Dennis, of Unionville, reported a case of carcinoma of the thigh, involving the femoral artery and requiring a tourniquet to check the hemorrhage, and yet through an advertisement

of the X-ray as a cure for cancer the patient was willing to undertake quite a journey to reach the advertisers, even with death from hemorrhage almost certain.

Dr. Redfield reported a case of sarcoma of the neck, involving the deep cervical lymphatics.

Dr. Conner reported a case of fracture in which the X-ray would not give a shadow of the bones through an ordinary splint and bandage dressing. He also reviewed the literature of the year regarding the X-ray in diagnosis, especially with reference to renal calculi.

Drs. Hulett, Distler and Preston reported cases where the X-ray had been used by them in locating foreign bodies. Dr. Douglas also reported cases of X-ray diagnosis, and the following very rare and interesting case:

A case of double uterus.—The patient, of German parentage, single, aged 30 years, no special occupation, well nourished, and, I believe, of good habits, came to me to get relief from insomnia. On careful examination and inquiry I found dysmenorrhœa, headaches, slight backache, menstruation six or seven days, all the symptoms of the first stage of melancholia with insomnia. Believing that her mental condition must be due to some abnormal condition of the pelvic organs I made a vaginal examination with the following results: Vulva and meatus urinarius normal; vaginal walls normal, except for shortening of the posterior wall. One large cervix with two external ora uteri, two cervical canals, two external ora uteri. The posterior os and cervical canal led into a uterus slightly larger than normal, retroverted with a mass behind, which, I am sure, is not the body of the larger uterus.

Just anterior to this os and cervical canal, about a line intervening in the same neck of the uterus, as described above, I found another external os, cervical canal, and internal os leading to a small uterus anterior and slightly to the left of the median line. These uteri were joined together at the neck, but each had a separate fundus, external and internal os and cervical canal, with no communication whatever between them. This diagnosis was confirmed by passing two sounds, one into each uterine body, and by no possible means could they be made to touch each other. The anterior uterus was not more than one-third as large as the posterior uterus and is the abnormal uterus.

I am sure menstruation is through the posterior uterus, as the ovaries and tubes are attached to it.

Dr. Conner reported that, on behalf of this Association, he had sent a telegram to Senator Goodsell and Assemblyman Bedell from this county, protesting against the Osteopathic bill.

By a vote of the Association it was decided to send Dr. Ferguson \$25 from the Orange County Medical Association, as its contribution to the State entertainment fund for the meeting

of the American Medical Association at Saratoga.

Dr. Conner stated that several of the Newburgh physicians had already signified their intention of joining our Association irrespective of any action that the Newburgh Bay Medical Society might take in the matter.

Dr. Conner, as president, then made the following committee appointments:

Committee on Legislation—Chairman, C. E. Townsend, Newburgh; W. E. Douglas, Middletown; F. D. Myers, Slate Hill.

Committee on By-laws—W. E. Douglas, chairman, Middletown; C. E. Townsend, Newburgh; F. W. Dennis, Unionville.

Committee on Public Health—Chairman, W. S. Russell, Highland Mills; L. G. Distler, Westtown; J. B. Hulett, Middletown.

Committee on Medical Charters—Chairman, W. I. Purdy, Middletown, A. W. Preston, Middletown; E. A. Nugent, Unionville.

There being no further business the meeting adjourned until Wednesday, March 19th.

* * *

New York County Association.—At the February meeting the following were elected to membership: Henry Bilt, John McCoy, Virgil P. Gibney, William Van Valzah Hayes and Edward M. Merrins.

* * *

Ulster County Medical Association.—The regular annual meeting was called to order at the Kingston City Hospital, February 17, 1902, at 2 P. M. by the president, Dr. Hühne.

The following officers were elected for the ensuing year: President, Dr. James L. Preston; vice-president, Dr. Albert Reed; secretary, Dr. Alice Divine; treasurer, Dr. A. A. Stern; executive member, Dr. George Chandler; member Nominating Committee for the Fifth District Branch, fellow, Dr. H. Van Huenenberg; alternate, Dr. Mary Gage-Day.

The following committees were appointed by the president: Committee on Legislation—Chairman, Dr. Mary Gage-Day; Dr. J. J. Ward and Dr. E. Osterout. Committee on Public Health and Medical Charities—Chairman, Dr. A. A. Stern; Dr. George S. LaMaree and Dr. A. Stillwell.

An offer was made by the Ulster County Society and presented to us by Drs. Preston and Stern, that if we would invite and entertain them at our meeting in May they would reciprocate in June. The president, Dr. Preston, appointed four others to serve with him in arranging for this entertainment.

* * *

Cortland County.—The regular monthly meeting was held February 7th at the office of Dr. Jennings. Dr. Jennings read an excellent paper on "Puerperal Septicemia, Its Causes and Treatment." By the advances made during the past twenty years in the scientific study of bacteriology and the blood with the aid of the microscope, our knowledge of this disease is no

longer theoretical, but is based on facts demonstrated. An interesting discussion on this important disease was participated in by all members present.

* * *

Meetings in the Fifth District.—The following meetings of county associations in the Fifth District will take place in the month of March: Kings County, 315 Washington street, Brooklyn, March 11, 1902. H. Arrowsmith, Chairman.

New York County, 17 West 43d street, March 17, 1902. Parker Syms, Chairman. Nomination of officers, fellows and alternates at executive session, 8 P. M.

Orange County, Middletown, N. Y., March 19, 1902. Milton C. Conner, Chairman.

Westchester County, White Plains, March 20, 1902. N. J. Sands, Chairman.

* * *

Medical Legislation at Albany.—There have been four important bills of a medical character before the Legislature this winter. The first was the Osteopathic bill, which was met fairly and squarely by the profession of the State, and was shown to be such an outrage upon the community that it was quashed in committee. The convincing argument of Dr. E. Eliot Harris, as chairman of the Committee on Legislation of the New York State Medical Association, was probably the most effective weapon used in putting a quietus upon this bill. The argument was published in full in our last issue.

The second bill to engage attention was the Lunacy bill. In the opinion of all of the friends of the State hospitals and of the medical profession this measure is destined to work harmfully, if not disastrously, to the present scientific methods of treating the insane. A vigorous effort was made to convince the Legislature of this fact, but argument seemed to be of no avail and it passed both the Assembly and the Senate by strict party vote. This was a pet measure of the Governor and, although he gave a public hearing to those opposed to the bill, he announced at the close of the hour that he should sign it, which he did.

The third bill is known as the State Charities bill. The provisions of this aim to place the charitable institutions of the State under new management and is more or less in conformity with the bill for the management of the asylums. It is equally objectionable.

The bill for compulsory vaccination now before the Legislature had the indorsement of our Committee on Legislation, but a substitute bill, less drastic in its requirements, has been accepted by the committee. The substitute bill provides that "every local board of health shall enforce general vaccination of all persons when required to do so by the State Commissioner of Health, who is hereby authorized to make such requirements when in his judgment such action is necessary for the protection of the public health."

THE ORGANIZATION OF THE MEDICAL PROFESSION.

The following, abstracted from a leading article in the "Journal" of the American Medical Association, will not fail to interest our readers.

Of the 110,000 physicians in the United States, only 33,000 belong to medical societies, leaving 77,000 who are not connected with any medical organization whatever.

"The Committee on Reorganization, appointed by the American Medical Association in 1900, which reported at the 1901 meeting of the Association at St. Paul, when preparing its report attempted to gather statistics concerning medical organization, and especially as regards the number of those who belong to medical societies. Reports were received from every State, although from some the results as to accuracy were not very satisfactory, it being impossible in some of the States to more than guess at the facts regarding the number belonging to medical societies. However, basing its conclusions on more or less reliable information, the Committee concluded that the total membership of the medical societies at that time was approximately between 34,000 and 35,000.

"In arriving at these figures no attempt was made to take into account those who belong to more than one society, although in some instances one individual might belong to half a dozen or more organizations. Neither was there any allowance made for those who were only nominally members, such as those who neither attended the meetings nor kept up their dues—in other words, delinquent members and those who, according to the constitution and by-laws of the various societies, should not be classed as active members. Taking into account all these and other things, it was concluded that a fair statement to make was that not more than 33,000 physicians in this country belonged to medical societies.

"The number of regular physicians in the United States is unknown. Various reports are published, these varying in number from 100,000 to 120,000. Probably the mean of these, 110,000, would be practically correct. This gives us the startling fact that there are 77,000 physicians in the United States who do not belong to any medical society whatever.

"Those who know the value of medical societies must acknowledge that the revelation is an appalling one. It is a revelation that accounts for the wretched condition that our profession is in as a body politic and as a social factor in many ways. It is jealous, antagonistic, discordant, disorganized, powerless, without unanimity of thought or action on important questions—ethical, social or scientific—without influence socially, politically, or in any other way.

"What is the cause of these conditions? Why is it that not one in three physicians belong to

a medical society? Does the fault lie entirely with the two-thirds, or is it a fact that for some reason our medical societies are not such as to make membership in them both available and valuable? Can existing societies better perform the functions for which they are created and be made more available for those for whom they are intended? These are important questions and well worthy of thoughtful consideration.

"It is quite probable that those who have given thought to the subject would, without hesitation, say that several things contributed to the existing conditions as regards organization. The first rests with those who are not members. These are apathetic, indifferent or ignorant of the practical value of membership in medical societies.

"The second is the want of medical societies in many localities so that those who desire to become members can have the opportunity.

"The third rests with the societies themselves. These are not performing their full functions as organizations representing the medical body politic; as educational or scientific bodies the majority of them are not conducted for the best interests of all their members.

"Accepting these propositions as true, the remedy then will be: 1, to arouse those not now members from their apathy and indifference and convince them of the value of membership; 2, to organize and encourage medical societies in every part of the country, and 3, to stimulate existing societies to more active work and, if necessary, to adopt different methods.

"Possibly a consideration of the subject of organization of the profession will not be out of place in this journal, which is the mouthpiece of the great National organization of medical men whose avowed objects and principles are:

"To federate into one compact organization the medical profession of the United States, for the purpose of fostering the growth and diffusion of medical knowledge, of promoting friendly intercourse among American physicians, of safeguarding the material interests of the medical profession, of elevating the standard of medical education, of securing the enactment and enforcement of medical laws, of enlightening and directing public opinion in regard to the broad problems of State medicine, and of representing to the world the practical accomplishments of scientific medicine." (Article II. of the constitution of the American Medical Association.)

(To be continued.)

The Tuberculin Test.—At the annual meeting of the Short-horned Breeders' Association, held at Toronto, February 4th, the following resolution was adopted: "We, the members of the Dominion Short-horned Breeders' Association, resolve that the tuberculin test is unreliable, unnecessary, and, in many instances, injurious, and

that we advise the discontinuance of the compulsory use of tuberculin by the Dominion Government Department of Agriculture. We also fail to see the object of continuing the ninety days' quarantine, as there is no contagious disease in Great Britain requiring its enforcement for such a length of time." While the opinion of Koch has thrown into temporary confusion our beliefs regarding bovine and human tuberculosis the medical profession is not ready to accept the dictum of our "short-horned" friends that the tuberculin test is unreliable, unnecessary, and, in many instances, injurious.

OBITUARY.¹

WILLIAM H. WILLIAMS, M.D.

Dr. William H. Williams was born January 9, 1822, at Clinton, Middlesex County, Conn., on the old homestead which came to the family by direct grant in the early history of our country. After receiving his general education he took up the study of medicine in New Haven, Conn., and at the age of 25 graduated from the Yale Medical School (1847). He at once began practice in Brooklyn in March of that year. He soon became well known throughout a quite extended region in South Brooklyn, and when the yellow fever outbreak occurred in 1856 he was found to be the leading physician throughout the old divisions of Gowanus, Bay Ridge and New Utrecht.

He continued throughout his career to be a general practitioner of high standing, and was known for his capabilities and personal qualities by all the prominent physicians of the city. He very markedly represented the type of the old school practitioner and inspired confidence in not only his patients, but all those who came in contact with him, and especially his fellow-members in the medical profession.

He had a universally recognized genial disposition and polished bearing, accompanied with a modest and possibly a too retiring manner. He always carried himself with dignity and inspired one with the idea of his sincerity. His devotion to his profession in all its details was deep and lasting, and his high idea of morality and straightforwardness made him a shining light in the religious circle in which he moved. He was repeatedly consulted on moral and ethical questions, quite as much as on professional subjects, especially in his later years, and his pastor has expressed his sincere gratification in having been free to consult and advise with him on many ethical points.

He continued in active practice up to a few years ago, but even in these last years there was a small circle of his old patients who still had such confidence in his judgment that they could not seek elsewhere for practical medical advice. He permitted these to consult him to

the last, and thus it may be stated that he actually practiced in his profession until his final confinement to his room.

He was a permanent member of the American Medical Association, an original member of the New York State Medical Association and one of the founders of the Kings County Medical Association.

He died at his residence, 207 17th street, on the night of Friday, January 3, 1902, at the age of 79. In 1877 he married Miss Susanna T. Foote, daughter of Dr. Anson Foote, of Guilford, New Haven County, Conn., who now survives him.

The warm attachment which all who knew him had for him was impressively shown on the evening of his funeral, Monday, January 6th, when a large gathering of mourners in all stations of life was assembled at his late residence to do honor and pay their last respects to his memory.

* * *

Public Drinking Cups Are to Be Abandoned in the public schools of Cleveland on the recommendation of the health officer of the city, because of the dangers of conveying infection through their agency.

* * *

In Active Practice at 98.—Dr. Charles F. Willgohs, of Clinton, O., recently celebrated his 98th birthday. Dr. Willgohs is probably the oldest physician in active practice in this country.

* * *

Bronchitis.—In the moist type of chronic bronchitis the following may be advised:

℞	Creosoti	℥xv
	Elix. ferri quin. and strych.	ʒii
M.	Sig.: ʒi in sweetened water after meals.	
℞	Creosoti	ʒss
	Glycerine	ʒss
	Spts. frumenti, ad.	ʒii
M.	Sig.: ʒi in water after meals.	
℞	Cocain. Hcl.	gr. v
	Menthol	gr. viii
	Tr. benzoin co., ad.	ʒi
M.	Sig.: Use in nebulizer several times a day.	

* * *

The Nursery and Child's Hospital, New York.—Dr. J. J. Hall has been appointed consultant physician to this institution, in succession to Dr. T. M. Markoe, deceased. The vacancy on the attending staff, caused by the resignation of Dr. J. J. Hall, will be filled in January.

* * *

A Physician Elected as a Trustee of Columbia University.—One of the two vacancies on the board of trustees of Columbia University was filled on December 2d by the election of Dr. Edward L. Trudeau.

¹Read at the February meeting of the Kings County Medical Association.

Book Reviews.

THE MEDICAL NEWS POCKET FORMULARY FOR 1902—By E. Quin Thornton, M.D., Demonstrator of Therapeutics, Pharmacy and Materia Medica in the Jefferson Medical College, Philadelphia, Pa. Fourth edition, revised. Lea Brothers & Co., Philadelphia and New York.

This is a handy little volume in wallet form, strongly bound in leather, with pocket and pencil. A convenient and reliable *vade mecum*.

As in other editions, the author has improved the opportunity afforded in the new edition to introduce the newer remedies which have stood the test of practical experience, and to add new formulas containing older drugs under new combinations. The use of hydrogen dioxide in the obliteration of powder stains is a valuable suggestion. The organic combination of silver and arsenic as substitutes for the more poisonous inorganic salts of those metals and the use of adrenalin as a hemostatic may be especially noted.

Diseases are arranged alphabetically, and under each are given a series of prescriptions for uncomplicated cases in their various stages, and also for complications.

Indications for the use of each formula are also appended. The quantity of each drug is given in both the English and the metric system.

In glancing through a compendium of this kind a very big doubt presents itself regarding the effect upon the mental and moral character of the physician in having stereotyped prescriptions so conveniently at hand. It is most convenient and time-saving, but unless wisely used is apt to make the physician so dependent upon it that when it is not at hand he is completely lost. As a source of suggestion, however, for modifying well-known prescriptions it may prove invaluable.

INTERNATIONAL CLINICS. A quarterly of clinical lectures and especially prepared articles by leading members of the profession throughout the world. Volume IV. Eleventh series, 1902. J. B. Lippincott & Co., Philadelphia. Pp. 302. \$2.

This is the fourth volume of a series whose previous numbers have been favorably reviewed in these columns. It contains articles on a variety of topics, though the importance of the topic is sometimes rather less than the reputation of its author would lead one to expect. Still, the book contains a vast deal of valuable information. Under the heading "Therapeutics" we notice a short but instructive article on strychnin, by Jacobi, and one on the treatment of syphilis by Brocq. In the chapter on "Medicine" Dyce Duckworth has a contribution on the tubercular and arthritic diatheses, and J. Mitchell Bruce one on the prognosis in cardiac diseases. In the surgical section Chetwood has a valuable contribution on the operative treatment of prostatic hypertrophy; G. Frank Lydston one on movable kidney; while Nicholas Senn and J. B. Deaver each contribute a chapter embracing the clinical treatment of a number of interesting maladies.

J. Madison Taylor has a chapter on deformities in children, while Gotheil gives the modern treatment of some common dermal affections. The book is handsomely bound and fully illustrated.

TRANSACTIONS OF THE STATE MEDICAL ASSOCIATION OF TEXAS, THIRTY-THIRD ANNUAL SESSION, HELD AT GALVESTON, 1901.

The plan of reorganization of the American Medical Association was discussed at this meeting, and the following resolution was adopted:

"Resolved, That the Texas State Medical Association approves and indorses said plan."

The president in his annual address calls attention to the necessity for reorganization and says: "Co-

operative and organized efforts and the improvement of the social and economic conditions of the profession are too urgent and obvious to allow a continuation of the old let-go policy.

"We should have two separate meetings, one scientific and one for administrative purposes. We should admit every decent practitioner to the former, but the other part should be in the hands exclusively of delegates from affiliated societies, or otherwise empowered members, under strict rules, to be conducted very much like a grand lodge. I think that the efficiency of our Association would be greatly enhanced and membership made so desirable that extra efforts to attract smaller societies would become superfluous. I mean that mutual life and accident insurance and other aid and protective features could be safely added.

"This brings us to the vexed question of how to regulate the affiliation of county and district societies. As it now stands they come in with the most profuse rights and no duties at all. They do not contribute a cent to our expenses. That this is an injustice to the members who pay heavy dues is evident. But the most dangerous feature is that it must lead to a total bankruptcy of the Association, because whoever desires to have all the privileges without paying will join any kind of a medical society, or, if necessary, will form even a new one, consisting, perhaps, of himself and a friend. For the present I think it will be the most expedient way to allow to affiliating societies as many delegates as they pay for at the ratio of individual membership."

The following amendment to the Constitution was unanimously adopted:

"Resolved, That the basis of affiliation with the Texas State Medical Association be constituted as follows:

"The adoption of the Code of Ethics of the American Medical Association.

"The payment annually into the treasury of the Association per member to be made by the first day of April.

"Each county or district society shall be entitled to send delegates to each meeting of the State Association upon a numerical basis as follows: For fifty members or under, one delegate; for each additional fifty members or fraction over thirty, one delegate."

The following resolution was adopted:

"That delegates be appointed in response to the invitation from the New York State Medical Association."

There were forty-two papers presented before the various sections of the State Association.

BOOKS RECEIVED.

Acknowledgment of all books received will be made in this column. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

SYSTEM OF PHYSIOLOGIC THERAPEUTICS—Cohen. A practical exposition of the methods other than drug-giving useful in the treatment of diseases. P. Blakiston's Sons & Co., 1012 Walnut street, Philadelphia.

THE MENTAL STATE OF HYSTERICALS. A study of mental stigmata and mental accidents, by Pierre Janet, Litt. D., M.D., Professor of Philosophy at the College of Rollin, with a preface by Prof. J. M. Charcot. G. P. Putnam's Sons, New York and London—The Knickerbocker Press, 1901.

CLINICAL HEMATOLOGY. A practical guide to the examination of the blood with reference to diagnosis, by John C. DaCosta, Jr., M.D. P. Blakiston's Sons & Co., Philadelphia, 1901.

TRANSACTIONS OF THE MEDICAL SOCIETY OF NEW JERSEY, 1901.

TRANSACTIONS OF THE HOMEOPATHIC MEDICAL SOCIETY OF THE STATE OF NEW YORK FOR THE YEAR 1901. VOLUME XXXVI.

Original Articles.

THE SURGICAL ASPECTS OF DIABETES.¹

BY ARPAD G. GERSTER, M.D.,

New York,

Surgeon to Mt. Sinai Hospital.

THE first evidence, in medical literature, of the close relations existing between diabetes and certain affections of the skin is found in this sentence of the venerable Cheselden: "Both these cases (furuncles and carbuncles) are attended with sweet urine, as in diabetes."

The first one, however, insisting upon the causal nexus between diabetes and the various forms of gangrene was the French military surgeon, Marchal de Calvi, whose important study of this subject was presented to the Académie de Médecine of Paris on April 13, 1853. In 1864 the same author was in a position to embody his theory in a fine monograph,² based upon the histories of 139 pertinent cases. A number of more or less important French and German publications, bearing upon our subject, failed to rouse adequate interest, until in 1880 Roser's article, "Diabetes and Sepsis,"³ and König's notice of it,⁴ gave impulse to a long series of German, American, French and English publications, composing a rich fund of valuable knowledge.

The question "*Why did sugar in the urine predispose to suppuration and gangrene?*" remained unexplained by the various theories advanced by Marchal de Calvi, Vevneuil, Seegen and O. Weber, and Roser himself honestly confesses absolute ignorance on the subject as late as 1880. In 1882 Wilhelm Müller⁵ first suggested the rôle of microorganisms in the process, supposing that the constant presence of these in the circulating blood determined septic conditions at any given "locus minoris resistentiæ." Müller's error was easily exposed by the pertinent remark of Kraske "that nobody had ever seen a subcutaneous fracture suppurate in a diabetic, or a purulent destruction of the bulb in diabetic cataract."

Kraske⁶ and König finally could and did bring indisputable proof that while diabetes furnished the predisposition, the entrance of microorganisms from without was necessary to determine the suppurative process.

But we know that a very large proportion of the cases of diabetic gangrene occur without, and in their beginnings lack entirely the element of suppuration, the purulent infection entering upon the field long after the first appearance of

the necrosis. This lack in the explanatory *rationale* of the process was furnished by Israel, who demonstrated the great importance of arteriosclerosis in the causation, and was supplemented by the labors of Heidenhain,⁷ showing in these cases the frequency of thrombosis of the large vessels of the lower extremities.

To complete the subject it is necessary to mention that v. Ziemssen,⁸ and after him the Frenchmen, Jeannel and Auché, then the Englishman, D. Pryce, with a number of others, have maintained that disorders of the nervous system, either in the form of peripheral neuritis, or of this in consequence of central degenerative changes, are leading factors in producing diabetic gangrene. This contention, however, is not well proven, it seeming, on the contrary, that they themselves are consequent upon arteriosclerotic lesions.

Accepting the fact as well established that accidental microbic infection in the presence of diabetes is followed by unusually destructive forms of suppuration, we may ask the question: "*Why is this so?*"

First, Do the liquid components of the tissues offer in diabetes an unusually favorable pabulum for the proliferation of the pathogenic organisms of suppuration, this exuberance determining also the heightened virulence? and, *secondly*, does not the presence of pathological quantities of sugar in the system constitute a disorder akin to senility, characterized by diminished resistance to infectious influences, and by other accompaniments of senile degeneration, foremost among which is arteriosclerosis and cardiac debility?

Both of these questions must be answered in the affirmative.

Abundant experimental proof of the first proposition has been furnished by a number of competent observers. Brevity of time permits, however, only a short review of the most salient features:

1. It is a well-known fact that dogs and rabbits, as compared with man, offer a remarkable immunity against staphylococci. Hedon and Méring Mynkowsky⁹ having extirpated the pancreas of a large number of dogs under most rigid antiseptic precautions, invariably found that in all the animals that did not contract diabetes the wounds healed by the first intention. On the other hand, among twenty diabetic dogs only one presented a faultless course of healing, every other subject suffering from various forms of stitchhole and other abscesses, most of them dying of peritonitis.

2. Bujroid¹⁰ found that a certain quantity of staphylococcus aureus introduced under the skin

¹Read before the New York County Medical Association, January 20, 1902.

²The Anatomy of the Human Body. London, 1768, page 139, Tenth Edition.

³Recherches sur les Accidents, Diabétiques. Paris.

⁴Deutsche Med. Wochenschrift, 1880, 1 and 2.

⁵Centralblatt für Chirurgie, 1880, page 138.

⁶Ueber das Auftreten von Sepsis bei Diabetikern. Baier. ärztl. Intelligenzblatt, XXIX., 41, page 457.

⁷Diabetes und Sepsis. Centralbl. für Chir. 1881, No. 35, page 545.

⁸Ueber einige Beziehungen des Diabetes zur Chirurgie. Ber. Klin. Wochenschrift, 1882, No. 46.

⁹Ueber die Behandlung der Senilen Gangrän, etc., insbesondere bei Diabetikern. Deutsche Med. Wochenschr., XVII., Nos. 38, 39, 40, 1891.

¹⁰Neuralgie und Neuritis bei Diabetes Mellitus. Münchener Med. Wochenschrift, 1885, No. 44.

¹¹Archiv für Experimentelle Pathologie, Vol. 26, page 376, 1890.

¹²Centralblatt für Bacteriol. Vol. IV., page 577, 1888.

of a rabbit was absorbed without producing any local lesion, but caused invariably an abscess whenever injected simultaneously with a solution of sugar.

3. In cultivating pyogenetic bacteria Theobald Smith,¹² of Boston, found that they could be made to thrive best in media that contained not less than 0.3 per cent. and not more than 0.5 per cent. of sugar, a fact of the highest importance and significance if we consider that these figures, especially the first one, exactly represent the proportion in which sugar is found in the blood of diabetics. In higher concentrations sugar assumes a decided bactericidal quality, a fact well known to the ancient Egyptians, whose preservative fluid was honey. In recent times Lücke and Billroth have utilized this antiseptic quality of sugar—the former in dressing all wounds with powdered sugar, the latter in deodorizing foul ulcers, especially those of cancer, by the application of fig poultices.

4. In reexamining the behavior of pyogenetic organisms in media containing grape sugar Fritz Grossmann,¹³ to whom we owe a most exemplary monograph on this subject, has confirmed all the statements of Theobald Smith, expressly remarking that the growth and coloration of cultures of staphylococcus pyogenes albus and aureus were most intense in media containing between 0.2 and 0.5 per cent. of sugar. This fact is sufficient to explain why these microbes thrive so well in the juices and tissues of diabetics.

5. Fritz Grossmann also ascertained by experiment that quantities of microorganisms which would not cause the slightest disturbance if injected into healthy rabbits did become extremely virulent if injected with the proper quantity of sugar, or if introduced into the system of rabbits made glycosuric by the injection of nitrite of amyl. In many of these experiments it was also noted that more or less extensive gangrene showed itself at or in the vicinity of the punctures.

6. The same experimenter, impelled by the assertion of Réard¹⁴ that suppuration, especially accompanied by gangrene, was productive of diabetes, ascertained by a number of careful trials that such was never the case in animals. This is borne out also by the well-known fact that furunculosis, carbuncle and gangrene of the extremities do occur in many patients who did never exhibit diabetes previous to, during or after these conditions. In the light of our present knowledge we may safely say that Réard's conception of a "concomitant diabetes" rests on a defective knowledge of the fact that diabetes rarely, if ever, begins otherwise than in an insidious way, the first invasion of the malady being mild and evanescent, appearing only after excesses in eating or drinking, or during a passing malady, accom-

panied by systemic depression, disappearing as soon as the equilibrium is restored. Thus the first attacks are often overlooked. Observations of the urine made during one of these periods of latency will easily mislead the best observer and have led to the error of Réard. *The surgical importance of this latent stage of diabetes cannot be sufficiently emphasized.* Its existence offers the true explanation of the cases in which, with the appearance of a suppurative process, for instance, we begin to find sugar in the urine of a patient whom we considered free from diabetes. A careful and searching inquiry of the previous condition will often reveal a passing polyuria or other unmistakable symptoms of the malady. These are the cases in which, with or without the regulation of the diet, after the successful employment of active surgical measures, limiting the suppurative process, we see the sugar disappear from the urine. The seeming paradox that, during the course of severe acute infectious diseases with much fever, we often observe the disappearance of sugar from the urine of diabetics may be explained by the fact that the natural retrenchment of the patient's diet during the febrile period is the cause of the absence of sugar.

Noorden¹⁵ gives the histories of seven cases in which, most of these patients being medical men or druggists and accustomed frequently to examine their water, diabetes was observed at very early periods of the malady. In all of these cases the diabetes was irregularly periodic, and in the beginning entirely devoid of any symptom pointing to the disorder, the periods of latency extending in two of the instances over several years.

7. The products of faulty assimilation circulating in the blood of diabetics, such as are acetone, acedi-acetic acid, lactic acid, *B*-oxybutiric and oxalic acid, devitalize and weaken the tissues to a marked degree, thus producing a status of premature senility. The intrinsic diminution of their resisting power makes them easy victims to the destructive invasion of microbes, and this all the more so as the local blood supply is curtailed by cardiac weakness and premature angiosclerotic changes, all of which together conspire to produce the various forms of necrosis observed in diabetes.

We may close these reflections by mentioning the popular belief that in most people wounds heal easily and that there are some few others whose wounds never heal without festering. The suspicion is justified that these may be afflicted by diabetes. Upon the knowledge of this difference in the healing tendency of the wounds of different subjects was based a curious practice of ancient surgery. Before entering upon the performance of a grave operation it was customary to make a probatory cutaneous incision to see what its behavior would be in healing.

¹²Ueber die Bedeutung des Zuckers in Culturmedien für Baeterien. Centralbl. f. Bact., Vol. 18, page 3, 1895.

¹³Ueber Gangrän bei Diabetes Mellitus. Berlin, 1900, page 13.

¹⁴Glycosurie éphémère. Revue de Chirurgie, 1886, page 639.

¹⁵Die Zuckerkrankheit und ihre Behandlung. Berlin, 1881, page 81.

Upon the issue depended the question whether the graver operation could or should not be done.

The surgical complications of diabetes are so manifold, their several characteristics showing so many imperceptible transitions, that here, classification must be somewhat arbitrary; but a certain grouping, according to predominant characters, will be useful, even necessary, in our study.

First come *furunculosis and carbuncle*. Relatively they are very common in diabetics, few of these escaping one or the other. *Absolutely* the greatest number of the cases of these affections occurs among those who do not suffer from diabetes. So we see that among thirty-two patients of Halpryn suffering from grave carbuncle only two had diabetes. Both of these affections are caused by the penetration of the sound or abraded cutis by pus-generating microbes. We shall not wonder, then, at the fact that the scaly, dry and itching skin of those exhibiting diabetic polyuria, under the incessant scratching and rubbing practiced by the patient, becomes so often the seat of furuncles and carbuncle. When, on the other hand, we see in diabetics excessive sweating, accompanied by furunculosis, we may look for sugar in the perspiration, not forgetting the interesting observations of Fletcher, Driessen, Semmola and Griesinger, who noted a curious alternation of the appearance of sugar between the urine and the sweat. Furuncles and carbuncle generally appear in middle-aged patients, whose urine contains only moderate quantities of sugar, and who, therefore, neglect a proper diet. They are the first ominous harbingers of graver trouble to come. Furuncles may be found in any part of the skin. The place of predilection for the typical carbuncle, however, is the dorsum, from the occiput down; next in frequency, the face. The former may attain enormous proportions, involving as much as a square foot of surface. Furuncles rarely demand active surgical interference, generally yielding to proper systemic and bland topical treatment. Diabetic carbuncle, on the other hand, especially that of the face, does not brook procrastination. To forestall extensive mortification, due to increasing infiltration and tension, to prevent fatal thrombosis extending from the facial to the meningeal veins, early and thoroughgoing, and multiple incisions are demanded.

Next in frequency to furuncles and carbuncle come the *superficial necroses of the integument*, the principal seat of which is the lower extremity. They begin either as a bluish-red discoloration or in the shape of a petechial mark, or finally and most commonly as a blister, filled with sanguinolent serum. They may be also provoked by the presence of rhagades, excoriations due to scratching; finally, by the application of mustard plasters, vesicants, leeches, dry or wet cups, the puncture of a hypodermatic syringe; then slight traumatism, as, for instance, a bruise, friction of a frostbite or pressure exercised by

the pad of a truss. The gangrene is generally preceded by a local sense of coldness, pain and numbness. In uncomplicated cases the immediate issue is favorable. Under moist, mildly antiseptic applications the necrosed layer is cast off and the granulating defect is soon cicatrized over, the shallow ulcer being replaced by a slightly depressed scar.

Should the primary lesion become infected the consequence may be a more or less extended *ill-conditioned ulceration*, which occasionally assumes the *phagedenic* character. The treatment must be directed toward an improvement of the local circulation by elevated posture and local heat, together with a diligent renewal of the moist, antiseptic dressings, whereby the infectious secretion is promptly removed. The rapid spread of the destructive process may need the energetic application of the actual cautery.

The *perforating ulcer of the foot* of diabetics does not differ from that observed in non-diabetic persons, except for its tendency to cause lymphangitis and to assume a phlegmonous character.

The most formidable form of diabetic necrosis is, however, *the gangrene of a whole limb*. For obvious reasons the lower extremities are much more subject to the disorder than the upper, the relative proportion being seven to one.

Here as well, as in the subject of superficial necroses, we can roughly differentiate between the primarily non-infectious and the infectious forms. In the causation of the non-infectious form of gangrene the determining factor is found in the arteriosclerosis, which gradually deprives the limb of its blood supply, as in so-called senile gangrene. Premonitory signs, in the shape of superficial necroses and ulcerations of the integument of the foot or toes, usually make their appearance long before the final catastrophe. Another early sign of imminent gangrene of the limb, Charcot's *intermittent lameness*, is characterized by these peculiarities: A person perfectly well while sitting or recumbent begins, after having been afoot for fifteen or twenty minutes, to complain of a sense of numbness and of painful tension felt in the limb. After a certain while exercise is not followed by these symptoms. Examination of the toes reveals a slight bluish discoloration, indicating a progressive arteriosclerosis.

If, in consequence of the entrance of infectious influences, an ulcerative process becomes established alongside the dry mortification, we observe a combination of the non-infectious and infectious forms. The purely infectious form represents a gangrenescent phlegmon of the dependent parts of the extremity, which generally takes its origin from a minor lesion, such as a superficial or perforating ulcer having a progressive character. Gangrene of the extremities is about four times more frequent in men than in women. The prognosis of these cases is almost hopeless unless operative relief by amputation is afforded. Even so, the forecast is

not very favorable, about one-half of the patients succumbing especially to diabetic coma.

Since the time when we learned to recognize the rôle of diabetes in gangrene, the question of its surgical treatment has undergone violent fluctuations. The bad results of the preantiseptic time led Landowzy to proclaim diabetic affections to be a *noli me tangere* to the surgeon. Even simple incisions were inadmissible. The other extreme was marked by J. Hutchinson¹⁶ and Lothar Heidenhain,¹⁷ who recommended high amputations in every case in which ablation became necessary, even if the mortification did not involve more than the toes or a part of the foot. To-day a certain equilibrium seems to have been attained by the general acceptance of the following principles:

In non-infectious cases of necrosis of the toes and of the leg, where there is no fever, a limitation of the gangrene is to be sought for by elevated posture, and the maintenance of a dry state of mumification as long as possible. Moist applications and poultices and everything else should be shunned that may introduce the element of pyogenic infection. When the period of demarcation is well established, no bloody operation should be undertaken without stringent necessity. Often parts or the whole of a mortified toe will be cast

off or can be cut away without causing hemorrhage, the wound healing kindly under a simple dressing. Where the foot or the leg is involved, the choice of the place for amputation should depend upon the estimation of the extent of the arteriosclerosis. If the popliteal pulse is felt, an amputation below the knee is admissible. In case of doubt, however, the higher amputation deserves the preference. In infectious cases another factor has to be considered besides that of arteriosclerosis, and that is the necessity of avoiding contact infection proceeding from the festering and gangrenous area. Keeping as far away from the infected area as possible seems to be the right thing here; hence, well weighing the elements of each individual case, the decision will often have to fall upon high amputation. This will be the case especially when the phlegmonous gangrene is rapidly progressive and productive of intense sepsis.

Let us cast a glance at the question of what constitutes the *principal dangers of operating* upon patients suffering from diabetes. First of all comes *anesthesia*, justly dreaded in far-progressed cases of diabetes, and this principally on account of the cardiac debility which here is very common. The next thing to be dreaded is *diabetic coma*, which is seen so often directly to follow major operations. As it is generally accepted that coma is the expression of a rapid increase of acetone and diacetic acid in the blood; further-

¹⁶Medico-Chir. Transactions, Vol. 67, II. Series, Vol. 49, page 91.
¹⁷l. c.

Name and Date.	Age.	Lesion.	Duration of Present Illness.	Treatment.	Result	Remarks.
1. S. L. 1892.	58	Gang. of 4th and 5th toes, and metatarsus.	3 weeks.	1st oper. Amputation of toes and metatarsal bones. 2d. Amputation of thigh, lower third.	+ 5 days after last operation from coma.	Sugar, $\frac{1}{4}$ per cent.; albumen, casts.
2. A. S. 1894.	53	Big toe gangrenous, also dorsum foot and ankle.	3½ weeks.	Amputation in lower third thigh.	Cured; in hosp. 3 months.	Sugar, 2 per cent.
3. F. R. 1896.	59	Gang. of foot.	8 weeks.	Step. Smith's amputation at knee.	+; coma 12 hrs. after operat'n.	Sugar, 3-4 per cent.
4. I. G. 1896.	57	Gang. of toes, foot and leg.	13 weeks.	Several operations at different levels; first of toes, secondly of leg, and finally of thigh.	+ 7 months later; exhaustion.	Sugar, 2 per cent.; chr. nephritis.
5. A. S. 1896.	55	Gang. of leg.	6 months.	Amputation in lower third thigh.	+; coma 2 weeks later.	Sugar, 6 per cent.; no nephritis.
6. D. O. 1896.	52	Gang. of leg.	2 months.	Amputation, thigh.	+ 4 days after operation.	Albumen; sugar.
7. B. L. 1897.	64	Gangrene of dorsum of foot.	6 weeks.	Amputation, leg, in its middle third.	Cured.	Sugar, 6 per cent.; albumen, trace.
8. E. E. 1898.	53	Gang. of 2d toe, extending to entire foot.	Several weeks.	Amputation of lower third thigh; repeated revisions of stump.	+ 10 mos. later; exhaustion.	Sugar, 5 per cent.
9. E. K. 1899.	74	Gang. over 1st metatarsal bone and dorsum of foot.	6 months.	Amputation in lower third thigh.	Cured	Sugar, 5-6 per cent.; in hosp. 9 mos.
10. M. S. 1899.	52	Gang. of 1st, 2d and 3d toes.	2 weeks.	Amputation in lower third thigh.	Cured.	Sugar, $\frac{1}{2}$ per cent.; albumen; +; in hosp. 4 mos.
11. M. G. 1900.	42	Entire right leg, up to knee, gangrenous, and black. Above knee the thigh for 4 or 5 inches is covered with discolored spots and is seat of emphysema. No pulsation in femoral at scarpa.	7 days.	Amputation in upper third. Femoral artery and veins thrombosed.	+ 3 days later.	Sugar, 28 per cent.; albumen; acetone. Gangrene extended to other leg and up to the lower part of abdomen, vulva and genitals.
12. 1900.		One other patient in 1900.		Amputation in upper third thigh.	Recovery.	

more, that severe traumatism and the infectious decomposition of tissues do increase acetone; finally, that a too restrictive antidiabetic diet is also productive of acidosis, as evidenced by the concentrated and scanty urine charged with diacetic acid, the following general rules should be observed as far as possible: Scrupulously avoid infection by the strictest asepsis and antisepsis. Don't starve your patient, but operate early in the morning; that is, after physiological abstinence has been maintained during the preceding night. Don't regulate the diet according to hard and fast rules, but consider what will bring about a condition that will enable the patient best to undergo the ordeal of an operation. An absolute deprivation of carbohydrates may bring about a status in which the vital processes are carried on at the cost of the proteids, and this again is directly responsible for the appearance of diacetic acid in the urine. In this contingency it will be rational, according to Karewsky, directly to increase the consumption of starchy and saccharine food, even at the cost of augmenting the amount of sugar in the water in order to diminish the chances of acidosis and coma. Finally, administer before and after anesthesia two drachms of bicarbonate of soda with ten grains of bicarbonate of potash. As cases of coma have followed in equal numbers both the administration of chloroform and of ether, the choice ought to be made on general principles other than the regard paid to diabetes.

Fritz Grossmann relates the curious fact that, according to Professor Hirschberg, comatose conditions were seen to follow cataract extractions done under local anæsthesia by cocaine.

As to the technical details of amputation in diabetes, we may say that artificial anemia by Esmarch's constrictor is to be avoided, digital compression being preferable, because it is gentler and less apt to bruise the tissues and principally the vessels. Long flaps are objectionable, likewise sutures, as both favor necrosis, short flaps and an open wound treatment yielding the best results.

It is needless to state that a careful urinary examination should invariably precede every surgical operation, and that a searching inquiry should be made in the anamnesis regarding the presence or absence of sugar, polyuria, furunculosis, etc. If there be grounds for suspicion, a test meal of six to eight ounces of bread or sweet cake should be given to see if it will bring sugar to the urine.

Regarding the prognosis, we must first combat the opinion that it is unfavorably influenced by high percentages of sugar in the urine. The experience of all surgeons, including my own, shows that more than one-half of the patients dying of coma had only moderate quantities of sugar in the urine. On the other hand, a respectable number of cases, showing as much as six per centum and more of sugar, have recovered. The main thing unfavorably influencing the forecast is the acidity of the blood. It is an expression of

decrepitude of all the physio-chemical functions. The highest degrees of this extreme decadence are marked by the absence of the patellar reflexes, which constitutes, according to Reynier, an infallible sign for an unfavorable prognosis.

The surgical service of Mount Sinai Hospital had, in the past ten years, to deal with twelve cases of diabetic gangrene of the lower extremity, in ten of which amputation of the thigh, in one Stephen Smith's operation at the knee, and in one amputation of the leg in its middle third were performed. Of these twelve patients five recovered, seven died. Among the causes of death we find four times post-operative coma, observed twelve hours, four days, five days and fourteen days respectively after amputation. Twice the patients died of exhaustion due to chronic sepsis; in one case seven months, in the other eleven months after amputation. In one, the last case in the series, death was due to rapidly progressive gangrene unchecked by amputation, which extended to vulva, genitals, the integument of the lower abdomen and to the other lower extremity.

Arranging the results according to the regions at which ablation was done, we find that of ten patients on whom amputation of the thigh was done four recovered. Stephen Smith's operation was followed by death; one amputation of the leg resulted in recovery. I owe the collection of these data to the kindness of Dr. A. A. Berg, adjunct visiting surgeon to my service.

THE MANAGEMENT OF NORMAL LABOR.¹

BY BERNARD COHEN, M.D.,

Buffalo, N. Y.

Essential to the proper management of labor is a watchful supervision of the health and habits of the pregnant woman during the carrying period. Next to absolute cleanliness nothing is doing so much to lower the morbidity and mortality rate as the practice now growing with obstetricians of observing and studying their cases before labor. Physicians should inculcate the idea among their patients that it is absolutely necessary that women who are pregnant should place themselves under medical care as soon as they become aware of their condition.

The management of a normal case begins with the first visit to the physician's office. He must at that time dictate to the patient how to conduct herself with reference to diet, care of nipples, teeth, dress, amusement and exercise. She would be directed to provide herself with a proper nurse—one that has been trained is preferred. The physician must insist that a sample of her urine be furnished him once a month until the eighth month; then every week.

¹ Presented at the meeting of the New York County Medical Association, February 17, 1902.

The urine must be examined, not alone for albumen, but quantitatively for urea and indican. If it contain albumen it must be examined microscopically to determine whether there be any structural change of the kidneys. If the twenty-four-hour sample of urine contains less than 300 grains of urea, then the patient should be kept under close observation and a daily examination of the urine made. I firmly believe that the percentage of eclamptic seizures, which are now one to three hundred, can be materially reduced if proper examinations of the urine are made and appropriate treatment early administered. Many women do not call on the physician until the seventh or eighth month and are then in most deplorable condition to undergo the severe strain of labor, with congested kidneys, swelled legs, varicose veins, bowels constipated, and suffering from auto infection. These cases require very vigorous treatment, the use of diaphoretics, diuretics, laxatives and directions to observe the strictest dietary and hygienic precautions until the beginning of labor.

With the end of the eighth month begins the most critical period of pregnancy. At that time a careful pelvic examination, both external and internal, should be made. A great deal of information can now be obtained without causing any pain or inconvenience to the patient as to the size of the pelvis, condition of the cervix, vagina and perineum. If a diagnosis of the position of the fetus is made at this time, it will usually hold good at the time labor actually begins; this is especially true in primipara; presentation and position rarely change during the last month. The breasts and nipples must also be examined. If the nipples are small or depressed they should be drawn out with the thumb and forefinger for a few moments every morning and night; if inverted, they should be drawn out with a breast pump, which should be employed with strict attention to surgical cleanliness. If there be any disease or tenderness of the nipples, proper treatment should be instituted at once, for proper care of the nipples at this time may be the means of averting painful and even serious disturbances to mother and child after lactation is established.

The physician should see the room that the patient intends to occupy. If there has been a contagious case occupying it recently it must be condemned and another selected if possible; if not, it must be repainted, repapered and re-furnished as simply as possible, yet with enough furniture to make the room comfortable and cheerful. The room must be kept well aired and so arranged that it may be kept at a proper temperature. Everything necessary for the labor should now be in the house and the patient should be told to send for the physician as soon as the pains become regular or the water has broken. If the latter has happened she must also send for the nurse at once.

We now come to the consideration of actual labor. I shall give but a brief review of the tech-

nique of a case of normal labor as I usually find it in private practice. Clinically labor is divided into three stages. The first stage: If an examination has been made at the eighth month, matters will be much simplified, as we then know the size of the child, amount of liquor amnii and what the presenting part is. If no examination has been made the physician must prepare himself to make one by a proper cleansing of the hands. They should be washed with green soap and hot water, using a brush; the nails should be well cleaned; then the hands and arms should again be scrubbed with green soap and hot water and then dipped into a 2 per cent. solution of lysol. While the hands are being washed, the nurse puts the patient in bed, which has been made up of clean materials, and washes her genitals, thighs and entire pubic region with green soap and warm water, using a soft brush, and afterwards pouring over the genitals about a quart of 1 per cent. lysol solution.

The patient being on her back, a careful examination should be made, and then, after again washing the hands, an internal examination; this is done to verify the first diagnosis, also to see how far the labor has progressed. To make the internal examination, the patient being on her back, the knees are flexed, the nurse separates the labia, and in full light the examining fingers are introduced into the vagina. The greatest care should be observed that the examining fingers do not touch anything before entering the vagina, because the most painstaking disinfection of the hands comes to naught if the fingers happen to touch the bedclothes or even the hair surrounding the parts, which usually are loaded with pathogenic bacteria, despite the most careful cleansing. This examination must be done very carefully, so as not to prematurely rupture the amniotic sac. It is also better to take time at this examination to determine all things we wish to know, than to make half a dozen short and incomplete examinations, for the fewer times we enter the vagina with our fingers the less chances of infection by that means. If the external os is of the classic silver dollar size and the pains recurring with increased frequency and at regular graduated periods, the nurse should prepare the patient for bed, first seeing that rectum and bladder are emptied, for after this time the patient will not be allowed to go to the closet. The physician now prepares to deliver the patient. Everything that is necessary should be placed near at hand; instruments should be made sterile and so placed that they will remain sterile. The physician should put on a sterile gown and endeavor to keep it so. The Kelly pad should now be placed on the bed, and the patient put there to stay. If the dilating pains are especially painful I pour a few drops of chloroform on a handkerchief and allow the woman to hold it as she likes. I am also using ether with a like result. I know there is considerable objection to the use of anesthetics in labor, but accurate ob-

ervation in some of the large continental lying-in hospitals has demonstrated that an anesthetic, if not pushed too far, has no influence on the power, duration or frequency of the pains, and that by relieving the dreadful suffering of the dilating pains that in some cases causes an exhaustion as profound as would follow the most tremendous physical effort, the danger of post-partum hemorrhage and subinvolution of the uterus are actually avoided; besides, it is only humane, and I have yet to see my first case that was not grateful to me for using an anesthetic.

As labor advances and the first stage is about to pass into the second, usually the bag of water breaks; if it does not, the physician must rupture it, doing so between the pains, being careful to know that it is the amniotic sac and not the thinned cervix. As the head now advances toward the vulva, gradually dilating the perineum and the orifice, we must be on the alert not to allow the head to be delivered too fast; as the perineum gradually thins out we must place the hand on the descending head and tell the patient not to use too much force, or have the patient take several rapid breaths. If this does not stop the head from coming too rapidly and a tear of the perineum seems imminent, the head must be pushed forward toward the symphysis with one hand, while the other hand draws the tissues of the back from about the sacrum forward, thus giving about all support possible to the stretching perineum. If this does not hold the head sufficiently, we must push the anesthetic to control the voluntary muscles, and at the same time apply cloths wrung out of hot water to the perineum until it thins out and softens sufficiently to allow the head to slip over without a tear; I have done this many times and it has worked very well. I do not believe there is one single plan of preventive treatment or method of supporting the perineum that will avail in all cases, but I do believe that if the descending head is watched and the time regulated for it to pass over the perineum, we will have less extensive tears and will most surely prevent the total destruction of the perineal body. There are excuses for the lesser grades of laceration, and no one, be his skill what it may, who can absolutely avoid this accident; but a tear through the rectum is rarely justifiable. As soon as the head is born, the physician must pass his fingers between the child's neck and the symphysis of the mother, to find if the cord encircles it; if it does, he must draw the least resisting part of the cord forward and pass it over the head. The eyes of the child must now be wiped with pledgets of cotton wrung out of a saturated solution of boracic acid and water, and a clean cloth placed over them until labor is completed. We must now wait until nature rotates the head and shoulders and the uterus recovers sufficiently to expel the remainder of the body of the child. We may assist by rubbing the fundus, but must not pull the head, as by doing so we may injure the child's

spine or rupture the perineum with the child's shoulders. I have seen this done more than once. As soon as the child is born it should be placed on its right side away from the vulva; its eyes should be washed again with clean pledgets of cotton, its mouth should be wiped out, using a clean cloth over a clean finger; after a few minutes—about five—the cord should be tied, using sterile thread, and cut, and the child then handed to the nurse.

We are now in the third stage of labor and the puerperium. This stage embraces the period of retrograde changes in the sexual and other organs affected during the pregnancy, and lasts from the time the placenta is delivered until the patient has entirely recovered and is able to attend to her usual duties; this takes from four to seven weeks.

The physician places his hand over the fundus of the uterus, so as to keep it down until the placenta is delivered. I usually wait until the patient has had two or three good contractions, when, with a little pressure on the uterus from before, backward, the placenta is expressed; this usually occurs in from ten to twenty minutes after the birth of the child. The placenta is caught in a vessel and afterward examined to see if it is intact.

After the placenta is delivered the physician must keep his hand on the fundus, thus making it contract and expel all clots. A full dose of ergot should be administered for the same purpose. It is the accumulation of blood clots in the uterus that usually causes the after-pains, and it is the same clots that so easily break down and attract saprophytes and their spores that swarm in the purest atmosphere and so cause a toxemia. So, if the uterus be kept well contracted, closing the large blood vessels, it is obvious that there is lessened danger from hemorrhage and sepsis, not to speak of the comfort to the woman if she have no after-pains. The hand should be kept on the uterus for at least an hour. The patient should now be washed, all soiled cloths removed, and the physician should look for tears in the external soft parts. If there are any they should be repaired, and repaired carefully. These slight tears are often the source of infection.

The abdominal binder, reaching from below the trochanters to the lower border of the breasts, pinned so as to fit the body snugly, may now be put on, and the vulvar pad of absorbent cotton, wrung out of a 1 per cent. of lysol solution, pinned to it. The nurse should be instructed to watch the pads, and if the bleeding be at all excessive, to place her hand on the fundus and expel all clots. The nurse should change the pads about once in two hours. She should place the child to the breast about six hours after birth, and three times daily until lactation starts, then every two hours afterward. She should keep a record of the pulse, temperature, the bladder, bowels and lochia; its color, odor and quantity;

also a record of the child, with reference to its bowels, bladder, the umbilicus, eyes and its weight. These records should be shown to the physician at every visit. If anything at all questionable arises, the physician should examine the child. Many things are easily cured or prevented at this time, which, if not attended to, can give us considerable trouble a short time afterward. Many a sudden death of the new born that cannot be explained could be avoided by greater watchfulness and care.

The nurse must see that the woman has perfect rest, both mental and physical. No visitors are to be allowed in the lying-in room; no loud talking or other noises should be allowed in adjoining rooms. The patient should be in bed for at least twelve days, only allowing her to sit up in bed to use the vessel, after which she may be allowed to move to the lounge, where she may rest for a few hours, and then be returned to her bed. After the third week she may begin to move about the house, but she should not attempt to do any manner of real work until the sixth week. At that time the physician should again examine her, and if the uterus has returned to nearly its normal size and position she may be discharged.

CONSERVATIVE SURGERY FOR TUBERCULOSIS OF LYMPHATIC GLANDS OF THE NECK.

BY PARKER SYMS, M.D.,
New York.

One of the great advances made in modern medicine has been shown by the brilliant results obtained in surgery for tuberculosis, especially in cases where the disease involves the joints, bones and the lymphatic glands. It has become an accepted fact by many that where tuberculosis is limited to such tissues the proper form of treatment is complete removal of the diseased area, even as one should treat a malignant neoplasm. With this teaching in mind the author worked along these lines for many years, but experience has led him to believe that the so-called radical surgery in tuberculosis is not always the best, and that surgery should be used as an aid to nature. The so-called complete removal of a localized tuberculosis does not always result in cure, but often is productive of a rapid extension of the disease beyond the limits of control.

The progress of a tuberculosis of any organ may become spontaneously arrested and a practical cure may result provided destructive degeneration has not taken place. This depends, however, upon the recuperative and resistant powers of the patient, and these will be very much reduced by anything in the nature of a shock or severe physical strain. Operations are not well borne by tubercular patients and should be avoided as far as practicable, and when they become necessary they should be of as slight a nature as possible. Anything that impairs the

health of one of these subjects becomes an active factor in aiding the advance of tubercular lesions. To one of these subjects an operation is a shock and a tax to his physical strength which tend to lower his vital force and thereby reduce his power of resistance.

To-day it is the common teaching of surgeons that the proper treatment of tubercular adenitis of the neck is complete removal of the entire chain of glands involved together with their lymphatics and their enveloping fascia and fat. The author contends that such radical ablation is a proper procedure only in those inveterate cases which have persistently resisted thorough general treatment and carefully applied local measures which will be described.

Tubercular disease of the lymphatic glands of the neck is usually a localized affection. It may involve both sides of the neck but it is not frequently associated with tuberculosis in other organs; it is commonly a disease of childhood and of adolescence, not often originating in adults. It may be confined to but one or two glands, or it may invade all the glands of a region involved. A mixed infection by pyogenic bacteria will hasten the progress of the disease by establishing an acute inflammation of the periglandular fascia, which will result in a rapid advance of the tubercular lesion from one gland to another. This pyogenic infection may result in a diffuse cellulitis of the neck.

Tuberculosis of the glands may result in:

- (1) Cheesy degeneration.
- (2) Fibroid degeneration.
- (3) Atrophy and absorption.
- (4) Abscess (mixed infection.)
- (5) Calcification.

In a single region we may find glands in each of these conditions which really represent stages of the disease. Of course, systemic infection may result from tubercular adenitis, but this is a rare occurrence. In treating tubercular adenitis of the neck the author is guided by these facts: 1st, that spontaneous recovery may take place in any gland which has not undergone a destructive degeneration; 2d, that the utmost attention must be paid to the patient's general condition, for cure will depend upon his power of resistance and repair; 3d, that when a gland has broken down it should be removed or incised and curetted; 4th, that when a gland remains very large for a long time and does not decrease in size it should be removed; 5th, that when degeneration or abscess formation have occurred within the gland, the gland should not be allowed to spontaneously rupture subcutaneously, but that it should be opened, curetted, drained and iodoformized, for iodoform certainly has some specific power of retarding or curing tubercular lesions.

His objections to the so-called radical operation are as follows: 1st, that it is not necessary, in the vast majority of cases; 2d, that it does not

save deformity from scar, but makes a uniform scar involving the full extent of the region; 3d, that it is not a sure and radical cure, for recurrence may take place no matter how carefully the operation has been performed; 4th, that it increases rather than diminishes the danger of general systemic infection or dissemination; 5th, that it is a severe tax to the patient's endurance, and should, therefore, be avoided, if possible. The author feels that it has a proper place, however, and should be employed without hesitation in certain cases, namely, those neglected cases where many or most of the glands of a region are in an advanced stage of degeneration, and where the several small operations necessary to treat them would amount to as much or more than the one radical procedure, and in those cases where the progress of the disease is persistent and where the more conservative measures fail to arrest its advance, and in those instances where the patient's health seems to be undermined by the tubercular disease of the glands and in which there does not exist tuberculosis of another region or organ which would account for this general impairment.

The author would lay down the following rules for the treatment of tuberculosis of the cervical lymphatic glands:

GENERAL TREATMENT.—The patient's life should be an out-of-door one with proper exercise so regulated that he should never become over-fatigued. As nearly as possible all the hours of sunshine should be spent in the open air. The patient should sleep with his windows wide open, but he should be carefully covered so as not to be chilled, and he should have a warm room to dress in; he should have a cold bath once daily; the utmost care must be given to his digestive functions and the action of his bowels. His food should be of the most nutritious character, and besides his three regular meals he should have milk between meals and upon retiring at night. Drugs are seldom necessary; if the patient is anaemic he should be given iron; the syrup of the iodide is probably the best form for children. The patient should retire early, spending as nearly as possible all the hours of night in sleep. The morning and evening temperature should be recorded and a careful account kept of the patient's weight.

LOCAL TREATMENT.—If the enlarged glands are apparently not broken down the skin of the region should be thoroughly annointed every night with a 10 per cent. ointment of ichthyol; this is to be removed in the morning with soap and water bathing. If any one or two of the glands are decidedly larger than the rest and persistently remain so or show a tendency to increase and not to diminish it may be well to make a small incision and remove them; if any of the glands show evidence of having broken down either by cheesy degeneration or abscess

formation an incision should be made and they should be opened before they have ruptured their capsules. In such event the cavities should be thoroughly curetted and kept open by means of a drain of gauze or rubber tissue employed for a few days and then they should be treated with a 10 per cent. emulsion of iodiform in glycerine.

In the vast majority of cases cure will result if this treatment is carefully carried out. The progress may be slow, but when the final result is attained it will be found very satisfactory, for the patient will have established good health and will have very little deformity from scars. Of course, this latter will not be true if the case is neglected, and if extensive periglandular abscesses have been allowed to form.

The author has had in his experience many cases which have demonstrated to him the truth of the principles and the value of the methods here set forth.

Compulsory Vaccination.—We note with satisfaction that the Post-office Department in New York has insisted that the letter-carriers and postal clerks be vaccinated. Police Commissioner Partridge, of New York City, has also issued an order requiring all the policemen to report upon a specified date at their respective station houses and be vaccinated. Dr. Brennan, president of the Board of Trustees of Bellevue and allied hospitals, has issued an order to the effect that all patients received at any of these hospitals shall be vaccinated on admission to the institution, excepting cases in which the condition of the patient is too precarious to permit of the treatment.

A SILVER CITY WITH A GOLDEN CLIMATE.

BY EARL SPRAGUE BULLOCK, M.D.,
Silver City, N. M.,

Medical Director, Department of Tuberculosis, St. Joseph's Sanatorium; late Pathologist and Physical Diagnostician U. S. General Hospital for Tuberculosis, Fort Bayard, N. M.

Few people realize that tucked away among the "Rockies" of the Far Southwest there is a bright little city with a truly remarkable climate. The constantly increasing influx of health-seekers into the Silver City district can only be interpreted as indicating an awakening on the part of the medical profession to the fact that the climate is ideal for tuberculous invalids. The United States Government has recognized this by establishing at Fort Bayard—a few miles from Silver City—a sanatorium for tuberculous soldiers. The results obtained at this institution have surpassed the most sanguine expectations of those instrumental in its foundation. In existence but two years, it is already the largest institution of the kind in the United States, and has been the means of returning many men to health and usefulness.

Recently we have all heard much of the home

and sanatorium treatment of pulmonary tuberculosis in so-called unfavorable climates. In view of the many victims of this disease—in fact, the majority, who are and always will be unable to avail themselves of climatic change—it is, of course, vastly important that the treatment in any climate or rather, regardless of climate, should be advanced as rapidly as possible, but in the absence of specific medication it should not be forgotten that a suitable climatic environment, for the present at least, supplies us with our most potent weapon against pulmonary tuberculosis. This is a fact, established by a long series of observations in the arid regions of the United States, and one which every physician with the best interests of his patient at heart will be careful not to forget.

The region of Silver City strikes the Eastern trained eye as desolate and barren in the extreme. Well, so it is in a way, and just because it is so are the conditions found that give health and life to the consumptive; for its aridity is the strongest possible proof of that almost absolute dryness so healing to diseased lungs. In the climatic treatment of tuberculosis, dryness is a very essential feature. Our knowledge of the effect of dry air is, of course, almost entirely empiric. That it exercises a beneficent influence over the disease is an established fact—just why is a question yet awaiting solution. The inhabitants of arid countries do not have tuberculosis to any extent, and when cases do occur they can usually be accounted for by the most direct exposure. This is, of course, due to the fact that opportunities for infection are infrequent, not only on account of sparse population, but also because the bacillus cannot retain its virulence in the presence of the very dry air and bright sunlight of arid regions.

Brilliant sunlight and unclouded skies are a distinctive feature of the Silver City district, an average of but thirty-seven cloudy days occurring during an entire year. Silver City has the same latitude as Savannah, Ga., and thus at sea-level, like Savannah, would have mild winters and hot summers, but the fact that its mountain situation is 6,000 feet—over a mile—above the sea, modifies the climate very markedly; for, as every one knows, the greater the altitude the lower the temperature. Thus, the combined influence of latitude, altitude and dryness results in a climate characterized by mild winters and cool summers and a practically cloudless atmosphere. As the capacity of air to hold heat is entirely dependent upon the moisture it contains, it follows that in a very dry climate such as that of this region, where the mean annual rainfall is 12.3 inches and the absolute humidity 1.71 grains, there is a marked fall in temperature as soon as the influence of the sun is withdrawn, and so at night it is really cold in winter, and it is only rarely that a blanket is not congenial covering all through the year.

During the winter it is always warm in the sun, and in summer the shade is always cool. Except during exercise visible perspiration is a thing unknown. So, in addition to enjoying a beneficent dryness the health-seeker can remain comfortably out of doors all the year round, and thus utilize most profitably the modern principle of open-air rest. In a climate like ours, where extremes of temperature are unknown, the pulmonary invalid certainly has a great advantage.

To the physician contemplating sending patients to our climate a word about conditions in general may be of interest. The Silver City region will never be an agricultural district. Topographically the land is so steep and evaporation so rapid that irrigation on a large scale will never be practicable, and only here and there in tiny valleys coursed by living streams can things be made to grow as the term is understood in the East. In the fact that conditions as regards agriculture and irrigation will always be what they are now, "lungers," as they are termed through the arid region, have cause for mutual congratulation; for irrigation on a large scale has so modified the climate of portions of Eastern Colorado and Central Arizona that these regions are no longer ideal from the consumptive's point of view. The greater portion of southern New Mexico, in fact, nearly all the territory, will always be pre-eminently a mining and stock country. The short rainy season, consisting of an occasional shower during the summer, and a genial sun cause the grass to spring up with wondrous rapidity, furnishing, in good years, a plentiful supply of feed for the cattle. Not infrequently, however, during the winter, the grass being about consumed, stock are obliged to eat the small leaves and twigs of the scrub oak in order to sustain life until another rainy season replenishes the supply of grass.

The mining future of the country, in contrast to the agricultural, is indeed bright. Silver City is surrounded by mineral-bearing mountain ranges. Gold, silver, copper, lead, iron and turquoise are the principal minerals found, and there are many mines in profitable operation. At Santa Rita, fifteen miles away, there is enormous deposits of native copper, and many paying mines. The Santa Rita Copper Company, the largest operators in the district, are working a mine that has been in existence no one knows how long. It would be safe to say that it is one of the oldest mines in the United States, and was known to the earliest Spanish invaders. At Pinos Altos, nine miles from Silver City, the Pinos Altos Gold Mining Company has profitable mines. At Hanover, seventeen miles distant, the Colorado Fuel and Iron Company is operating the iron mines on a large scale. The Burro Mountains, about twelve miles from town, are becoming noted for their copper and turquoise mines, and at present their mineral re-

sources are being actively developed. When capitalists awaken to the fact that our mountains are filled with precious and common minerals there will be twenty producing mines where now there is one.

In the beginning I spoke of the desolation of the region; after all it is but relative, for among glorious mountain ranges with their ever-shifting colors and shadows, real desolation in the desert sense of the word is impossible. From Silver City may be seen to the east the Santa Rita range. North, the Pinos Altos Mountains loom grandly majestic, the Twin Sisters peaks silhouetted against the sky. West are the Burro Mountains with their ceaseless mining activity and ever varying shades of blue, and south, overlooking over one hundred miles of mirage and plain, are the faint outlines of the mountains of old Mexico. Within a day's ride of Silver City the ambitious seeker of big game can find perfect satisfaction. Many mountain brooks teem with trout. So, after all, the health seeker will find it far from a desolate land, and, in a proper frame of mind, can have abundant outlet for energy as well as the ruddy cheeks of health. A brief digression to explain what is meant by a "proper frame of mind" may be useful. Many invalids spoil the whole effect of a proper climatic environment by a bad attack of nostalgia. The experienced physician when face to face with a paramount desire to go home lays down his arms. Nothing remains but to let the patient do as he pleases, and how often we see the work of months undone by the fatigue of a long railroad journey added to a short period in an unfavorable climate. A proper frame of mind with which to enter the battle for life and health against tuberculosis may be briefly defined as a large capacity for interest in one's surroundings and the ability to amuse oneself regardless of environment, and, last, but by no means least, a complete co-operation with one's physician.

On account of limited railroad facilities and great areas of practically uninhabited land, the cost of living is relatively high. Food and manufactured articles are brought great distances. This is unfortunate when one thinks that otherwise so many sufferers might come and be healed in the clear and ever genial atmosphere of New Mexico. It is, of course, an objection that time only will remedy. After a year, in early-stage cases, one can anticipate earning one's living. To make a good and quick recovery, comforts of life as well as a suitable climate are essential. It is a sad mistake and one often made to suppose that a tuberculous invalid can rough it and yet recover. I have seen it tried many times and nearly always a dismal failure results—a sad disappointment not only to the invalid himself, but also to the dear ones at home—a mistake that brings much unmerited reproach upon the climate.

Though we can at present offer no specific for

tuberculosis, yet under careful medical supervision, advantage is taken of every point that may aid in the fight for life. How often I see a misguided unfortunate hanging about saloons and the gaming table, breathing a vitiated atmosphere, surrounded by the unhealthy influences of gambling, even if he does not play himself, and yet expecting the climate to make him well. Careful inquiry in such cases will usually elicit the fact that the home doctor has given instructions to avoid physicians and depend upon the climate, or, if in doubt, to write for advice—to a man who knows little or nothing about local conditions and who often tells his patient that when he gets out West he will find the climate very equable, when the fact is that a range of 40 degrees in twenty-four hours is little out of the ordinary.

Silver City itself is a characteristic American town, full of life and energy—one of the few New Mexican towns in which the Mexican population does not preponderate. It has 3,000 people and supplies as many more in the surrounding district. The railroad facilities are exceptionally good, the Atchison, Topeka and Santa Fé sending a branch from Rincon, with sleeper as far as Deming—forty miles south. The town is lighted by electricity, has modern water and telephone systems, and, in fact, like most Western towns is superior to the Eastern article of the same size. Churches of many denominations are a feature of town life. There is an excellent public school, a convent school and the Territorial Normal College. The American Smelting and Refining Company maintain a large smelter a short distance from town. Accommodations for visitors are very good, there being four well-appointed hotels. But best of all, from the health-seeker's point of view, the Sisters of Mercy, taking advantage of an ideal climate, have established a sanatorium for tuberculous invalids, and it is their ambition to build up a truly great institution.

It is the experience of phthisia therapists the world over that carefully regulated sanatorium life is the most essential feature of treatment, and in a perfect climatic environment, such as the Silver City region affords, it is but natural that excellent results should be anticipated.

WHAT PERCENTAGE OF GOUTY AND RHEUMATIC PATIENTS DEVELOP FATAL PULMONARY PHTHISIS?

BY THOMAS F. REILLY,
New York.

IT is almost a century since Louis called attention to the antagonism that he believed to exist between gout and rheumatism, on the one hand, and pulmonary phthisis on the other. Several decades later Rokitansky, the father of modern pathology, called attention to the same fact. In the rush of the modern microbial invasion of the last two decades, however, practically no attention has been paid to

this phenomenon. Most of the text books do not even mention it. In order to determine, as far as might be, how much foundation there was for a belief in this antagonism I have, during the past year, questioned 100 patients in the wards of St. Joseph's Hospital. In this number there were but six who had had during some period of their lives an attack of acute articular rheumatism. In only one case did the rheumatism occur after the onset of the tuberculosis. In the case of the others there was an interval varying from two to ten years between the disappearance of the arthritic phenomena and the development of the tuberculosis. Three of the cases had fibroid phthisis of three or four years' duration, with little tendency to the formation of cavities. They were in fair general condition and have continued so. Two of the others had suffered from the disease for about one year. Both had several large cavities and were considerably emaciated. One of those left the hospital much improved; the other has since died. The sixth case died within nine months of the inception of the tuberculosis. This gives a mortality of 2 per cent. In four other cases there was a family history of rheumatism. In three of these the disease appeared to be stationary. The fourth died after about a year's illness. None of the 100 cases ever had suffered from gout or any of the diseases usually classed as being of gouty or rheumatic origin, with the possible exception of three cases of chronic endocarditis. There was not a single family history of gout. In passing it may be mentioned that the neuritis which is quite common in the later stages of phthisis is very often mistaken for rheumatism by the patient. On inquiring into the habits of the patients just previous to the development of the phthisis it was found that a history of exposure, alcoholic excesses or loss of sleep, alone or together, was present in 82 per cent. of the cases. In 50 per cent. prolonged alcoholic excesses alone preceded the attack. Loss of sleep was a determinative factor in 45 per cent. of the cases. The bulk of the remainder dated from an attack of one of the infectious fevers. These patients were for the most part drivers, waiters, laborers and domestics. All of them were from those walks in life which expose them to inclement weather the greater part of the time. Alcoholic excesses and exposure to inclement weather are the most common exciting causes of acute rheumatism and gout, yet the number of these patients who have developed acute rheumatism is, I am sure, far less than could be found among others of their fellows similarly situated who have not developed tuberculosis. A history of gout or gouty manifestations not being present in any one of the 100 cases is also significant. Modified gout, probably dependent on beer drinking, is, I believe, quite common among the class from which these patients come. As this paper is largely statistical the differences in etiology of

gout and rheumatism will not be dwelt on. Although these statistics are too few in number to warrant any definite conclusion, there are still numbers of accessory facts which seem to bear out the statement that an antagonism of some kind exists between the two diseased conditions. Croftan, who has studied this relationship, has had results similar to those given above. He found in 100 consecutive cases of arthritis—*i. e.*, functional manifestations of the uratic diathesis—only one case of advanced pulmonary tuberculosis. In 200 selected cases of advanced pulmonary tuberculosis there were but three with coexistent arthritic manifestations. He concludes that the arthritic taint consists in a tendency on the part of the organism to disintegrate a quantity of nuclein in excess of the normal. As a result of this disintegration the alloxur bases appear in large quantities in the circulation of the arthritic subject and cause a deposition of the mineral salts of the blood wherever the vitality of any of the tissues is reduced. (This may be in a joint, the throat, the lung or elsewhere.) A deposit of these salts occurs in the lung, in and around the areas in which the resistance is lessened. A thickening of the tissues follows. These areas are walled off, the blood supply to them is lessened and the bacilli destroyed or effectually shut in. Rheumatism and gout are leucocytotic diseases; on the other hand, pure tuberculosis is never accompanied by an increase of the leucocytes. In a case of suspected pulmonary phthisis Croftan believes that we may consider it strong corroborative evidence of the existence of the disease when the total percentages of uric acid and the alloxur bases in the urine are persistently low, and there is also an absence of the polynuclear basophilic granules from the blood. On the other hand, we are justified in making a favorable prediction in a case of early tuberculosis, in which the presence of arthritis can be demonstrated. S. Bernheim, in the September issue of the *Bul. Med. de Strasbourg*, confirms Croftan's researches. He claims to have demonstrated beyond a doubt that the excretions of the prospective tuberculous individual are hypoacid, while those of the arthritic are hyperacid. He cites several prominent French writers in support of the statement that there is a pronounced antagonism existing between gout and tuberculosis. Bronchial asthma, which is generally regarded as a cogenitor of rheumatic intoxication, is seldom associated with fatal pulmonary phthisis. It has long been known that a much more favorable prognosis may generally be given in those cases of phthisis pulmonalis that are also affected with mitral regurgitation. Of course, mitral disease is, in the vast majority of instances, due to a previous rheumatic poisoning. This latter point has lately been exhaustively studied by Anders, of Philadelphia, and his results have fully borne out the above statement as to the prognosis in these cases.

Harper, of Birmingham, Eng., was so convinced of this antagonism between gout and tuberculosis that he was led to employ urea in the treatment of phthisis. He did this under the impression that urea is one of the causative factors in the production of gout. Of course, this is by no means agreed upon. At any rate he has reported a considerable number of cases of phthisis, in which the disease seemed to be arrested by the daily administration of this agent. Owen and others, at the international congress in London, reported several cases of various forms of tuberculosis that appeared to be arrested by this treatment. The absence in cases of pulmonary phthisis of the various skin diseases belonging to the arthritic group, or those due to so-called rheumatic intoxication, has been noticed by various writers. As far as treatment is concerned, the natural result of such a deduction—*i. e.*, that an antagonism more or less marked exists between these two diseased conditions—would be that we should cultivate the so-called acid diathesis in those who from heredity or environment are likely to succumb to phthisis. As a matter of fact that is what is generally done. Most of us believe that red meats in excess tend to develop a soil on which the specific microorganism of rheumatic fever, if such there be, develops, and also that it prepares the way for the development of gout in its various forms. On the other hand, we particularly urge this diet on the tuberculous. Indeed, most of the cases of permanently arrested pulmonary phthisis develop a decided arthritic taint.

CARDIAC MANIFESTATIONS OF ARTERIOSCLEROSIS.

BY DELANCEY ROCHESTER, M.D.,

Associate Professor of the Principles and Practice of Medicine, University of Buffalo; Attending Physician Buffalo Hospital of Sisters of Charity, and Erie County Hospital.

SEVERAL factors enter into the production of the morbid changes occurring in the heart in association with arteriosclerosis. These are the steadily increasing obstruction to the onflow of the blood, due to the loss of elasticity of the arterial walls and the diminishing caliber of the systemic arterioles; the interference with nutrition of the myocardium through the participation of the coronary arteries in the general disease and consequent poor supply of blood to the myocardium; the further disturbance of nutrition of the myocardium, due to poor quality of the supply of blood, the result of impaired function of digestion and absorption and the toxemia resulting from the impaired function of excretion by skin and kidneys and sometimes bowel. As a result of these various etiological factors acting together—and of these factors the interference with nutrition of the myocardium is probably the most important—we have, in the first place, hypertrophy of heart. Although for a while this hypertrophy may restore the equilibrium of circulation, the

interference with nutrition of the myocardium soon causes a loss of tone in the muscle fibers and dilatation occurs. Even before dilatation can be demonstrated the increase in size of heart can be shown to be dependent, not so much upon increase in size or number of true muscle fibers, but upon an increase in the fibrous tissue between and surrounding the muscle fibers, so that with the increase in size there is not an increase but rather a decided decrease in the contractile power of the organ. While according to most observers the change is chiefly of the nature of a fibroid infiltration, nevertheless Huchard's investigations would go to show that through the obliterating endarteritis of the arterioles in the ventricular wall and in the musculi papillares, the muscular fibers supplied by the diseased vessels undergo necrosis, granular degeneration and fragmentation, and that then the fibrous tissue proliferates and finally entirely replaces the muscular tissue of that part. Nevertheless, early in the course of an arteriosclerosis there is undoubtedly true hypertrophy of heart muscle, changing soon, however, to fibroid degeneration and dilatation. Thickening or atheroma of the aortic and mitral valves is present in some degree in almost all cases of advanced arteriosclerosis.

The lesions most commonly present in my own experience are stiffening of the aortic leaflets, producing in all cases obstruction and allowing in some cases regurgitation and thickening of the mitral valves, producing a stenosis of the mitral orifice. Right-sided valvular disease is reported in a limited number of cases of arteriosclerosis, particularly when the degeneration is present in the pulmonary vessels.

Clinically the cardiac manifestations of arteriosclerosis may be briefly stated to be those of hypertrophy or hypertrophy with dilatation or degeneration of the myocardium, of the valvular lesions just referred to and of angina pectoris. It would be manifestly improper here to describe the clinical manifestations of these various forms of disease of heart. I shall therefore content myself with the citation of a few cases, illustrating some of the clinical phenomena that we may be called upon to meet and the measures indicated in meeting the emergencies.

In the first place I desire to state that the general management of the arteriosclerosis should, of course, underlie and be the chief portion of the treatment of the cardiac manifestations, and that only occasionally are especial procedures necessary for the control of the cardiac manifestations of the disease.

CASE I.—A. B., male, age 52, German. History of syphilis, U. S. Army, 1863-65. Typhoid during the period. Present condition arteriosclerosis of mild degree in systemic arteries; some interstitial nephritis. Heart hypertrophied and dilated; double aortic and double mitral lesions. Exceedingly nervous and depressed about himself; pulse 90; moderate tension, with

water-hammer character to a limited degree. Attacks of palpitation and dyspnea; cyanosis; no precordial pain. Attacks accompanied by great nervousness and dread. Treatment, hypodermic of nitroglycerin 0.0006 Gm., and a hot mustard foot-bath, followed in thirty minutes by morph. sulph. 0.015 Gm., atrop. sulph. 0.0004 Gm. This procedure generally put an end to the attack. The rationale of the nitroglycerin and foot-bath is the opening up of the capillaries and relief of tension of the morphin and atropin, a similar relaxation and quieting of nervous apprehension. Between the attacks the treatment of this case consists in the use of the hot-air cabinet bath, the keeping of the bowels open and the kidneys active by the use of an alkaline mixture containing potassi nitrate, sodium bicarbonate and Rochelle salts, the keeping of the arterioles somewhat relaxed by the use of moderate doses of potass. iodide and the maintenance of the circulation by the use of tincture of *nux vomica*. I have in this case in a number of instances prevented a severe attack by the use of fl. ext. cactus (*Merrell's*) and fl. ext. valerian in frequently repeated doses as soon as palpitation begins to be noticed; 0.20 of the cactus and 1. of the valerian every fifteen minutes for four doses has generally sufficed.

CASE II.—R. W., male, American, age 45. Was in the civil war; history of rheumatism; when seen had decidedly thickened arteries, greatly hypertrophied heart, with double aortic lesion and mitral insufficiency; suffered from attacks of violent precordial pain and sense of constriction in chest, pain radiating to left shoulder and arm.

Relieved by inhalation of amylnitrite and internal administration of nitroglycerin.

This case finally died of apoplexy. The autopsy revealed marked thickening of the coronary arteries and degeneration of the myocardium, as well as the valvular deformities mentioned above.

CASE III.—Mrs. S., age 50, American. Patient was first seen in an attack of violent epigastric pain, following a late supper of lobster salad, followed by ice cream. No history of previous attacks, except of so-called indigestion. There was nausea and some vomiting of undigested food. Sodium bicarb., peppermint and chloranodyne were administered, followed by marked eructation of gas and relief of the pain. The further study of the case at the time revealed a moderate degree of thickening of the radial and temporal arteries, a murmur of mitral obstruction, a sharp, short first sound of heart, a heart not enlarged, a mild albuminuria, no casts.

After the attack of pain had passed off a dose of calomel, followed by salts, was given, and patient felt well after free evacuation of the bowels had taken place, but twenty-four hours later, forty-eight hours after first attack, she was again awakened from sleep by violent pain in the epigastrium and died within twenty minutes.

The autopsy here revealed thickening of the mitral valves and some obstruction at that orifice, a very marked calcareous degeneration of the coronary arteries, with complete obliteration of the lumen of the left coronary artery by a thrombus and rupture of the thin wall of the left ventricle.

CASE IV.—G. S., age 64, male; arteriosclerosis of ten years' standing, with interstitial nephritis. Heart enlarged, somewhat dilated, double aortic lesion. Suffers occasionally after physical or mental strain, with attacks of marked dyspnea, going on to orthopnea. During these attacks the patient becomes cyanosed, gasps for breath and is in great dread of death. The pulse, hard at first, becomes small and irregular and loses its tension. A true edema of the lungs develops, as shown by physical signs and the eventual expectoration of partly serous exudate. The attacks are relieved by heat to the feet and legs, cupping of the chest, the administration of morphin, atropin, strychnin and nitroglycerin hypodermically and the use of oxygen by inhalation. In the last attack he received morphin 0.015 Gm., atropin 0.0004 Gm., strychnin 0.002 Gm. and nitroglycerin 0.0006 Gm. The strychnin and nitroglycerin were repeated in one hour; oxygen was administered continuously. In about two hours he began to improve. The strychnin alone was repeated and the oxygen kept up. The strychnin and nitroglycerin were continued at three-hour intervals. In twenty-four hours the attack was over and he returned to his regular treatment of the underlying conditions. If he keeps up his treatment he goes for months without attacks, then lets up treatment and in a few weeks has an attack.

CASE V.—G. M., age 42, male, night watchman, good family and personal history. In early life exposed to hardship and change in weather as a sailor. When first seen patient complained of weakness, shortness of breath on exertion, dizziness, eructations of gas, constipation. Examination shows him pale, with edema of eyelids and lower extremities; temperature a little subnormal, pulse frequent, small, occasionally intermittent; blood vessels thickened, but no calcareous plates demonstrated in any of the superficial arteries.

Examination of the heart reveals slight increase in size, apex not capable of palpation, cardiac impulse exceedingly weak, but of slightly heaving character; no endocardial murmurs, first sound exceedingly short and weak, high in pitch and valvular in quality; second sound almost inaudible except in aortic area. His urine showed the characteristics of interstitial change plus those of venous congestion.

The man was exceedingly apprehensive of sudden death and felt that nothing could be done that would help him. In addition to the sclerosis he was suffering from a very common accompaniment of the disease, toxemia from in-

sufficient excretion from liver, kidneys, bowel and skin.

This man's general condition has been greatly improved by increasing his elimination through his liver and bowel by calomel occasionally and the regular daily administration of Carlsbad salt, through the skin by hot-air baths and through his kidneys by mildly alkaline drinks. His anemia has been partially overcome by the use of tinct. ferri chloridi.

The condition of his myocardium has improved with his general improvement, but has also been greatly aided by the use of increasing doses of tinct. nucis vomiceæ, and the carefully conducted resisted movements and general massage so admirably described by the late Dr. Schott, of Nauheim.

The occasional attacks of nervous palpitation of the heart, to which this patient has been subject, have been well controlled by the use of the combination of cactus and valerian previously referred to.

I could, of course, go on multiplying cases illustrative of the symptoms of the various forms of diseases of heart associated with arteriosclerosis, but I think the few cited illustrate well the symptoms of the disease that can properly be referred to as cardiac manifestations.

It may seem strange to some that in speaking of the treatment of the various cardiac conditions referred to, no mention of digitalis has been made. Digitalis I consider an exceedingly dangerous drug in arteriosclerosis because of its action upon the arteries and arterioles. I think more harm than good has been done by the indiscriminate use of digitalis in such cases. There are occasions, even where arteriosclerosis is present, when an occasional dose of digitalis may be useful, and when given the least harmful preparation. One that is followed by the best results is Merck's *German* digitalin in dose of 0.005 to 0.015 Gm. Of course, any such dose of ordinary digitalin would be fatal; so it is important that we should know our preparation. But, as I said before, useful as digitalis is under certain circumstances, it is exceedingly questionable whether it has any place whatever in the treatment of the cardiac manifestations of arteriosclerosis. We can produce with a proper preparation of cactus all the good that we can expect from digitalis without the deleterious effects of the latter drug. The combination with cactus of valerian is especially beneficial in cases where nervous symptoms are pronounced. For the relief of the distressing attacks of angina pectoris the inhalation of amylnitrite and the hypodermic administration of nitroglycerin give the most prompt relief, but occasionally morphin has to be used also. In one case relief was only obtained through the use of inhalation of ether.

In many cases, in so generally distributed a degenerative process as arteriosclerosis, it is

hard to draw the line so as to know what are distinctively cardiac manifestations as distinguished from the manifestations of the general disease. It is important to recognize this fact, for any attempt to treat any cardiac symptoms that may arise without such recognition is apt to result disastrously.

I cannot refrain from repeating that the main treatment of the cardiac manifestations of the disease, as well as the surest measure of prevention of their appearance, is the proper treatment of the general disease.

Benzine in Surgery.—Professor Franks (*Ctbl f. Chir.*) has for some years employed benzine in cleaning the skin after the application of ointments; this renders the removal of the dried and often adherent masses extremely easy. The rubber adhesive plaster which sometimes adheres so firmly to the skin that when it is pulled off it causes not only a great deal of suffering, but even actual excoriation and bleeding, can be removed painlessly if after raising one corner of the plaster a pledget of cotton soaked in benzine is pressed against the rubber surface. Benzine has a very feeble action upon pus bacteria. It is to be preferred to ether as a means of cleaning the skin, because it is cheaper, does not produce the same cooling effect, and causes no irritation even of the tenderest surface.

* * *

Precocious Maternity.—The occurrence of pregnancy in a girl of 11 years, proceeding to full term, and birth accomplished naturally after fourteen hours, is of sufficient rareness in this country to merit more than passing notice. Such a case is reported by Allen (*Maryland Medical Journal*, October, 1901). The child-mother was a colored girl, her age at conception being 10 years and 11 months, her age at birth of child 11 years and 8 months. Her pelvic measurement showed it to be of the infantile type of the justo-minor variety, the conjugata vera diameter being 6.5 c. m., with the child's head having a sub-occipito-bregmatic diameter of 10 c. m., and occipito-frontal diameter of 11.2 c. m.

With this disproportion the labor was an extremely easy one, and accompanied with very little real or apparent pain. The child weighed 32.65 grammes, well developed, cried and nursed, and on the sixteenth day was vigorous.

* * *

Quinquaud's Sign of Chronic Alcoholism is thus described by Aubry: The patient holds up his hand with the fingers spread apart. The examiner then presses upon the patient's finger tips with his own, using moderate firmness. If the patient is an alcoholic there will be observed in a few seconds a grating or crackling of the phalanges as though the bones were rubbing each other. It is more marked in men than women.—*Medical Times*.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. No 4.

APRIL, 1902.

\$1.00 PER ANNUM.

THE INSPECTION OF IMMIGRANTS.

The probabilities are that during the coming season we shall have an unprecedented influx of immigrants. The industrial distress and hard times that are afflicting both the continent of Europe and Great Britain, together with the stories that are current in those countries regarding the great prosperity of the United States and its industrial progress, are creating anew the impression that America is the Eldorado of the West. If a strong wave of immigration sets in, it will behoove the Commissioners of Immigration to renew their vigilance in sifting out the paupers and the diseased. During the month of January 21,145 immigrants were inspected at the port of New York. Of this, ninety-one were certified for deportation on account of contagious or loathsome diseases or other physical causes. One of the latest ships to arrive from Holland brought 2,300 passengers.

HEALTH IN THE UNITED STATES.

A comparison of the returns for the year 1900 with those of 1890, as presented in the census report recently issued, shows a gain of fully seven years in the average life of Americans. This improvement in the general health shows what sanitation and hygienic methods have accomplished. In 1890 the average age of Americans was, in round numbers, 31 years, and in 1900 it was 38 years. The report of 1900 demonstrates that this prolongation of life has been due to the lessening mortality from diseases which are amenable to treatment by the enforcement of strict hygienic methods, such as typhoid fever, tuberculosis, diphtheria and cholera infantum. There has been an increase in the rate of mortality from cancer, Bright's disease and pneumonia.

A NEW SOCIETY OF MEDICAL SPECIALISTS.

There has recently been organized in New York City a medical society under the title of American Association of Urologists. The object of this organization is the study of urinary

organs and their diseases; the demonstration and discussion of new methods of technique and treatment. The membership includes specialists in genito-urinary diseases, gynecologists interested in renal and vesical surgery and men devoted to the microscopy and chemistry of the urine.

HONORS TO DR. LAZEAR.

The War Department has recently ordered that one of the sea coast defenses of Maryland should be known hereafter as "Battery Lazear." This is to commemorate the heroic devotion to science of Dr. Jesse W. Lazear, late Acting Assistant surgeon, United States Army, who lost his life at Havana, Cuba, September 13, 1900, while making experiments in his effort to demonstrate the theory that the mosquito is the source of yellow-fever infection. He allowed himself to be bitten by a culex mosquito which had recently sucked the blood of a yellow-fever patient, expecting that he would be inoculated with the disease.

WOMEN PHYSICIANS EXCLUSIVELY.

The Woman's Medical School of the Northwestern University at Evanston, Ill., has recently been abolished and the building sold. The alumnae of the institution have recently decided to establish a hospital to perpetuate the memory of the school. The hospital will be entirely under the management of women surgeons and physicians, surgery and all branches of medicine being practiced. Men will be received only as guests or patients.

PROFESSOR VIRCHOW'S RECOVERY.

Our readers will be interested in knowing that Professor Virchow, who recently sustained an injury of the femur in alighting from a street car at Berlin, is making steady progress toward recovery. Six weeks after the accident, with suitable support, he was making persistent efforts to walk. His general physical condition is excellent.

SURGERY OF THE HEART.

It is not many years since the medical world was startled by the report of a surgeon of repute that he had invaded the region of the heart, entered the pericardium and actually stitched up a deep wound in the walls of the heart itself. His example has been followed since by others and such work is no longer regarded as the work of a reckless enthusiast; on the contrary, the tendency is to extend the sphere of operations along these lines.

Sir Lauder Brunton, of St. Bartholomew's Hospital, London, a medical man, has conceived the idea of operating upon the living subject for the relief of the contracted mitral orifice. He has not yet had the temerity to operate upon the pulsating human heart, but has performed a series of experiments on the lower animals, thereby endeavoring to justify the procedure, at least experimentally. His plan is to expose the heart by incisions from the left edge of the sternum, outward along the edges of the third and fifth ribs, connecting the outer ends by a cross incision and dividing both the soft structure and the fourth and fifth ribs. The trap-door thus made is turned back on the sternum and the heart is exposed and the pericardium divided.

For the division of the valves of the heart a knife, like a tenotomy knife, is used with a cutting edge of about one-half inch. The valve is divided with comparative ease through the thickened edge, thus elongating the natural opening. He has not yet decided whether it is best to operate from the side of the auricle or that of the ventricle. The knife is not much thicker than a needle, and yet it is surprising to read that the incision of the ventricle rarely gives rise to any hemorrhage. The knife is introduced during diastole to prevent wounding the opposite wall of the ventricle and the pericardium is left open to allow for drainage.

He has operated in this manner upon healthy valves in the heart of cats, as well as divided, *post-mortem*, stenosed valves in diseased human hearts. Dr. Brunton thinks that the good results that have been obtained in the treatment of wounds of the heart justifies one in hoping that ere long good results may be obtained in operating upon mitral stenosis. He believes that the operation ought properly to be undertaken by the surgeon, saying that the "risk which such an operation would entail naturally makes one shrink from it, but in some cases it might be well worth while for the patient to balance the risk of the shortened life against the certainty of a prolonged period of existence, which could hardly be called life, as the only condition in which it could be continued might be to them worse than death."

It seems rather strange that such a bold suggestion should come from a physician rather than a surgeon. But the risks and the dangers attending such an operation would, doubtless,

have to be looked in the face for many a day before a surgeon will be found bold enough to put it into execution.

DR. PFEIFFER REMAINS AN ANTIVACCINATIONIST.

In the story published in our last issue giving an account of Dr. Pfeiffer's experience with smallpox, it was asserted that in the event of Dr. Pfeiffer's recovery he might be expected to do one of the three things: either deny that his disease was smallpox, relinquish his public opposition to vaccination, or frankly and courageously admit that smallpox is contagious and that the public, therefore, needs protection from its awful ravages by any and every feasible means. It is reported from Boston that he has so far recovered from the disease as to reassert his opinion over the telephone, thus: "Nothing has happened to change my views on the subject." Dr. Pfeiffer, Jr., who attended his father during his illness, claims that he was vaccinated "only as a matter of form," and that this did not take. As *American Medicine* tersely remarks: "Belief not founded upon reason and evidence is affected neither by reason nor evidence."

STATE REFORMATORY AT ELMIRA.

Among the reformatory and penal institutions of the State there is not one of which the State is so justly proud as the New York State Reformatory at Elmira. The annual report for 1901 is at hand and carries the statistics for the year closing September 30, 1901. At that time the population of the institution was 1,276 and the total number entertained during the year was 1,972. Of this entire number 559 had been previously imprisoned. The average amount for maintenance was \$4.19 per diem.

During the twenty-five years of its existence 7,010 men have been paroled, and while it has been impossible to follow absolutely the career of these men, the best estimate attainable is that one-half of these paroled men, 3,500 souls, are to-day honest citizens of the State; of course, some have died and some have removed from the borders of the State. This happy result is due to the system of indefinite commitment and the system of parole by which the boys' term of confinement depends entirely upon the demonstrated change in their character and habits. "Reformation of character is the end sought, and in this the criminal must cooperate honestly and not merely yield a compelled and unwilling obedience. Every inmate, if he proves his good conduct, may see his way to deliverance; and in returning to the outside world most of the young men take with them the helpful qualifications of the knowledge to read and write and the acquisition of one of the

forty trades taught and daily practiced in the institution."

Under the "indefinite sentence" system these young criminal inmates have it in their own hands to work out their own salvation, the officers and managers being the judge of how thoroughly and successfully this has been accomplished. It has been found that those sentenced for a fixed term—that is, under a definite sentence—are the least susceptible to improvement and the most difficult in all respects to bring into the reformatory processes of the institution.

There is no questioning the fact that the Elmira Reformatory is doing a great and beneficent work and is in every way a model institution. The present Board of Managers, in their enthusiasm, seem to forget, however, that some of the 3,500 young men who have been restored to citizenship are not the products of their individual management, but that this institution has been doing the same noble work from its foundation, twenty-five years ago, and that the restoration to honorable citizenship of 3,500 has been going on throughout the entire quarter of the century.

THE AMERICAN MEDICAL ASSOCIATION.

February Meeting of the Board of Trustees as Presented in "The Journal."

Pursuant to a resolution adopted by the Board of Trustees at the June meeting directing the Secretary of the Board to publish in *The Journal* for the information of the members of the Association, a synopsis of the business transacted at each meeting, the following is respectfully submitted:

The Board of Trustees met in regular meeting February 21-22, 1902, at Chicago, with the President, Dr. Happel, in the chair, Dr. Johnson, Secretary. All members of the Board were present except Dr. Rodman, who was absent on account of illness.

The minutes of the previous meeting were presented and approved. The Treasurer, Dr. Newman, presented his annual report, together with the report of the Public Auditor, which showed the finances of the Association to be in excellent condition, and the circulation of *The Journal* increasing. The report will be read at the Saratoga meeting before the House of Delegates.

Several accounts were presented to the Trustees for approval which were incurred in connection with the personal office of some of the officers of Sections. These were disallowed, and the Secretary directed to notify the Chairmen and Secretaries of the various Sections that they must pay their own expenses, and that the Association will not be responsible for such expenses; further, that where specific appropria-

tions are made, that amount shall not be exceeded.

In connection with *The Journal* office it was found necessary, in consequence of the increased work, to purchase an automatic feeder and folder, also another printing press, the necessity for which being clearly demonstrated to the Board of Trustees. Considerable time and discussion was given to the matter of advertising in "*The Journal*," and it was decided that advertisements of external remedies should be rigidly scrutinized, and that all such should be subjected to the same rule governing the admission to space in "*The Journal*" which applies to the publication of internal remedies, and further, that no advertisement of proprietary remedies shall be advertised in "*The Journal*" if such remedies are advertised in the lay press. Several firms who had made application for space in "*The Journal*" were notified by the direction of the Board that their advertisements would not be accepted unless they positively agreed to abide by the regulations of the Trustees. The editor was instructed to continue his individual efforts and carefully edit all advertisements before permitting them to appear in "*The Journal*." A vote of thanks of the Board was tendered to the editor, Dr. George H. Simmons, for his faithful and efficient services and successful conduct of *The Journal* and the office of Secretary of the American Medical Association during the past and previous years.

In consequence of the present overcrowded condition of the printing office of *The Journal*, and a notification from the owners of the building that a considerable advance would be demanded on the present rental, the Board considered it imperative in the interests of *The Journal* and the American Medical Association to provide more space for the printing plant and offices. The following preamble and resolution was adopted:

WHEREAS, The present building rented by the Association for the publication and business of *The Journal* is wholly inadequate in space on account of the increased business demands; and, whereas, no more space can be obtained in the building at present occupied, it was moved and carried, that the property located on the north-east corner of Indiana street and Dearborn avenue, in the city of Chicago, measuring 80 by 100 feet, be purchased for the use of *The Journal* and the other business of the American Medical Association.

The matter of securing the new site for *The Journal* had been carefully studied and investigated since the early fall by each member of the Board of Trustees, particular attention and investigation being carried on during this time by the resident trustee, Dr. Ingals, who has been untiring in his efforts in behalf of the interests of the Association. At a comparative additional outlay, it was decided at the earliest possible moment to remodel a portion of the property and transfer *The Journal* plant. Every

detail with respect to title in the building and legal transfer to the Association was discussed and arranged for. All these matters will be fully set forth in the annual report of the Board of Trustees at the Saratoga meeting.

The Transportation Committee reported progress, and that their special aim was to secure a one-fare rate for the round trip with a time extension and the abolition of the annoying 50-cent fee which was inflicted upon the members of the Association at the St. Paul meeting. The annual report of the Board of Trustees was read and approved and ordered to be presented at the next meeting of the Association.

The propriety and advisability of the American Medical Association adopting a designating flag to be known as the flag of the American Medical Association, which shall fly over the headquarters of the American Medical Association at their annual meetings, was discussed, and the Secretary of the Board was requested to bring the matter up before the Association at the next meeting. After considering a number of minor matters and details, the Board adjourned to meet with the Association at Saratoga.

SMALLPOX.

The reports from various States of the Union announce the steadily increasing progress of smallpox throughout the country. This invasion of the disease has been going on for the last two years and has been a revelation to the sanitary authorities of the country of the apparent indifference that has permeated the community in reference to vaccination. Although it has not seemed wise to enforce universal compulsory vaccination, much has been accomplished by corporations employing large numbers of men by insisting upon their employees being vaccinated and also by school boards in compelling children in attendance upon the public schools to submit to this immunizing process. The profession, too, has been awakened to new interests in all the various details of preparation of vaccine lymph and methods of inoculation. The New York County Medical Association at its last meeting presented a symposium upon this subject which we publish in this number of *THE JOURNAL*. The chief points in the discussion were the differentiation of smallpox from other eruptive diseases, the importance of multiple points of insertion of the lymph and the frequency with which inoculation should be repeated. At a meeting of the New York Academy of Medicine, held February 20th, the scientific business of the meeting consisted also of a symposium on vaccination. At this meeting the character of the lymph was a prominent feature of discussion and the relative merits of dry points versus glycerinated virus. The concensus of opinion seemed to favor the glycerinated preparation. Filtered vaccinal

serum was pronounced by Dr. Huddleston to be absolutely inefficient. Regarding the life of vaccine material, observations by the New York Board of Health show that the life of certain specimens has been as long as thirty months. Glycerin when combined with the vaccine virus acts as an antiseptic against contamination by extraneous infective germs, not only by its drying power, but probably also by some chemical quality of the glycerin that possesses bactericidal action. The recent unfortunate experience from tetanus following vaccination, notably at Camden and St. Louis, was the subject of discussion at this meeting. Tetanus as a sequel of vaccination is rare. It has occurred indiscriminately after the use of dry points and of glycerinated virus. Dr. Huddleston insisted that no case of tetanus had ever developed at a time when, according to the general incubation period of tetanus, it would seem probable that both tetanus and vaccine could be inoculated together. The principal source of tetanus bacilli is horse manure. Whether or not this bacillus occurs in the stools of cattle is not known. That tetanus, when it occurs in connection with vaccination, is a secondary infection of the wound, seems to be demonstrated by the fact that animals, notably susceptible to tetanus, inoculated in the ordinary way with vaccine material known to be contaminated by tetanus bacilli, do not contract the disease.

The Association.

New York County Association held its stated meeting March 17, 1902, Parker Syms, M. D., president.

The evening was devoted to a timely discussion on smallpox. "Smallpox and Its Differentiation."—Dr. Charles S. Benedict opened the symposium by reading a paper with this title. He commented on such recent amusing additions to medical nomenclature as "Cuban itch" and "Philippine measles," which had resulted from frantic efforts to evade the law in connection with the diagnosis of smallpox. If, said the speaker, a given case presented a high fever following a rigor, headache, angina, lumbar pain and marked prostration, the physician had good reason for looking for an eruption of smallpox. The fever was variable in the early stage, and tended to terminate by crisis, while the secondary rise of temperature might equal that occurring in connection with the onset of the disease. The eruption usually appeared in from twenty-four to thirty-six hours after the chill as dark red macules, disappearing on pressure, and in a few hours characteristically hard, shotlike papules developed. By the sixth day the vesicles would be perfectly formed, and by the ninth day these would be converted into pustules. The hemorrhagic or fulminating type

of smallpox usually terminated fatally within forty-eight hours. In making the diagnosis of smallpox one must differentiate it from variella, measles, scarlet fever, malignant endocarditis, cerebrospinal meningitis, erythema multiforme, papular syphilides and pemphigus. From varicella it was distinguished by the fact that in that disease there was rarely any umbilication and the shotlike feeling of the smallpox eruption was absent. In measles, vesicles are not observed in the throat. The erythema of variola is evanescent and does not, like that of scarlet fever, disappear on pressure. The petechial rash of malignant endocarditis was more apt to be mistaken for typhus than for variola. A papular syphilide sometimes caused the diagnostician some anxiety during a smallpox epidemic. The lesions of vaccinia naturally closely resembled those of smallpox, but they were exceedingly few and the duration of the disease was limited to nine days. It was important to remember that in the early diagnosis of smallpox no one sign or symptom was pathognomonic.

"Smallpox and Its Treatment."—Dr. S. Dana Hubbard read this paper.

"What Constitutes Efficient Vaccination?"—Dr. Frank S. Fielder read this paper. Both papers are published in full in this issue of THE JOURNAL.

Dr. John H. Branth opened the general discussion as follows:

Smallpox is no respecter of persons. It is, perhaps, true that filthy surroundings promote virulence, which may be a factor regarding the great fatality in the savage races, which latter races suffer greater from the ravages of exanthematous diseases, when introduced into their country, than the civilized. For instance, just now the Alaskan Indians are decimated by measles.

Centuries ago variolous inoculation was introduced and a reduction of mortality was noticed, a then curious paradox: That, to save a human life from destruction by smallpox, inoculation with the poison should have to be resorted to. But the result seemed to prove the theory, for the malignant form would not attack those so protected, as a rule. This theory is of great antiquity. Kirkpatrick says of it: "Some poor, unlearned, but heaven-taught mortal, some Chinese, Hindoo, or Circassian, first hit upon it. For unknown numbers of years it was practiced in Hindostan. For hundreds of years the Chinese placed smallpox scabs in the nose for the purpose of inoculation." The wife of the English ambassador to the Court of Turkey, in 1717, in writing to her home, says: "The smallpox, so fatal and general among us, is here entirely harmless by the intervention of engrafting, which is the term they give it. Every year thousands undergo the operation, and the French ambassador says pleasantly that they take the smallpox here by

way of diversion, as they take the waters in other countries. There is no example of anyone who has died of it." Yet, in my reading on this subject for many years past, I cannot help to suspect that in England, and particularly in Ireland, the great epidemics were influenced to some extent by this factor. I think in the year 1850 the English Government forbade this procedure. I would strongly suspect that temperature, environment, climatic conditions, aerial humidity, etc., have an influence on the severity of the epidemic. May it not be that it was safer to inoculate at a time when no epidemic raged? It is certainly reasonable to assume that during an epidemic the majority of the population is in a highly receptive condition for the virulent and unmodified form, if not protected. Otherwise no epidemic could occur.

But let us proceed for a moment to another phase: "The vaccine pustule and its relation to smallpox." For more than thirty years every practitioner has had at his disposition literature that smallpox is either congruent with vaccinia, or, that the two were entirely different and unlike diseases, which were, however, subject to influence one on the other. To-day these two camps still exist, for a small minority of the antivaccinationists are yet in the field. I do not here want to attempt to prove the claims of Jenner. Yet, to furnish an explanation, is it out of place to draw on other examples of modern pathology and bacteriology? In an article published in *American Medicine*, February 22, 1902, Ernest Hutchinson, D. V. S., of Portland, Ore., United States Inspector of Animal Industry, says in abstract that the tubercle bacilli from one species cannot be transplanted with the same success to other species of animals, and if successful, then a modification of virulence occurs. The transfer of bacilli from man to man is of more virulence than from animal to man, and vice versa. Now, we know that tubercle bacilli prefer certain localities for development, which often vary in different species. In range cattle of Oregon is disclosed the dominance of lesions in the liver, mesenteric and retro-pharyngeal glands, but without any apparent enteric lesions. In swine fed upon tuberculous offal of abattoirs, the muscle juice has been found to possess virulent properties. Now, let us make comparison with vaccine pox. The grease in the horse which occurs near the hoof is said to give the same protection as cowpox—vaccine. On the fact that cowpox elect the udder, Jenner bases his assertion of probable accidental inoculation of smallpox—virus. It appears, however, that the udder is the most vulnerable organ for the inoculation of pox.

In the human being the envelope—that is, the epidermis and the involuted respiratory tract—and the alimentary canal seem to be the most vulnerable organs. We know of the great fatality of hemorrhagic intestinal variola, which nearly always ends fatally before

eruption appears. During my visits to the pest-house of Ross Hill, in Cincinnati, I do not remember of one such case recovering. I have seen such a case to die in eleven hours from appearance of first symptoms. Now, is it unfair to present the question: May not the modification (vaccinia) be due to a certain inhibition of activity (modified virulence?) such as Hutchinson asserts for tuberculosis for different species? All writers seem to agree that smallpox originated with the human species; at least, no such epidemic in the lower animal is mentioned.

Again, we older practitioners, who used to practice arm-to-arm vaccination, know that this form of vaccinia takes in about four days (perhaps due to acclimatization of virus), while cowpox vaccination takes in a longer time, generally.

I hope my colleagues will pardon my transgression into the field of tuberculosis, which I only did to build a bridge over a chasm, for which we have as yet no better argument for bridge-building material.

In conclusion, let me bring to your notice the number of smallpox cases in London recently, where the antivaccinationists have succeeded in relaxing the laws for compulsory vaccination. On a casual glance in a report for London I find more than 500 cases for one week; in all of Prussia, four cases; in Bavaria, two. (This is all from memory.) In the latter countries strict laws as to compulsory vaccination are in force. Right in our midst we have an antivaccination party, who have not yet profited by the study of past epidemics and the principles evolved by Jenner. The antivaccinationists claim that compulsory vaccination is an infringement on the personal liberty a free country like ours holds out. In justice I am entitled to the same line of argument: The presence of an unvaccinated person is an infringement on my personal liberty, being a danger to my well-being. He who harbors such an unprotected individual of more than two years of age should be made liable to punishment. In special cases of chronic sickness, a physician may be employed to give a certificate stating why vaccination should be postponed to a more favorable time in such special case.

Dr. William Dolz called attention to a series of 1,300 cases of smallpox that he had assisted in treating in the province of Santiago de Cuba, according to the general plan described by Dr. Hubbard. These patients were bathed from one to three times a day with bichlorid of mercury solution, 1 to 5,000, the frequency of the bath increasing with the severity of the eruption. Half of the cases were confluent, and two-thirds had not been vaccinated, yet the mortality had been only 10 per cent., which he thought was creditable considering the adverse conditions present. It was worthy of note that although a smallpox epidemic had existed there for more

than a year, and over 4,000 persons had succumbed to it, these 1,300 persons were discharged in ten weeks, and in the three years since that time no new case of smallpox had developed in that district. This spoke most eloquently for the effect of isolation and vaccination as a means of stamping out smallpox.

Dr. David P. Austin did not see how trustworthy conclusions could be drawn from the hospital statistics quoted by Dr. Fielder, because the custom of some countries was to make use of multiple insertions in doing primary vaccinations, and, therefore, in a subsequent investigation it was impossible to say whether the number of scars present represented that number of separate vaccinations. He firmly believed that two vaccinations made at different times were more fully protective than a number of simultaneous insertions. He also believed that an immunity, lasting the balance of the person's life, could be established by a variable number of revaccinations. The speaker then described a series of ten cases in which he had vaccinated children at intervals of one month. The first vaccinations in this series were primary, and all ten children were vaccinated at the expiration of one month, eight of them successfully. At the end of another month six of the children were successfully vaccinated, and after another month four out of the six children presenting themselves were once more successfully revaccinated. This report should serve to effectually explode the old notion that revaccination is only required at intervals of seven years.

Dr. Fielder said that he had performed a similar experiment, yet he was surprised at the very large proportion of successful revaccinations obtained by Dr. Austin. There was no known rule as to the duration of immunity, but it lasted longest in those who had been vaccinated by multiple insertions. He was, of course, a firm believer in the efficacy and importance of revaccination. That immunity to smallpox and to vaccination were not the same appeared to have been shown by the case of one of the resident physicians of the smallpox hospital on North Brother's Island. This physician, though constantly exposed to smallpox, did not contract the disease, though he was able to successfully revaccinate himself.

* * *

Erie County.—The annual meeting of the Erie County Medical Association was held on March 10, 1902, in the rooms of the Buffalo Natural Science Society. The following officers were elected for the coming year:

President, Joseph W. Grosvenor, Buffalo.

Vice-President, Howard L. Hunt, Orchard Park.

Secretary, Jacob S. Otto, Buffalo.

Treasurer, Wm. Irving Thornton, Buffalo.

Executive Committee, Lorenzo Burrows, Bernard Cohen, Buffalo.

Member State Nominating Committee from

Fourth District Branch, George Haviland, Buffalo.

Delegates to State Convention, Wm. H. Thornton, Chas. A. Wall, Arthur G. Bennet, Bernard Cohen, Chester Stewart, Delancey Rochester, Raymond Johnson, George Cott, Chas. Stockton, Albert Worhust, all of Buffalo.

Alternates to State Convention, W. H. Chace, C. C. Frederick, Herman Hayd, A. G. Gumaer, Earl Lathrop, Michael O'Gorman, F. A. McGuire, W. G. Taylor, all of Buffalo; H. P. Trull, Williamsville; Ben Gipple, Alden.

The retiring president, Dr. Delancey Rochester, read a paper on "The Microscope in Medicine." He emphasized the fact that almost the entire progress in medicine in late years has been due to microscopical research.

Dr. Allen Jones read a paper on "The Differential Diagnosis Between Dilated Gall-bladder and Floating Kidney."

* * *

The Kings County.—The Kings County Association held its stated meeting at 315 Washington street, Brooklyn, on Tuesday evening, March 11th. After the presentation and discussion of patients, specimens and interesting cases, a discussion of the blood in its normal and abnormal conditions was given in two papers.

1. "Normal Blood: Its Composition, the Technique of Its Examination, and Its Pathological changes." Illustrated by apparatus, microscope and lantern slides, and by a large number of colored slides showing the various forms of blood cells in health and disease. By Havens B. Bayles, M. D.

2. "Inflammatory Leucocytosis, and a Demonstration of the Malarial Parasite." Illustrated with plain and with colored lantern slides. By Victor A. Robertson, M. D.

* * *

The Orange County Medical Association held its regular monthly meeting Wednesday afternoon at the office of Dr. Conner, Middletown. There were present Drs. Conner, Douglas, Purdy, Redfield, Stivers and Preston, of this city; Dr. Distler, of Westtown; Dr. Wise, of Turners, and Dr. Woodhull, of Monroe, and Dr. Irving S. Haynes, of New York.

Interesting cases were cited by Drs. Conner, Douglas, Purdy, Redfield, Preston and Distler. Dr. Distler, of Westtown, read a very instructive paper on "Acute Cystitis, Its Symptoms, Causation and Treatment," giving a complete résumé of the subject.

Dr. Haynes, of New York, followed with a paper on much the same line, also presenting numerous clinical examples of the various forms of cystitis.

In the general discussion following these papers all those present took an active part and many valuable points in the treatment of these most annoying bladder affections were dwelt upon.

Dr. Conner stated that those who would read papers at the next meeting were Drs. Dennis, of Unionville; Hulett, of Middletown; Many, of Florida, and Nugent, of Unionville.

Dr. Conner cited several interesting cases of acute retention of urine, one in particular treated by supra-pubic puncture with ordinary trocar and canula, with recovery.

Dr. Purdy reported an interesting case of cystitis due to silk ligature ulcerating through and being discharged per urethra two years after abdominal hysterectomy for fibroid, the ligature being recognized as that which held the pedicle of the tumor.

Dr. Preston reported a case of retention of urine due to several strictures treated by filiform bougie, with relief of the condition temporarily.

Dr. Redfield reported a case of chronic calculous cystitis following operation for saplingitis, terminating in pyonephrosis and death, in which irrigation was practiced under the impression it was ordinary chronic cystitis, but the condition grew rapidly worse, with the above result.

Dr. Douglas reported favorable results in several cases of cystitis by irrigation with potassium permanganate and internally methylene blue in capsules.

Dr. Distler mentioned a case of prostatic cystitis apparently benefited by fluid extract of pichi.

Dr. Haynes stated that he had secured great benefit from urotrophin in cystitis and always used it. Several members present also had had favorable results with the drug.

Nitrate of silver and protargol were mentioned as useful in irrigation, as well as the long-used boric acid.

Dr. Haynes spoke of the use of Carl Seiler's nasal tablets as having given him excellent satisfaction in irrigating the bladder.

Dr. Redfield reported a case of measles in a man of 29 years, which came on with symptoms of acute catarrhal appendicitis two days previous to the characteristic rash of measles. The three cardinal symptoms, pain, tenderness and rigidity, were present to a very marked degree, insomuch that the operation seemed to be indicated, but on the third day one of the patient's children developed the distinctive rash, and the pain subsiding under the free purgation and ice bags over the seat of pain, decided in favor of the measles, although the rash did not develop well until the sixth day, at which time another child was taken ill with the disease.

* * *

The Fifth District Branch.—The attention of the members of the New York State Medical Association, and especially of those who are members of the Fifth District Branch, is called to the fact that the annual meeting of the Fifth District Branch will take place in New York City on May 6th. Due notice will be sent to each member.

THE STATE LEGISLATURE.**BILLS IN THE ASSEMBLY.**

Bill No. 1590, introduced by Mr. Cadin, to provide for a commission to investigate the nature and value of vaccination, antitoxin, seropathy and other alleged prophylactics.

Bill No. 1744, introduced by Mr. Burnett, to amend the insanity law relating to the sales of unclaimed personal property belonging to deceased or discharged patients of the State hospitals.

Bill No. 1764, introduced by Mr. O'Malley, abolishing the office of the coroner of Erie County and creating the office of county medical examiners, and naming its duties.

Bill No. 1505, introduced by Mr. Nye, to amend the public health law relating to the adulteration of a deception in the sales of drugs, chemicals and other substances.

Bill No. 1633, introduced by Mr. Patchin, to amend the poor law of pestilences in almshouses and elsewhere.

Bill No. 1439, introduced by Mr. Fuller, to amend the public health law relating to local boards of health.

Mill No. 1489, introduced by J. E. Smith, to amend the Greater New York Charter by providing that the physician and driver of the Central Park ambulance should be members of the police force.

Bill No. 1488, introduced by Mr. Sanders, for the protection of the public health, and to prevent the use of certain poison in snuff and tobacco and proprietary or patent medicines.

Bill No. 1484, introduced by Mr. O'Brien, to amend the town laws relating to the places of holding meetings of the Town Board and Board of Health in certain laws.

Bill No. 1587, introduced by Mr. Fisher, to amend the public health law relative to local boards of health.

Bill No. 1376, introduced by Mr. Allds, to amend the State charities law relating to the business of the State charitable institutions, and creating the office of the fiscal supervisor.

Bill No. 1401, introduced by Mr. Merritt, to amend the public health law relating to penalties for the practicing of veterinary medicine and surgery without a license.

Bill No. 1773, introduced by Mr. Rogers, to authorized the State Commission in Lunacy to consent to the improvement and change of route of a highway across the lands of the Binghamton State Hospital.

BILLS IN THE SENATE.

Bill No. 1108, introduced by Mr. Green, to provide for the construction and maintenance of outside stair fire escapes upon school buildings, hospitals, asylums, homes for infants, the aged, crippled and infirm, sanitariums, dormitories, theaters, opera houses, dance, music or assembly halls, hotels, private and public institutions and apartment and tenement houses.

Bill No. 942, introduced by Mr. Mills, to

amend the public health law relative to the local boards of health.

Bill No. 1209, introduced by Mr. Stewart, to authorize the State Commission in Lunacy to consent to the improvement and change of route of a highway across the lands of the Binghamton State Hospital.

Bill No. 932, introduced by Mr. Sherwood, to amend the poor law relative to pestilence in almshouses and elsewhere.

Bill No. 892, introduced by Mr. Hennessy, to provide for the construction of a building for hospital purposes and acquiring lands for the same in the Borough of the Bronx in the city of New York.

Bill No. 1180, introduced by Mr. Fuller, to provide for the proper sanitation and ventilation and protection from fire of schoolhouses and other public buildings.

Bill No. 869, introduced by Mr. Elsberg, to amend chapter 6896 of the laws of 1887, entitled "An act to provide hospitals, orphan asylums and other charitable institutions in the State of New York with water, and remitting assessment therefor," and the acts amendatory thereof.

Bill No. 855, introduced by Mr. Hill, to amend the public health law and the acts amendatory thereof in relation to pharmacy.

April Meetings.—The following meetings of county associations of the Fifth District Branch will take place in the month of April:

Dutchess County—Vassar Hospital, Poughkeepsie, April 23d; Irving D. LeRoy, president.

Kings County—315 Washington street, Brooklyn, April 8th; Hubert Arrowsmith, president.

New York County—17 West 43d street, New York, April 21st; Parker Syms, president.

Orange County—Middletown, N. Y., April 16th; Milton C. Conner, president.

Rockland County—Suffern, N. Y., April 16th; Gerrit F. Blauvelt, president.

Sullivan County—Liberty, N. Y., April 9th; C. S. Payne, president.

* * *

New York County.—At the stated meeting held Monday evening, March 17th, the following were elected to membership:

Frank S. Fielder, M. D., 2 West 82d street; Isador Goldstine, M. D., 225 East 115th street; Edward L. Keyes, Jr., M. D., 109 East 34th street; Charles C. Langsdorf, M. D., 253 East 86th street; Charles J. Pick, M. D., 117 East 86th street; H. G. Piffard, M. D., 256 West 57th street; Godfrey Roger Pisek, M. D., 250 East 72d street; Julius Rosenberg, M. D., 57 East 77th street; William Ridgely Stone, M. D., 66 West 49th street; Sydney H. Stine, M. D., 158 East 72d street; Albert T. Swan, M. D., 317 East 18th street; Charles L. Weeks, M. D., 136 West 16th street; Bernard Zweighaft, M. D., 54 West 71st street.

Compulsory Vaccination Law.—At a meeting of the New York City Board of Health last week, its three members, Dr. Lederle, Dr. Doty and Police Commissioner Partridge being present, a resolution was passed declaring against compulsory vaccination. The resolution stated that in the opinion of the Board the passage of any bill requiring compulsory vaccination was unwise and uncalled for. The members were agreed that the measure now in the Senate and Assembly Committees was special legislation against all local boards of health and implied that these local boards were incapable of conducting their own department. The members believed that vaccination should be taught not by force but by education, and that it could not afford to have the present harmonious relations between the Board and all classes in the city upset by any mandatory legislation at Albany.

* * *

National Health Board.—The bill to change the name and increase the efficiency of the United States Marine Hospital Service has been favorably reported to the Senate by the Committee on Public Health and National Quarantine. It changes the name to the United States Health Service. The bill provides for creating an Advisory Board for conducting investigations by the Hygienic Laboratory, and provides also for the creation of a National Board of Health, to consist of one delegate from each State or Territorial Board of Health, to meet for conference when upon the request of five of these boards the interests of the public health can be promoted thereby. The uniformity of registration of mortality, morbidity and vital statistics is provided for by authorizing the Surgeon-General of the United States Health Service after conference with the State boards to prescribe forms for their collection and compilation. In the time of threatened or actual war, when the commissioned officers of the United States Health Service are brought into official relations with the medical officers of the Army or Navy, they are to have rank with and after those of similar rank in those services.

* * *

Meddlesome Midwifery.—Dr. William S. Stewart, of Philadelphia, in a letter to *American Medicine*, says:

"Since I have given up the greater part of my obstetric work it surprises me to find that some of my former patients who gave me little delay in their normal labor have had performed on them symphysiotomy and Cesarean sections for no other reason, so far as I can learn, than because the bag of waters was ruptured prematurely, the os and cervix uteri not being sufficiently relaxed to permit the passage of the fetus within the limit of time ordinarily required."

Operative Treatment of Gangrene of the Lungs.—Lenhartz reports 23 cases of gangrene of the lung treated by resection of ribs and pneumotomy. There has been complete and permanent recovery in 11; 3 have died since from tuberculosis, 3 from sepsis and 1 from general debility. He operates in two sittings, as it is impossible to suture the pleura, and union has to be accomplished by vigorous compression. He warns against exploratory puncture. It entailed empyema in at least one of his cases.

* * *

New Home for Incurable Consumptives.—The House of Rest for Consumptives, after various vicissitudes during the past ten years, has at last purchased for \$75,325 a fine plot of twenty-seven lots, situated at Inwood-on-the-Hudson, at an elevation of 160 feet above the river. A double mansion now on the place will be quickly altered at a cost of \$10,000 to meet the requirements of the institution, which is conveniently accessible by railroad from the heart of the city. The endowment fund now amounts to \$450,000.

* * *

Vaccination and Smallpox in Montreal.—Dr. Laberge, the medical health officer of Montreal, has reported to the health committee of that city that since last November 335 cases of smallpox had been reported in the city, the average varying from two to four cases per day. The report also showed that from January 15th to February 28th, 24,233 people had been vaccinated.

* * *

Minturn Hospital Annex.—Mrs. Andrew Carnegie has expressed her willingness to give \$60,000 to build an annex to the Minturn Hospital, in New York, to be used for smallpox patients. The authorities of the institution will consider the plan. The building was intended for diphtheria and scarlet fever cases only.

* * *

Contagious Diseases Hospital for the Bronx.—The Senate has passed the bill authorizing the establishment of a hospital in the Borough of the Bronx, which may be used not only for emergency cases, but for the reception of smallpox patients. As no opposition to the bill has developed, it is confidently expected that the bill will become a law.

* * *

A Differentiating Sign in Infantile Pneumonia.—Weill claims that pneumonia in young children can be diagnosticated from other diseases by the following sign, which he considers pathognomonic: This sign is the lack of expansion in the subclavicular region, independent of the site of the pneumonic lesion. With the child on its back, the chest exposed, and respiration regular, it is easy to note the dif-

ference in expansion between the two sides. On placing the fingers on the subclavicular region on either side, they are lifted as by a wave on the sound side, while on the other the lack of expansion is evident, even in the very first days of the disease. In pleurisy or pneumothorax, the lack of expansion corresponds to the seat of the lesion, but in pneumonia it is invariably subclavicular.—*Medical Times*.

OBITUARY.

Dr. Morris W. Townsend, of Bergen, N. Y., died at his home on February 26, 1902, being 74 years of age. Dr. Townsend graduated from Jefferson Medical College in 1853, and located at Bergen in 1858. In 1861 he enlisted as assistant surgeon in the Forty-seventh Regiment of the New York State Volunteers; returned to his home in 1864; performed his first ovariectomy in 1867, and from that time until his death was in active practice.

Dr. Townsend was a man of striking personality; kind and charitable to all; a friend and adviser to his fellow-practitioners, and especially kind to the younger members of the profession.

He was foremost among the surgeons of Western New York. He was on the Board of Curators of the University of Buffalo, a member of the New York State Medical Association; also of the American Medical Association; founder and president of the Genesee County Medical Association.

A memorial service was held at the Court House in Batavia on March 12, 1902, for the late Dr. M. W. Townsend, of Bergen, N. Y. This was largely attended by the doctors of the county and of Western New York. His death is mourned not only as a loss to the county, but to the medical and surgical world.

* * *

Edward Mott Moore, M. D., LL. D., died full of honor and of years at Rochester, N. Y., March 3, 1902, at the age of 88 years. Dr. Moore was born at Rahway, N. J., was graduated from the Medical Department of the University of Pennsylvania in the class of 1834, and served as resident physician at Blockley Hospital, Philadelphia. At this time he became greatly interested in cardiac diseases, and recorded some valuable observations and experiments. He began the general practice of medicine at Rochester. He served as professor of surgery successively in the Medical School at Woodstock, Vt.; the Berkshire, Mass., Medical College; the Starling Medical College, Columbus, O., and the Buffalo Medical College. With the latter institution he was connected for twenty-five years. He was a member of the American Medical Association, and its president in 1890; one of the founders of the New York State Medical Society and also of the New York State Medical Association; he was also one of the founders of the American

Surgical Association and president of the State Board of Health from its organization until 1855. The high esteem in which Dr. Moore was held, not only by his colleagues in the profession, but also by the members of the community in which he lived, is evinced by the concerted expression of appreciation which was given, both by the local medical societies with which he was connected, and also by the Chamber of Commerce of Rochester and the officers of the various institutions with which he was connected. Dr. Moore was valued by all who knew him as the true gentleman, the good counselor and the lovable citizen and friend.

* * *

Christian Fenger, the noted surgeon of Chicago, and a man of world-wide fame, died at his home, March 7, 1902, at the age of 62 years. He was born in Copenhagen, Denmark, underwent careful training in the clinics and hospitals of his native land, had experience in the Franco-Prussian War and as a member of the Sanitary Council sent to study the etiology of diseases in Egypt. He went to Chicago in 1877 and located there. His greatest interest lay in pathology, in which he acquired an international reputation. He filled successively the chair of clinical surgery at the College of Physicians and Surgeons, the Chicago Medical College and Rush Medical College. Dr. Fenger was prized with enthusiastic admiration by the men who came in immediate contact with him and was regarded by them as the very embodiment of truth and the incarnation of the scientific spirit in surgery. He was a strong and influential factor in the development of medical education in Chicago.

DEATHS.

Dr. Joseph A. Booth, New York City, died February 27th.

Dr. George W. Cushing, Brooklyn, died March 20th.

Dr. Max Hein, Brooklyn, died February 24th.

Dr. George Zabriskie Hunter, New York City, died February 16th.

Dr. George W. King, King's Station, died March 6th.

Dr. Edward Mott Moore, Rochester, died March 4th.

Dr. Conrad Mund, New York City, died March 2d.

Dr. Arthur T. Muzzy, New York City, died March 4th.

Dr. Jesse Myer, Kingston, died February 16th.

Dr. Oren Day Pomeroy, Whitestone, L. I., died March 19th.

Dr. James T. Smith, New York City, died February 24th.

Dr. Jarvis E. Smith, Clyde, died March 9th.

Dr. Morris W. Townsend, Bergen, died February 26th.

Dr. Ervin Alden Tucker, New York City, died March 3d.

Dr. Herman William Weber, New York City, died March 6th.

Dr. W. H. Smith, Millville, N. J., died February 12th.

Dr. Harry F. Nichols, Hoboken, N. J., died March 18th.

Book Reviews.

THE ROENTGEN RAY IN MEDICINE AND SURGERY, with 391 illustrations. By Francis H. Williams, M.D., Visiting Physician at the Boston City Hospital, etc. The Macmillan Company, New York, 1901.

The X-ray is such a recent addition to the physician's armamentarium that a formal work upon its relation to medicine seems, *a priori*, rather premature, and that impression is not entirely dissipated by this book. In taking up a work of its size and pretensions one naturally looks for authoritative statements as to demonstrated principles. Yet, the disappointment which follows failure to find such statements is quickly changed to satisfaction when we come to appreciate that their absence demonstrates not only the author's self-control, but, what is of far greater importance, a clearly scientific comprehension of his subject and its present limitations. The work as a whole shows that the author has been more coldly judicial than the enthusiastic reader might have wished, for he has refrained most remarkably from presenting deductive conclusions and confined his statements to demonstrated—one might almost say—clinical facts. The result is a work which goes quite as far as is safe in the present state of the subject, and which inspires the fullest confidence in such parts as do present conclusions from the author's own experience.

When considering the work in detail one is rather debarred from criticism by the first sentence of the preface, which says: "The following pages are rather a report of progress than a final presentation of this growing subject." Nevertheless, and, therefore, we venture the opinion that much will be omitted in another edition which appears in this one. The opening chapters on "equipment" and "methods" are all that could be desired, and upon these points Dr. Williams is justly recognized as an authority by reason of his experience and painstaking work. Such criticism as we have heard of his methods relates to measures that some consider needless precautions, but the beginner will certainly act wisely in following most carefully the directions in these chapters. With this introduction the work takes up in order the examination of the thorax, abdomen, pelvis and special organs. In each case the examination is comprehended in the separate diagnosis of special diseases. In preparing the section on the thorax in particular the author has apparently had less confidence in himself than have those who know his work, for he has inserted a needless amount of case records to prove what would readily have been accepted upon his personal authority. While they may make most interesting reading, such records, save in the rarest instances, are out of place in a medical treatise. The peculiar exigencies of the subject may excuse their insertion in a first edition without justifying their retention later. The chapter on the therapeutic uses of the X-ray shows most commendable reserve in reporting only results and avoiding generalizations, despite the encouraging character of the results.

The surgical portion of the book covers with abundant detail and profuse illustration the well-known field of X-ray work in surgical diagnosis, and a brief final chapter extends this field over dental surgery, in which rather new relation it promises to be of very decided value.

BOOKS RECEIVED.

Acknowledgment of all books received will be made in this column. A selection from these volumes will be made for review, as dictated by their merits, or in the interests of our readers.

ANNUAL REPORT OF THE NEW YORK STATE REFORMATORY AT ELMIRA, for the fiscal year ending September 30, 1901. Twenty-sixth year book. Illustrated.

SYPHILIS—A Symposium. Special contributions by L. Duncan Bulkley, A.M., M.D., and others. E. B. Treat & Co., 241-243 West 23d street, New York, 1902.

SOME THOUGHTS ON THE PRINCIPLES OF THE LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES. Being two lectures delivered at the Medical Graduates' College and Polyclinic on October 2 and 9, 1901, by Sir Felix Semon, M.D., F.R.C.P., Physician Extraordinary to His Majesty, the King; Royal Prussian Professor of Medicine; Physician for Diseases of the Throat to the National Hospital for the Paralyzed and Epileptic, Queen's Square. London, Macmillan & Co., Limited; New York, the Macmillan Company. 1902.

THE AMERICAN YEAR BOOK OF MEDICINE AND SURGERY. In two volumes, under the general editorial charge of George M. Gould, M.D. Philadelphia and London, W. B. Saunders & Co., 1902.

THERAPEUTIC HINTS.

Treatment of Sty (Hordeolum).

R. Hydrarg. oxidī flav. gr. ii

Vasellini puri ʒi

M. Sig.: Apply locally once or twice daily and rub in well.

* * *

Turpentine as an Antiseptic.—Glycerinated turpentine is an excellent antiseptic dressing in the treatment of wounds. Dr. Kossobudsk fills a sterilized bottle with glycerin and adds a small quantity of turpentine. This should be well shaken and allowed to stand for two days; then he adds a small quantity of a 5 per cent. solution of hydrogen dioxide; it is then ready for use. As an antiseptic it checks excessive secretion when applied to wounds, relieves pain and swelling, and promotes the healing process. This action is thought to be due probably to the oxygen liberated and partly to the properties of the turpentine.

* * *

For Chronic Rhinitis.

R. Camphor-menthol m. x

Olei eucalypti m. x

Olei petrolati q. s. ad. ʒiv

M. Sig.: A few drops into each naris when there is local congestion of the nasal mucous membrane; or use as spray; or:

R. Olei eucalypti ʒii

Olei cassiæ m. xl

Olei gaultheriæ m. xl

Camphor-menthol m. xl

Olei petrolati q. s. ad. ʒiv

M. Sig.: Use as a spray to stimulate the mucous membrane in case of chronic pharyngitis associated with dryness of the membrane; or:

R. Cocainæ hydrochlor. gr. ii

Olei cassiæ m. x

Camphor-menthol m. xv

Olei petrolati ʒii

M. Sig.: Use as a spray two or three times a day.

Original Articles.

SMALLPOX AND ITS TREATMENT.

BY S. DANA HUBBARD, M.D.,
New York,

Clinical Assistant in Dermatology at the Vanderbilt Clinic.

SMALLPOX, as you all know, is a self-limited disease and tends toward recovery unless a severe infection is implanted upon an already weakened constitution, thereby acting as the last straw. There is no specific or sure cure, though many have been suggested and tried most faithfully. The treatment of smallpox has received the attention of physicians many hundreds of years, and it taxes their ingenuity as much to-day as it did then. Many new remedies have lately been suggested, and I am sorry to have to state are dismal failures. Experiments in many parts of the world are being made now, and I sincerely trust that ere long we will discover something that will be of service in this malady. The indications to-day are most favorable that the cause of smallpox will be discovered, and when it is found I have no doubt but that the remedy will soon follow.

In the treatment of smallpox the principal rules which govern are: First, isolate the patient; second, prevent spreading of the contagium; third, treatment of the patient; fourth, preparation of patient for dismissal.

Isolation of Patient.—This should be done as soon as the disease is suspected. Do not wait until a positive and final diagnosis is made. I have been asked many times how can this be done without alarming unnecessarily the patient, family and their friends?

It should be the rule to place patients in a room secluded from annoying callers and with only one to care for them. This could be done by telling patients that the disease was obscure, but as soon as it had manifested itself they would be informed of its nature. The family physician that has the confidence of his patient can certainly isolate in this manner without objections, and can do so without exciting any suspicions.

The above is not the rule, I am sorry to state, and it is in this way that infection is scattered practically broadcast before it is recognized. Physicians also wait until the eruption is in an unmistakable stage before reporting the case, and this delay also causes many to be unnecessarily exposed. Hospitals are not at fault in admitting cases that have obscure symptoms to their general wards without a short period of observation. Institutions where many children are housed receive new ones into their midst without a certain time for observation. Is it then surprising that we find cases of diphtheria, scarlet fever and other contagious cases in large wards, exposing many, when a small extra ex-

pense or a little unusual care might have prevented it?

The up-to-date physician will isolate and observe and guard an obscure case until the clinical symptoms present themselves with sufficient distinctness to enable him to make a correct diagnosis.

The up-to-date hospital or other institution is going to have an observation ward or building where all the new cases admitted will serve a period of observation until such symptoms appear as will enable one to act with precision, when the case will be transferred to its proper ward. In institutions where there are many children this isolation system is being rapidly adopted, and a child remains here for a period sufficiently long to prevent the infection of the remainder of the institution with measles, scarlet fever or even smallpox. I have every reason to believe that visitors will be excluded in such wards, and that all children will be visited and seen by friends in a parlor or ward distant from the main body, thereby preventing visitors from infecting the institution.

Now to return to my subject: The patient having been removed to a separate room, in the care of one person, the disease develops undisturbed by extraneous influences. The symptoms of each disease soon become sufficiently well marked, so that a diagnosis is possible.

It is here well to remark that a disease coming on with obscure constitutional symptoms, lasting from two to four days, the obscurity is enough to put an alert physician on his guard. The diagnosis having been made, or the symptoms so suspicious as to suspect this disease, the family physician should, if the family are trustworthy, notify them of the nature of the disease, and whether or not the patient should be told that a consultation with others is to be held, so that when a public officer appears the excitement of his presence should not alarm an already nervous patient. If the family are of that class that are apt to make trouble for the physician or to abscond, then, after his retirement from the case, without saying anything to the family, he should immediately call upon the health authorities and inform them of the nature of the disease, being careful to give all information with accuracy. Have the message repeated by the officer receiving it, and finally give your name and address, and if this is not to be used state that fact and it will not. The pronouncing of a case as one of smallpox, especially if it is mild in character, is generally met with a host of objections. If the signs are not decidedly characteristic be most guarded, have your opinion backed by another physician. Public diagnosticians invariably in doubtful cases have their opinion confirmed by repeated visits, and by others seeing the case, being careful not to warp their opinions by giving any facts in advance.

The diagnosis having been made and con-

firmed, it is now the duty of the public officer to isolate the patient, and, in order to do so, he is removed to a place or hospital where he can be kept away from others and others away from him. The removal of the patient should be as early as possible in order to protect the public, and the earlier the removal of the patient the better it is for him. The moving of a smallpox patient should be done with every care for the comfort of the sick and for the consideration of the well. The patient should be covered all over, preferably with blankets, and taken along empty halls, through back unused passages and to the vehicle that is in readiness. The anxious gathering of lookers-on should be moved away, as it is quite possible for some of them to be infected. The patient is then taken by the most direct route to the hospital, and all large crowds avoided, and unfrequented streets used in order to avoid the conveyance being stopped by a block which is liable to occur in busy, crowded thoroughfares.

The room so recently emptied is at once closed and sealed by pasting paper across and a note posted to inform all that smallpox has been in that room, and that it is awaiting the disinfectant of the public department that is to cleanse it. The rest of the house is then to be well aired and cleaned. The halls used in the removal are to be thoroughly aired. If the patient has touched anything it is to be thoroughly washed with hot soap-suds and soda. All of the exposed persons should be promptly vaccinated, whether recently vaccinated or not. This rule should be absolutely enforced. The premises should be visited and all occupants seen daily for a period of twenty-one days, and, upon the first symptoms of illness appearing, the patient is to be isolated and observed. The neighborhood should be inspected, and if any are found that have suspicious symptoms, treat them as if they were "suspects" until their case can be positively diagnosed. The neighborhood for a block each way, back and front, should be visited and vaccination offered and the necessity urged upon those that are not immune.

The patient is received at the hospital. A few words about a smallpox hospital would be well at this time. Most people believe any old place is good enough—a stable or old unused out-house or anything. There never was a greater mistake. It would be better to use an ax and knock all in the head that contracted this dreaded malady if such is the consideration they are to receive. This disease is one in which, if sepsis is prevented or limited in amount, the recovery can be assured, but neglect, filth and carelessness are generally followed by most fatal results.

The building should be built with a regard for its occupants as well as for the community. Although it is to be a hospital and everything inside to be made most pleasing and agreeable,

the outside should be so arranged as to prevent any from escaping, yet not so jaillike as to impress the newcomer that it is a loathsome place. The temperature of the ward should be about 70 to 72° F. It should be ventilated by means of pipes receiving the air from the side of the building at least seven feet from the ground and conducted along underneath the floor and dispersed into the ward in the center. The exit should be along the center line of the ceiling, and both entrance and exit should be adjustable as to increase or diminish the draught as required. This can be done very cheaply, or can, with the modern appliances, be made expensive, the idea of ventilation being to change the air in the ward continually and not to cause a draught.

Smallpox seems to have a peculiar effect upon the mucous membranes, rendering them very susceptible to draughts, and, as a result, bronchitis and pneumonia are very common. The windows of the ward should be long and large and shaded with some kind of colored glass to aid the eyes that are nearly always irritated. There should be large transoms above the windows in order to ventilate in summer and not have open windows for patients to make their escape from. All openings should be guarded by ornamental iron bars, and should have in addition wire screens to keep out the flies and to prevent the escape of any solid particles of dust from the room. Doors should be at the ends of the ward, and a double door is better than a single one. The hinges should be of the spring pattern. There should be a vestibule of at least four feet between outer and inner doors. In this vestibule there should be a closet with hooks to receive the clothing of the visiting physician and the attendants. On the opposite side should be another closet to receive the clothing to be worn into the ward.

The clothing that is used in visiting a contagious case consists of a large, loose gown, rubber shoes and a cap. All should be plainly marked. In the vestibule there should be a washstand of iron and a bottle containing a solution of bichloride of mercury. The patient is now received into a properly appointed, neat and clean hospital, with all the modern arrangements necessary for the comfort, care and treatment of his case.

We will now return to the home of the patient and attend to the infected apartment which was sealed. This room must be fumigated as well as all others that are infected, but where the patient has been discovered early in the disease, before any peeling has occurred, it is only necessary to fumigate the one room. This can be done either with sulphur and moisture or with formaldehyde gas. One, to my mind, is as efficient as the other. The latter has not half of the unpleasantness that the former has, but the formaldehyde is more difficult to operate. Fumigation is continued for six to eight hours,

and then the premises are wellaired and all heavy textures, such as mattress, pillows and other articles, are to be removed to a steam sterilizing chamber and properly treated. All books and toys should be burned.

We have now used all measures to prevent the spread of the disease except one, and that I will speak of specifically, and that is the doctor himself. His case is a peculiar one. He should promptly vaccinate himself and his own family and servants. He owes this not only to himself but to the many that are dependent upon him in their illness. Physicians very generally overlook this most important point. I will even go a point further and say that he ought to offer vaccination to every family that he visited after seeing the doubtful case. He has unwittingly exposed many, and in extenuation the least that he can do is to inform them of the fact and offer vaccination, and here it is wise not to make a charge. A frank, conscientious, manly physician will be more than half-way met by his patients, and he will have the satisfaction of knowing that he has done all that can be considered necessary.

Smallpox up to this point has been considered in its remote phases for the benefit of those that see few cases, and they are the ones that can do most to prevent its spreading. We will now consider it more specifically. The first indication in the treatment is to prevent sepsis, and the second is to make the patient as comfortable as possible. The first indication is met when we have nice, clean wards, with pure air, clean beds and clean attendants. The patients must be kept scrupulously clean, the floors of the ward scrubbed at least once daily and once swept after sprinkling with water and wet paper scraps thrown about. Do not paint the floors; it hides dirt. The soiled bedding is removed from the ward, and is best kept in wooden barrels holding a solution of bichloride of mercury, and these barrels should have close-fitting covers. The prevention of odors and the gathering of flies are to receive special attention.

The attendants should be clothed in white washable goods, close-fitting caps and easy-walking canvas shoes for the ward only. The male attendants have white loose-fitting overalls, canvas shoes and caps. On leaving the ward the nurse or orderly should remove the outer garments in the vestibule, wash their hands and then don their clothing, which is kept in the opposite closet. They should invariably wash well their hands and clean the nails, and in this way there is small danger of carrying infection.

To keep the patient clean, bathe him at least twice daily in all cases that have the constitution to stand it. This not only makes the patient more comfortable, but it materially shortens the drying and peeling stages.

Symptomatic treatment is the classical term; anticipate evil influences and combat those ex-

isting. In the stage of invasion the backache is generally the first symptom complained of. Massage, rest in bed with sedatives, especially some form of opium, meets the indications. Counterirritation is contraindicated, for the reason that any irritation of the skin causes the eruption to appear at that site, and a thick eruption in the middle of one's back is not the most agreeable location to have it. Frequently we see a plaster applied for the backache. This causes moisture to accumulate, and this seems to irritate the skin and the eruption appears here most intensely, causing much inconvenience and annoyance. The fever in this stage is usually controlled by five to ten grains of acetanilid or phenacetin, and it is wise to combine bicarbonate of soda with either. In the later stages the fever is best controlled by some form of bathing.

The nausea and vomiting are sometimes very persistent and aggravating. You will probably find that it will subside of its own sweet will as the eruption appears. Bismuth or oxalate of cerium or cracked ice has received due care and consideration, sometimes doing good, and at others being useless. Cocaine and magendie are indicated in the severe forms of vomiting. Dilute hydrocyanic acid occasionally relieves temporarily. The headache and neuralgia will next command attention, and here the synthetics act most admirably. Acetanilid with bicarbonate of soda, equal parts, with one grain of caffeine to each five grains, makes a splendid combination. This can be repeated as often as every one or two hours for four or five doses. An ice cap is also very soothing if applied over the aching nerve. If with the headache there is considerable arterial tension, tincture of aconite is very good. A good plan is to place fifteen drops of aconite in a tumbler of water and to give one teaspoonful every fifteen minutes for five or six doses, to be repeated in three or four hours, if necessary. In this stage a prolonged hot bath or a hot foot bath, with mustard, and patient given a hot drink and placed in bed and made to sweat, will relieve many of the unpleasant phenomena, and in later stages hasten the appearance of the eruption.

To maintain the patient's strength, food will have to be urged, owing to the nausea and vomiting. Fluid soups, milk and weak tea may be taken. Give in small quantities and repeat frequently. The thirst demands our attention, and no patient should ever suffer for the want of water. Give him all that he wants. He may vomit it repeatedly, but that only washes out the stomach and helps in the later stages for the better absorption of the nourishment given. If the vomiting of large quantities of water causes inconvenience, vary the plan by giving lavender water acidulated with citric acid or ice soaked in lemon juice. Carbonic water heavily charged is very palatable.

The bowels should be relieved on general principles. A mild, laxative-like fractional dose of calomel, with soda and cinnamon powder, followed by a saline or phosphate of soda, acts most favorably. In some patients there is a tendency to diarrhea. These ought to have a mild saline, followed, when effective, by an astringent with salol. Stimulants in the early stage ought to be interdicted, for the reason that they seem to expend their effect, so that in the later stages, when they are most necessary, they are ineffective.

Alcohol locally is very beneficial, and should be used after the bath. It is a very good plan after an alcohol rub to use a powder of some kind, as it seems to be more refreshing. A good powder is made of equal parts by measure of subnitrate of bismuth lycopodium and starch. If there is a tendency to itch alcohol should not be used. When there is pruritus carbolio acid acts most favorably in the form of an oil, as olive oil, with acid carbolio from 5 to 20 per cent. in strength; well rubbed on, this is very soothing.

During the commencement of the eruptive stage the constitutional symptoms abate somewhat. During the eruptive stage the fever will be the most important symptom that we will have to combat, and there may be some delirium. The fever here is best controlled by sponging or baths. Opiates are best for the delirium. If there is a very discrete eruption, the septic infection is slight and the synthetic preparations will act favorably on the remaining symptoms, but in the more severe forms of smallpox they are too depressing and their use interdicted. Baths are best and their use most beneficial. The cold pack has been used in the cases that cannot be moved without danger of breaking the lesions. Always anticipate a shock to the system by giving a little whisky diluted.

In moderately severe cases of smallpox it is wise to bathe the patients at least twice a day. This seems to have a very beneficial effect upon skin, heart, kidneys and respiration. A bath given before retiring causes very refreshing sleep. To the water that is used for bathing and sponging it is a good plan to add permanganate of potassium, say from one-half to two grains to the ounce. This seems to have no deleterious effect, is not absorbed, and certainly has a very satisfactory effect upon the odor in the pustular and desquamating stages. This also seems to have an effect in lessening the tendency to sepsis and hastens drying and peeling and also lessening the tendency to furunculosis. During the pustular stage it was also considered wise to give quinine, say five grains, three times a day until some unpleasant effects appear, then to reduce it to two grains.

The nutrition of the patient should be closely guarded at all times, and everything used and pushed to the limit to maintain strength. Pre-digested foods, extracts, milk koumiss, and, in

fact, anything that is easily swallowed and is nourishing. Broths and beef tea were considered good stimulants, but bad for general use, as they tend to cause flatulence. The treatment of smallpox in its many forms more closely resembles the modern treatment of typhoid fever than anything else. In fact, if one will closely study the features in typhoid they will closely strike the key toward successful treatment of smallpox.

Strychnin, strophanthus and digitalis are to be given either separately or in combination when the heart shows a tendency to flag. Whisky in the later stages is good and acts excellently. It is the best adjuvant to the food that we possess. In septic cases whisky can be pushed to a remarkable extent, large quantities being taken and apparently assimilated with good effect. Remember the advice of a once distinguished physician who said: "Don't let them die sober!" In the feebleness of exhaustion it is wise to rest the stomach at times, and, in order to do so, nutritive enema are to be given. The bowels in the septic stage may become constipated, and here it is wise not to give calomel, as it has a tendency toward salivation. Salines and phosphate of soda meet the demands in the majority of cases.

The care of the mouth and eyes are very necessary in the eruptive and desiccating stages. The eyes should be frequently washed with warm boric solution (5i to 0i). If there is a swelling of the lids cold cloths are to be applied continuously. The mouth should be frequently cleansed, as in no disease do sordes give more trouble than in smallpox. A warm aromatic alkaline was, like dilute listerine or borolyptol or glycothymoline, are splendid when diluted and warmed. The tongue should be scraped from time to time with a celluloid scraper. Dioxide of hydrogen is good to use in addition to the above; 3 or 4 per cent. strength is best. If salivation causes odor, then permanganate of potassium is better. Small doses of pilocarpin sometimes act most favorably.

The skin needs constant attention, not only in one stage, but from the commencement to the end. During the stage of invasion the congestion of the skin, when there is much fever, is to be relieved by baths and cooling applications; alcohol rubs, followed by powdering. If there is a tendency to itching it is to be oiled with a carbolized oil. Menthol in some cases works splendidly, but be careful not to use it where it will be confined, as it causes considerable irritation. During the vesicular and pustular stages the indications are to prevent the lesions from being ruptured either by scratching or by the patients moving about the bed. Relieve the itching if possible. Prevent rupturing of the lesions by wet applications in the form of dressings, and in later stages, when the scabs form, the use of oil is indicated.

It is a good plan to have the mild cases and

the convalescents in a different ward from the very sick. The convalescent ward is light and comfortable, and is made attractive by papers, books, flowers and games. The very sick are to be in a distant ward where it is quiet and darkened and where they are close to their attendants. In the very sick cases there is at times an acute delirium that makes them very difficult to treat. It cannot be anticipated, so it is wise to have them at all times under close observation.

Pitting.—This is a part of the treatment that has received the care and attention of therapeutists for many years, and to-day we are as far from treating it successfully as we ever were, except in occasional cases. Sydenham once said: "As to guarding against the face being disfigured by scars, I try nothing at all." Osler also says: "The prevention of pitting, so much discussed, is really not in the hands of the physician." In reference to the latter statement I think we are fully justified in concurring, except that there are some cases in which, with the aid of a good and faithful nurse, we can accomplish wonders. My opinion is that if we can prevent infection we can prevent pitting.

Finsen's red light, poultices, scarifications, cauterizing bases, painting each pustule with a thick collodion coating, rubber-tissue masks and many other suggestions have all been tried with great expectations, and have been discarded, leaving disappointment.

In those cases where we approached a condition of a sepsis we had better results than in any others. Here is the secret in my opinion. Keep the face clean, prevent rupture of the vesicles and pustules; macerate with oil or water the scabs and prevent their too early removal, and if you have no ulceration under the little scab it will exfoliate as on the rest of the body and leave no scar.

The best lotion to keep the skin and the face soaked with is: Boric acid, ʒi to ʒi , to which is added ʒii of glycerin. This is kept warm, and cheesecloth folded in many layers is wrung out in it and applied. When cold or dry, repeat until the skin is bleached and macerated, and then plain, sweet or olive oil is applied by means of a close-fitting mask, with only one hole cut in it, diamond-shaped, to permit of breathing and eating through a glass tube. The mask is not removed at all except for observation and then quickly replaced. In one case in which this method was tried persistently the result was very satisfactory. I am sorry I am unable to exhibit this sensitive young lady to you this evening, but it is impossible. Her face was very thickly covered with lesions, and they were situated deep in the skin. To-day it is impossible to tell from the face that she has ever had smallpox, but there are scars on the back of her hands and a few on the body where the treatment was not applied. In another case a solution of equal parts of oil and lime water was

used. This was not quite so successful, but the patient was not as persistent as my first case. Close the points of entry of extraneous germs of infection, and, in my opinion, pitting can be prevented. This, in many discrete cases, can be easily accomplished, but in others it is impossible.

During the drying stage the frequent bathing and oiling certainly has a good effect in hastening desiccation and exfoliation and lessens the tendency to furunculosis. After the scab is exfoliated the skin under the scab is purplish, surrounded in the dark races by a layer of pigment more or less broad in area, giving a very striking appearance. This discoloration disappears in from one to three months. If the scab is picked off too soon a small ulcer forms, with a blood scab over it, and this will delay healing.

After an attack of severe smallpox the patient is emaciated and very weak, and the stomach is easily upset. The greatest care must be used to build up the patient's strength; food commenced carefully and the patient watched as closely as if he were convalescent from typhoid fever. The slightest indiscretion may upset him, and as he is in a very starved condition he is very liable to indulge in articles prohibited or eat too much if not closely watched. Do not let the very sick ward be overcrowded, as it is hard work to give them the observation that is necessary. Do not have one nurse attempt to take care of too many cases. See that the patient and all surroundings are kept clean, and you will be successful both with mild cases and with the severe.

The treatment of the complications is symptomatic. Many of them can be anticipated; for instance, the tendency toward furunculosis. Bathing and internally quinine seem to prevent them. Pneumonia and other lung troubles can be obviated by due and proper care in many cases. The loss of hair in the severe is inevitable, but stimulation of the scalp with ammonia water, in addition to the use of massage, sometimes prevents the total loss. If lost it usually returns in time. Bitter tonics and cod liver oil and other nourishing foods soon repair the broken-down constitution.

The patient having recovered from his attack and his health restored to a certain extent, he being free from all scabs, is ready to receive the care necessary to render him clean enough to return to his friends. On the face and body the scabs dry and are easily brushed or picked off, but on the palms and soles, the lesions being located under the papillary layer, has to be opened by a pin or lancet and the little brown kernel removed. This also has to be done under any of the nails where there might have been a lesion. The patient's clothing and effects are sterilized by steam. All articles that might be damaged by steam are to be fumigated in a box for at least eight hours. The evening before the day of the patient's discharge he is

given a bath of warm water and soap and afterward a bichlorid of mercury soak 1 to 5,000. The head and hairy parts are to be soaked in soap and tied up. The patient goes to bed in a clean bed. Next morning he takes a thorough bath in soap and hot water, and this is followed by another soak of bichlorid a little stronger—1 to 3,000 or 4,000. He is then placed in a room that has not been used, and here he receives his clothing, which he dons, and as soon as dressed is passed out of a door leading directly into the outer air. He is not to be permitted to enter the ward again under any circumstances.

This plan of treatment has been the practice of the New York Department of Health for a number of years and has worked admirably.

WHAT CONSTITUTES EFFICIENT VACCINATION?

BY FRANK S. FIELDER, M.D.,
New York.

THE most efficient vaccination may be defined as that which secures to those vaccinated: (1) the smallest proportion of smallpox cases per thousand individuals; (2) the longest duration of immunity among those who finally take smallpox; (3) the lowest mortality among those who contract the disease; (4) the mildest course of the disease and the least amount of subsequent pitting among those who, having had smallpox, survive it.

In performing vaccination, how many insertions of virus, and what sort of resulting scars are necessary to afford the most complete protection as judged by the above standard?

As regards quality of scar all observers agree that a vaccination which leaves a good scar affords better protection than one which leaves a poor scar. What, then, is a "good scar"?

For several months after vaccination the normal scar is red and is usually depressed. Gradually it loses color, but is pinkish in the center for a year or more. Its final appearance in typical cases is as follows: In color it is whiter than the surrounding skin, the outline is quite regular, the edge sharply defined, and the entire area is slightly depressed, the center is smooth or somewhat striated and is surrounded by a more or less deeply and numerously foveated ring. This ring corresponds to the area of active vesiculation; while the center represents either the original area of scarification, or the cicatrix following the separation of a more or less deep central slough. The shape of the scar depends upon the shape of the original scarification, while its size depends partly upon the size of the scarification and partly upon the activity of the virus.

A poor scar is irregular in outline, with an ill-defined margin, no depression and with little or no foveation. Sometimes the scar is "poor" even when the vaccination has been a well-marked and typical course, but as a rule a good vaccination gives a good scar.

In how many spots should the subject be vaccinated? American physicians are almost universally content to vaccinate in one spot, and, it must be confessed, the majority of them are also satisfied if some sort of a scar is the result. They believe that any vaccination which "takes" after some fashion is protective, and do not trouble themselves much with the question of whether this protection is as thorough and complete as possible. They issue a certificate of successful vaccination, and the parent thinks his child is immune to smallpox for the next seven years. This perfunctoriness on the physician's part teaches parents to wish their children to have as little vaccination as possible, and encourages in them an active opposition to vaccination by multiple insertion.

Is one-spot vaccination sufficient? Unfortunately there is very little recent literature upon this subject in this country, for the reason that one-spot vaccination is well-nigh universal. The older literature, however, contains ample testimony by careful observers as to the relative protective power of vaccination by different methods. These observations are the more valuable because they were made during a period when vaccination was extensively practised both by multiple and by single insertion, and when smallpox was sufficiently prevalent to operate as an excellent test of the relative merits of the different methods.

Let us review some of these observations.

1. With reference to the proportion of smallpox cases per 1,000 individuals, Dr. E. C. Seaton and Dr. Buchanan made observations, during the smallpox epidemic in London in 1863, upon more than 50,000 persons. Some of these had never been vaccinated, but most of them had been vaccinated in various manners and degrees. Their results appear in the accompanying table:

TABLE I.	
1. Having no vaccination scars.....	360
2. Vaccinated.	
(1) Number of scars	
(a) one scar.....	6.80
(b) two scars.....	2.49
(c) three ".....	1.42
(d) four or more scars.....	0.67
(2) Quality of scar or scars	
(a) bad quality.....	7.60
(b) tolerable ".....	2.35
(c) excellent ".....	1.22

From this table it appears that among more than 50,000 persons examined the smallest proportion of smallpox cases per 1,000 was among those who had been vaccinated in four or more spots and among those who presented scars of excellent quality. As regards the smallpox pitting displayed, without quoting actual figures, the observers noted that the well vaccinated were more lightly marked than the poorly vaccinated.

It is to be understood that the columns headed "Number of Scars," in this and in the following tables, refer to scars resulting from primary vaccination, and not the scars of successive vaccinations at different times.

2. With reference to the duration of immu-

nity to smallpox following different methods of vaccination, R. Cory made observations between the years 1884 and 1887. To avoid the possibility of error in diagnosis he considered only those cases which were pitted. Of such cases there were 448. The ages at which these persons developed smallpox are shown in the following table:

TABLE II.

	No. of Cases.	Average Age in Years.
Unvaccinated	210	6.58
Alleged to have been vaccinated—no scar..	105	9.86
Vaccinated		
1 scar	47	17.77
2 scars	31	17.82
3 "	33	18.02
4 "	12	18.67
5 or more scars.....	10	19.03

This table, so far as it goes, seems to show that vaccination by multiple insertion gives slightly longer immunity to smallpox than does the one-spot method; but the number of cases in each class is too small to give much authority to the table.

3. With reference to the mortality rate in cases of smallpox which have followed vaccination by different methods, it is possible to quote figures covering large numbers of cases.

Gayton, in the Report of the Royal Commission on Vaccination, 1889-90, gives the following table upon 7,415 cases of post-vaccinal smallpox:

TABLE III.

No. of Vaccination Scars.	No. of Cases of Smallpox.	Per Cent. of Deaths.
1 scar	2,289	5.4
2 scars	2,464	3.6
3 "	1,424	3.1
4 "	1,238	1.6

This table points strongly toward the conclusion that vaccination by multiple insertion gives better protection than the single-spot method.

J. F. Marson, for more than thirty years the Resident Physician of the London Smallpox Hospital, made very careful observations on the number and quality of the scars in all the cases of post-vaccinal smallpox which came under his care. During the sixteen years from 1836 to 1861, 5,797 cases of smallpox were treated in the hospital. Of these, 2,787, or nearly 50 per cent., showed the scars of previous vaccination. Excluding sixty-three cases of death from smallpox complicated by other diseases in themselves fatal, he compiled the following mortality table:

TABLE IV.

	Per Cent. of Deaths.
1. Never vaccinated	35.5
2. Alleged to have been vaccinated—no scar visible	21.7
3. Vaccinated	
1 scar	
1357 cases } 768 good quality	4.23 } 7.57
} 589 indifferent quality.....	11.95 }
2 scars	
888 cases } 608 good quality	2.68 } 4.13
} 280 indifferent quality.....	7.29 }
3 scars	
274 cases } 187 good quality.....	1.63 } 1.85
} 87 indifferent quality	2.32 }
4 or more scars	
268 cases } 202 good quality	0.99 } 0.74
} 66 indifferent quality	0.00 }

TABLE V.

Average mortality of all post-vaccinal cases.....	6.76
" " " " 1 and 2 scar cases.....	6.21
" " " " 3 and 4 scar cases.....	1.30
" " " " good scar cases.....	3.04
" " " " indifferent scar cases.....	9.77

It will be seen from these tables that both

the largest number of cases of smallpox and the highest rate of mortality were found among those vaccinated in one and two spots.

From the observations, Marson deduced the law that the efficiency of vaccination is in the exact ratio of its excellence and completeness as shown by the number and quality of the resulting scars.

During a second period of sixteen years, from 1852 to 1867, Marson continued his observations, the number of smallpox cases treated being 10,661. The results were as follows:

TABLE VI.

	Per Cent. of Deaths.
1. Never vaccinated	34.9
2. Alleged to have been vaccinated—no scar visible...	39.4
3. Vaccinated—1 scar	13.8
2 scars	7.7
3 scars	3.0
4 or more scars	0.9

The percentages in this table differ somewhat from those in Marson's first table, but they point with equal emphasis to the superior efficiency of vaccination by multiple as compared with single insertion.

W. M. Welch, who for twenty-five years was in charge of the Philadelphia Smallpox Hospital, from a similar study of his cases, confirms Marson's view that the protective degree of vaccination can be measured to a considerable extent by the quality of the scars borne by the vaccinated persons. His experience, however, does not entirely agree with Marson's as to the relative value of multiple as compared with single insertion. The following is Welch's table:

TABLE VII.

	Cases.	Deaths.	Per Cent. of Deaths.
Vaccinated	1,668	909	54.49
Alleged to have been vaccinated—no scar visible	258	150	58.13
Vaccinated during incubation of smallpox			
From 1 to 7 days before appearance of eruption.....	59	25	42.37
Longer than 7 days before appearance of eruption	95	17	17.89
Vaccinated in infancy—one good scar	820	70	8.58
Vaccinated in infancy—one fair scar	451	70	15.52
Vaccinated in infancy—one poor scar	874	256	29.29
Total number showing 1 scar....	2,415	396	16.46
Vaccinated in infancy—two good scars	287	20	6.97
Vaccinated in infancy—two fair scars	114	14	12.28
Vaccinated in infancy—two poor scars	102	24	23.53
Total number showing 2 scars....	503	58	11.53
Vaccinated in infancy—three good scars	122	10	8.19
Vaccinated in infancy—three fair scars	49	4	8.16
Vaccinated in infancy—three poor scars	51	13	25.49
Total number showing 3 scars....	222	27	12.16
Vaccinated in infancy—four or more good scars	251	24	9.56
Vaccinated in infancy—four or more fair scars	81	10	12.34
Vaccinated in infancy—four or more poor scars	97	11	11.34
Total number showing 4 or more scars	429	45	10.49
Summarizing the post-vaccinal cases with reference to the quality of the scars we have			
Vaccinated in infancy—good scars... 1,480	124	8.38	
Vaccinated in infancy—fair scars... 695	98	14.10	
Vaccinated in infancy—poor scars... 1,124	304	27.04	
Total number of post-vaccinal cases	3,299	526	15.90

An examination of this table shows that the protective power of vaccination is in proportion

to the excellence of the resulting scars. As regards number of insertions, the table shows that one good scar protects better than two, three or four fair or poor scars, and practically as well as two, three or four good scars. Welch thereupon concludes that the quality of the scars following vaccination is a far more reliable indication of the degree of protection than the quantity, and that when the scars are typical it makes no difference whether they are single or multiple.

If, however, we compare the total number of cases vaccinated by the different methods, we get from Welch's own table figures which speak for the superiority of vaccination by multiple insertion. Thus:

TABLE IX.

	Cases.	Deaths.	Per Cent. of Deaths.
Total number showing one scar....	2,415	396	18.46
Total number showing two scars....	503	58	11.53
Total number showing three scars....	222	27	12.16
Total number showing four or more scars	429	45	10.49

Taking the extremes of the table we have the mortality of the one-scar cases 18.46 per cent. while that of the four or more scars cases is only 10.49 per cent.

4. As regards the severity of smallpox in patients who have been vaccinated by different methods and with different grades of resulting scars, Marson in his first series of cases found that (a) as to number of scars, of 2,245 patients with 1 and 2 scars, 392 or 17½ per cent. had confluent smallpox; of 542 patients with 3, 4 and more scars, 36 or only 6½ per cent. had confluent smallpox; (b) as to quality of scars, of 1,765 patients with good scars, 196 or 11 per cent. had confluent smallpox; of 1,022 patients with indifferent scars, 232 or 22 per cent. had confluent smallpox.

From all this evidence it seems fair to conclude with Marson, that "test the question in which way soever we will, the result is in favor of producing four vesicles, at least, at vaccination, with lymph which leaves good permanent cicatrices;" and that such vaccination will measure up to the standard with which we set out, in securing to those vaccinated: (1) The smallest proportion of cases of post-vaccinal smallpox; (2) the longest duration of immunity to the disease; (3) the lowest mortality among those who contract it; and (4) the mildest form of the disease and the least amount of subsequent pitting among those who, having had smallpox, survive it.

The writer believes it to be proven beyond doubt that after a variable length of time (usually five years or more) the protection afforded by even the most efficient vaccination is lost; that successful revaccination restores this lost immunity; and that, therefore, revaccination should be as systematically and as conscientiously performed as primary vaccination. But he holds that these patent facts afford no excuse for failing to perform the primary operation in such a way as to secure as complete and as lasting immunity as possible.

THE RELATION OF INTESTINAL TOXEMIA TO ARTERIORENAL DISEASE.*

BY CHARLES E. QUIMBY, M.D.,
New York.

IT is impossible for one to study with any considerable care the symptomatic manifestations of either cardioarterial or renal disease in their chronic forms, without appreciating the futility of any attempt to regard them as separate entities from the clinical standpoints of etical diagnosis and treatment. Their mutual dependence as forms of functional failure upon some underlying pathic condition is so obvious that it should not escape recognition by the most casual observer. But, however well the relations may be understood in a general way, there yet remain some connecting links which are still the subject of controversy and others which have received but scant appreciation.

We consider first the objective character of the so-called pathic processes constituting that complex commonly recognized as arteriorenal disease, and in so doing call special attention to the basis upon which the significance of these processes is to be decided. There is no controversy as to the histology of the conditions which make up either arterial fibrosis or renal degeneration. But pathology too commonly examines irregular activities of the systemic elements as isolated facts, and their results as independent effects of some force that is injurious *per se*. Both action and result thus appearing purposeless it properly brands them "pathic," simply because they are out of the common order. When, however, we define these same activities, not by the reaction which the involved elements manifest to chemical stains, but from the biological standpoint, by their value as force factors which develop the consecutive steps in a harmonious movement of all the systemic forces, directed to the preservation of their own existence, then they are seen to be only the normal methods of self-defense, of which the despised fibrosis and traduced granulating cell are more truly pathetic than pathic results.

To my mind it is absolutely necessary that we assume this attitude, made imperative by all the teachings of evolution and biology, and recognize in so-called pathic processes simply special efforts of the systemic forces to meet a prearranged for, although accidental, demand for specific functional activity, if we are ever to attain any rational comprehension of disease, and, as therapeutists, to become aids instead of hindrances in the conflict which every system is constantly waging for existence.

Under the consequent interpretation of facts every pathic condition becomes the index of either an existing or completed tissue activity objectively favorable to the well-being and life

*Read at the Annual Meeting of the Fourth District Branch Association, held at Buffalo, N. Y., May 31, 1901.

of the entire organism, and however widely the process may depart from the normal it is none the less physiological.

While I well recall the time when I was called quixotic for teaching these principles, the fact that to-day they are unquestionably accepted by all pathologists, as applied to many infectious diseases, does not seem to diminish the sympathetic incredulity which meets their even more obvious application to the autocthonous and functional diseases. Their application to the case in hand and the demonstration of the significance of the involved pathic changes as related processes requires us to show that these processes are: First, the same in essence; second, directed to a common object; third, dependent upon a common cause. There is surely little in common in the macroscopic or microscopic appearances of arterial fibrosis and renal degeneration to indicate their unity. Yet, from the biologic standpoint, they are both degenerations, and are equally indices of overstrained organic function ending in failure. For the fibrosis, although *per se* a productive process, as the substitution of a low-grade tissue for one of higher nutritive requirements, is as directly the result of weakened arterial walls with failing function as is the renal degeneration a result of incompetency of the renal epithelium to maintain a nutrition sufficient to meet the functional demand. It thus represents as distinctly a degenerative stage in the arterial wall as the other does in the kidney. Nor is the significance of the change affected by the fact that in the former a still further degeneration is possible and in the latter not.

Essentially, therefore, these two conditions, as biological results, are seen to be identical and dependent upon the same immediate cause—*i. e.*, failure of nutritive supply to equal functional demand. Their further unity as parts of a complex process will be proved by showing that the excessive functional activities whose failure resulted in these diverse forms of degeneration were dependent upon a common cause and directed to the accomplishment of a common object.

That degeneration of renal epithelium is the direct result of excessive functional activity in the excretion of normal waste products and toxic elements, plus the direct influence of those toxic elements on regenerative metabolism, is too generally accepted to require further proof. But that the arterial weakening which is precedent to fibrosis, and hence the fibrosis itself, are equally the result of overtaxed function, as well as toxic nutrition, is not sufficiently appreciated. I do not, by any means, minimize the toxic factor in its relation to arterial changes, but do insist upon the dominant influence of excessive function in all cases of chronic toxemia, and especially in that large class of cases where the toxemia is simply an excess of the normal waste products. High tension has long been recognized

as a cause of fibrosis, but here lies an error in making an effect the cause. No high tension is possible without either obstruction of capillaries or contraction of arterial lumen. Unless, then, one accepts Haig's most irrational theory of mechanical capillary obstruction, arterial contraction must precede and be the controlling factor of high tension.

Moreover, it is impossible to have those variations of blood supply, made necessary by changes in functional activity, without contraction of the general arterial system and relaxation of those vessels supplying the active organ. If, then, some organ is called upon to maintain more than normal functional activity, or still more, if pressed to its full power persistently, we have physiological conditions acting through physiological channels to produce physiological arterial contraction which becomes pathic, simply by reason of its degree and persistence.

Such is the condition that exists in all cases of chronic toxemia. In the majority of cases the kidney is the organ through which the toxic element is eliminated. It is also the organ in which increase of function makes the greatest demands for vascular tension—*i. e.*, excessive arterial function. Thus the kidneys and the cardiovascular system become coworkers for the common object of relieving the system of toxic influences, and their subsequent degeneration is made to depend on the rational causes of excessive function under toxic nutrition, which leaves no further necessity for the assumed mechanical effect of high tension in compressing and obstructing the vasa vasorum. Whether the patient dies of Bright's, apoplexy, or cardiac failure, the fundamental pathic cause is chronic toxemia, and the immediate cause of death but the sign of the weakest spot in the defensive tissues.

This brings us to a consideration of the nature and source of the toxins which excite these defensive activities that have such pathic results. We have already limited ourselves to the chronic autocthonous toxemias, and of these we shall refer to uric acid, urea and their allies only to accept them as prominent members of this etical class. I cannot refrain, however, from expressing the opinion that Haig's claim, which makes uric acid the sole *causa mali*, is utterly irrational, and not even supported by the facts which he adduces, when these are freed from his ingeniously invented "probabilities." But whatever the toxic element may be, we claim that an explanation of its action upon the basis of well-recognized physiological laws is much more rational than one which requires for its support the purely gratuitous assumption that uric acid in the blood, when left to itself, is transformed into gelatinous masses that mechanically obstruct the capillaries until some accidental change in the acidity of the blood causes them to dissolve.

Clinical experience certainly leads us to believe in many forms of toxemia; but this paper is primarily a plea for the acceptance and etical recognition of a class of toxins whose influence in causing cardiorenal disease, we feel, has been too largely overlooked. They are the ptomains developed by the resident intestinal bacteria in all cases of obstipation, and, in certain individuals without constipation, from the substances found in animal foods.

The claim that ptomain poisoning from the intestine is a common cause of cardiorenal disease is by no means new, but it has not received that consideration which it deserves, for not only is the argument for both its possibility and probability unassailable, but the clinical evidence fully confirms its accuracy.

It is established beyond all question for the acute infections that it is the toxins, not the bacteria, which, by their presence in the blood, excite the general systemic reaction, and, according to their nature and strength, cause increased cell activity, degeneration or necrosis.

It is impossible to assume that bacterial toxins change in character with change in quantity. Variations in their effects depend upon variations in systemic reaction, determined by the degree and duration of the toxemia.

The poisons of the chronic infections must, therefore, have a similar influence on the tissues, and certainly the pathetic results of their action are no less distinct and directly consecutive, although their insidious development renders them less obtrusive.

This influence is most marked in those organs which, first, are the direct recipients of the poison; second, are specially susceptible to its action; third, are concerned in its antagonism, and, fourth, are the channels and agents for its excretion.

The predominance of pathic changes in one or the other of these several sets of organs, as well as their extent and character, will be determined by the virulence and concentration of the poison and the duration of its action. The concentrated toxins of the acute infections show their action most strongly at the point of reception and on susceptible tissues, in acute exudative inflammations and necrotic degenerations, as instance the throat in diphtheria and the liver in typhoid. If the organs of excretion become affected the lesions are of the same acute character. When, however, the poison element is relatively small in quantity, but its production is continued for a long time, then the toxic action is minimized or disappears at the point of reception, while its effects become apparent, possibly in susceptible organs, but especially in the organs concerned in its excretion, where it is manifest by a tendency to degeneration out of proportion to the increase of functional activity. Cases of chronic alcoholism perfectly illustrate the varying grades and combinations of these degenerative processes.

This brings us to the objective point of our argument, the proposition upon which we lay the most stress—that in all chronic toxemias the dominant factor of evil is prolonged functional overstrain of the organs of excretion under the handicap of toxic nutritive supply, and that the results will not vary in essential character, but simply in degree, location and proportion, as controlled by the terms of the personal equation.

The direct clinical deductions are obvious. They are, first, that essentially all the causes of chronic renal and arterial disease make their presence manifest by a persistently increased functional activity of the kidney and circulation for a long time before such increased function, even under toxic influences, results in degeneration, and, second, that this degeneration will, at first, be cellular without exudation; will progress for a time, and may continue for years, without any deficiency of organic function, and hence without the presence of casts or albumin in the urine or of any subjective symptoms.

This demonstration makes plain the fact that albumin and casts, although possibly early symptoms of Bright's disease, are, nevertheless, late symptoms of an underlying toxemia that has been causative not only of the Bright's, but of the coordinate lesions in the heart, arteries and special organs.

The cure of Bright's and cardiovascular disease is thus seen to consist solely in their prevention. To accomplish this it is necessary that we recognize the earliest stages of strained function and the possible sources of the causative toxemia. The limitations of time compel me simply to state without comment the symptoms upon which I rely for a diagnosis.

I believe that a persistent disturbance of the normal ratio between solids and fluids in the urine, whether constant or variable, is the earliest available symptom of toxemia, and that it indicates conditions which, if continued, are certain to develop, more or less rapidly, cardio-renal disease.

The second stage of the disease is invariably shown by the presence in the urine of granular and broken-down renal epithelium in excessive amounts, with, perhaps, after a time, now and then a fine hyaline cast. This condition may last for years before the appearance of albumin and granular or epithelial casts. While I mention but these two symptoms, which I regard as pathognomonic, so far as symptoms can be, it is, of course, understood that they are to find support in all the commonly accepted manifestations of toxemia and increased arterial tension.

In conclusion we offer the following illustrative cases in support of the propositions which this paper is designed to demonstrate: First, that intestinal toxemia is one of the most common, but least appreciated causes of arterio-renal disease; second, that its more common occurrence in patients of abstemious habits and

correct lives, together with the established custom of attributing all chronic renal disease to gout or alcohol, and arterial fibrosis to high tension or syphilis, have caused us to overlook the symptoms of the primary toxemia, and to regard the renal and arterial degeneration as primary processes instead of the final stage in a general disease that is nearing its end.

The first case illustrates what I consider the earliest stage of toxemia, with the toxic effects most manifest in susceptible tissues.

Mr. W., contractor, aged 43 years, a man of abundant means; has lived well and worked mildly; has not been acutely ill since his youth. Complains now of a nervousness which prevents application. Attention to business increases this condition and causes insomnia and attacks of undefined discomfort and anxiety. Has crystallized his sorrows in his own mind under the head of constipation; has movement every day, but is never satisfied. On examination, appearance that of a healthy man; tongue slightly coated; pulse full and hard; second heart sound relatively loud over both aortic and pulmonic valves; in abdomen, liver normal, colon from caput to left flexure filled with solid fecal masses; urine shows only excess of urates, 5 to 8 per cent., of water 15 to 20 per cent., alternating with drops below normal of 10 to 20 per cent. Diagnosis: Intestinal toxemia. Treatment: Lavage of colon every day until free and then twice a week, laxative to be taken three times a day with meals, and a strict vegetarian diet. Result: Relief within a week and cessation of all symptoms within two months. Reduction of waist measure three inches; cessation of all medication at end of six months, with urine about back to normal relations.

The second case shows a higher grade of toxemia, with tendency to acute suppression.

Mr. L., aged 52 years, lawyer, with an oppressive amount of work, involving immense responsibilities. Family history that of the abstemious man's gout; has suffered for years from gastric and intestinal indigestion. First seen in 1897 for slight cold. Examination: High-tension pulse, sharp heart sounds, aortic accentuated, slight aortic bruit; urine not examined. In 1899 another cold, examination following. Urine showed very constantly decrease of solids and increase of water; no albumin, casts or granular matter in marked excess; heart and arteries as before; aortic bruit possibly a little clearer. Patient, however, felt "pulled down" and started on a course of Warburg's tincture and protiodide of mercury, but soon stopped it. Two or three times since 1899, under unusual strain, he gradually became constipated, with disturbed gastric and intestinal digestion, until, suddenly, he would have a chill, followed by a fever, with nearly complete suppression of urine.

The only treatment for these attacks has been a milk and vichy diet and free lavage of the

colon, which is always found filled with most offensive matter. Within a few hours after the bowel is thoroughly cleansed the urine starts up, is heavily laden with urates for a few days and comes back to its usual condition. Meantime the evidences of chronic toxemia have slowly increased. The vascular tension is now distinct at all times, and the urine shows persistently the abnormal ratio between the solids and fluid. There is not much epithelium, however, as yet, except just after the acute attacks. The last of these brought the patient to his senses, and he is now on a vegetable diet—a nutritive stimulant, or alterative, and an intestinal antiseptic. Of course, this case shows nothing in results of treatment, but it does illustrate a class of cases which I consider infective toxemias.

The third case is one of prolonged toxemia, with moderate degenerative results, and the subjective disturbing effects accidental rather than direct.

In October, 1900, Mrs. R. sought relief from persistent roaring sounds in the head and irregular attacks of intense nausea and dizziness. She had recently been under the care of an aurist, who made a diagnosis of Meniere's disease, and pronounced her incurable. Examination shows a thin anemic woman of 58, with pale skin and cold hands. She complains of only the above symptoms, but admits distaste for food, frequent indigestion, exhaustion on slight exertion, and insomnia. She denies the possibility of constipation, because the bowels have moved two or three times a day for years past. Pulse is small and weak, but tense; heart regular, sounds clear and valvular, aortic relatively louder; faint systolic mitral murmur. The colon is easily outlined and filled from caput well across to left with firm fecal masses. Urine averages 50 to 60 ounces in twenty-four hours, sp. gr. 1,008 to 1,014; has epithelial debris and an occasional cast, but no albumin. Diagnosis: Toxemia sure; Meniere's disease doubtful, as there is no deafness or objective sign of trouble about the ear. Treatment: Warburg's tincture twice a day, mild mercurial after meals and daily high enemata of salt water. Result in two days: Bowels free and all noise in the head gone. Patient was then directed to continue same medication with enema every other day, gradually decreasing to once a week, and was put on the full diet of high living with wine at lunch and dinner. Up to date, May, 1901, she has had no further noise in her head, except just before two attacks of the old nausea and dizziness—one in March and one in April. These attacks came with some return of fecal retention. Very recently I have learned of an acute attack suffered many years ago, which, it seems to me, must have been an abscess at the base of the brain that opened itself through the ethmoidal sinuses. Certainly no other explanation satisfies the symptoms,

and my explanation of her present attack is that the thickening and adhesions about some cerebral vessels, resulting from that abscess, cause the general circulatory disturbances of toxemia to become manifest first at that point. Aside from these two attacks the patient has improved greatly in her general condition; she eats heartily, takes her toddy regularly at night, sleeps well and has no noise in the head. The heart has gained in strength, but the urine is not much changed. The patient is now, and has been from the first, taking a four-chloride tablet, which, she insists, has been the cause of her improvement.

The last case seems to be an instance of a purely irritant toxemia, and not only perfectly demonstrates the direct relation of intestinal toxins to arterial strain, but equally reveals by its absence the important influence of toxic depression of tissue nutrition in determining degenerative changes.

Mrs. A. first came to me for advice April 5, 1899, bringing her own diagnosis. She stated that for twenty years she had suffered from what some called diabetes insipidus and others polyuria; that eighteen years ago she was told by a prominent physician that if what he gave her did not cure her her disease would become chronic, in which opinion I mentally concurred. Upon questioning she said that she had to get up five or six times in the night and often passed two quarts of urine in that time and from four to five quarts in twenty-four hours. Later measurements showed about four quarts. Her thirst was tormenting and she could not drink enough to relieve it, but had to hold water in her mouth. She was weak, languid and unable to work. While there had been periods of some duration in these years when her symptoms showed remission, yet at no time had she been free from annoying thirst, nor had the urine ever been less than three quarts. Of course, these statements represent mostly her opinions, yet some measurements had been made from time to time, and so they are probably fairly accurate as representing ratios. The urine was white, phosphatic acid, with sp. gr. of 1,008, and gave no trace of sugar or albumin.

On physical examination I could find nothing abnormal except a fulness along the line of the colon and a strong accentuation of second heart sound over the aortic valve. Upon this I made a diagnosis of intestinal toxemia. Patient was given pill aloes and strychnin comp. three times a day, and was forbidden to eat any sort of animal food, including eggs. On April 24th she reported feeling much better, and both thirst and urine decreased. A teaspoonful of Warburg's tincture twice a day was added, and later the aloes pill was changed to one of the four chlorides. On May 8th thirst had decreased to simply a liking for water; she was up but once or twice in a night and was able to do her own housework. The urine, by measurement,

had once or twice been as low as three pints, and averaged about two quarts. It was little changed in appearance, but the sp. gr. was 1,010—a slight numerical change, but exceedingly significant, considering the great decrease in quantity.

In June the report was essentially the same. After that she was not seen for eight months. She then said that her condition was unchanged until late in the fall, when she had an attack of *grippe* and called in a homeopathic physician, at whose suggestion, to regain her strength, she resumed a meat diet. The urine had increased to three quarts, thirst had returned and strength had decreased. The urine had gone down in sp. gr. to 1,004, and Ralfe's test gave fairly distinct evidences of peptones. This test, unfortunately, was not applied to previous specimens.

The foregoing cases are, of course, only illustrative, but we are all constantly seeing patients suffering from indefinable ailments, a right interpretation of which, I believe, would place them in one or another of the classes represented by these histories and speedily furnish conclusive clinical evidence of the accuracy of the propositions defended in this paper.

THE THERAPEUTIC VALUE OF ALCOHOL AS UNDERSTOOD AT THE BEGINNING OF THE NEW CENTURY.

BY FRANK W. DENNIS, M.D.,
Unionville.

THE subject selected for this paper is the most important one that can be studied by the medical profession, for no drug is more universally prescribed, does more injury or is more thoughtlessly and ignorantly used by physicians than alcohol and the liquors in which it is the essential, active ingredient. No narcotic drug is so extensively used by the highly civilized races of man, and no drug or agent possesses the power to influence the physical, moral, intellectual and religious acts of the individual or to produce more physical degenerates than alcohol. To support these statements competent statisticians place the amount spent in the United States last year for alcoholic beverages at \$1,059,563,925. This amount is nearly twice the amount spent for bread or for iron and steel and five and a half times as much as we spend for public education. It is about equal to the capitalization of the gigantic steel trust that has astounded the world, and is an amount that if conserved for two-thirds of a generation would buy, pay for and furnish free and clear every family in the United States a comfortable home. The people of our country drank last year 1,334,176,033 gallons of alcoholic liquors, equal to 17.68 gallons per capita, equal to 1.58 gallons of alcohol. Dr. Crothers estimates that 10 per cent. of the people use alcoholic liquors. Then one-tenth of the people consume 15.8 gal-

lons a year, equal to 5.5 ounces each day. As is well known, and as we will show further on, alcohol is a powerful narcotic poison. A moment's reflection on the fact that 7,600,000 of our people consume an average of 5.5 ounces of alcohol a day is sufficient excuse for bringing this subject to your attention. One hundred thousand deaths are caused annually in the United States by alcohol, and nearly one-third of the adult population use alcoholic liquors as a beverage. Alcoholic liquors produce not only a distinct, well-defined disease itself, but it is an important factor in the etiology of very many fatal diseases. Fifteen to 60 per cent. of insanities, 60 to 75 per cent. of all crimes and nearly all the paupers of our country are traceable to the use of alcohol. Dr. Crothers estimates that 10 per cent. of the adult population, or 1,900,000 persons, are most of the time incapacitated in this country, entailing an enormous loss of productive energy and an enormous burden of public and private taxation. The cost of crime alone charged up against alcohol amounts to \$600,000,000 per year. The amount of suffering and the number of diseases directly and indirectly caused by alcohol is greater than any other agency or condition. The per capita consumption is on the increase in the majority of countries.

The chief end of the physician and of the medical profession is to prevent and cure disease, relieve suffering, promote health and extend the longevity of the individual and the human race. Indirectly, in accomplishing this, we promote morality, intellectuality and productive capacity, all of which is a valuable service to the State as well as to the family and the individual. Hence, it is within the province of the medical profession to take a stand for or against anything that may arrest or hinder the progress of their work.

The sale of alcoholic liquors and other methods of getting people to use them are so deftly and intricately woven in our political fabric that our greatest statesmen and economists are unable to separate them, and most of our State governments grant the privilege, for a consideration, of selling this alcoholic liquor to their subjects, and for every dollar received for the privilege granted pays out about \$10 to pay the costs of the results of the business. The State of New York alone maintains over 25,000 places where alcoholic liquors are distributed, with practically no restrictions, so long as the State receives its share of the proceeds. Hence it is that the foremost problem before the civilized world at the beginning of the twentieth century to be solved by scientists, statesmen, the clergy and teachers is how to abolish the use of alcoholic liquors. Physicians as scientists must take the lead in pointing the way toward its solution. And the problem is not too hard.

May not the profession which, at the begin-

ning of the century, successfully combated the dread scourge of smallpox, and at the close of the century was equally successful with the great foe of childhood—diphtheria—well turn its best efforts toward abolishing a destroyer greater than both of these? No problem that has to do with the preservation, welfare and longevity of the human race is too great to be solved by the medical profession.

The sum total of our work during the last fifty years has added one-third to the average duration of human life, yet the diseases and disturbing conditions brought about by the free use of alcoholic liquors are increasing, and the rate of mortality from these diseases and conditions is increasing more rapidly than the increase of the population.

Dr. J. J. Ridge, London, says alcoholic beverages have done more harm to the human race in the past century than the accumulated evils of war, pestilence and famine. Physicians should take the initiative in teaching the public the evils arising from the use of alcoholic liquors. Strange to say, however, in many instances, instead of leading public opinion in this matter, they have followed it.

Chemistry of Alcohol.—Alcohol is a transparent, colorless, inflammable, mobile and volatile liquid, having an agreeable odor, a burning taste, and is miscible with water, ether and chloroform.

Where a watery solution of grape sugar—dextrose—or other sugar or starch that can be readily converted into dextrose is exposed to the atmosphere under ordinary temperatures and conditions, the unicellular fungus, the yeast plant, at once begins to grow and reproduce itself. It feeds upon the sugar, appropriating what it needs for its maintenance, and excretes as waste products carbon dioxide (CO_2) and alcohol ($\text{C}_2\text{H}_5\text{OH}$). The observation of this phenomenon gave rise to the term fermentation. Fermentation is a phase of cellular nutrition. The change is a putrefactive one or a retrograde change from a highly organized compound back to simpler forms toward the inorganic world.

Alcohol is, therefore, an excretion—a substance cast off during the growth of the yeast cell. It is highly poisonous, and if left in the solution stops the growth of the yeast plant when it approaches to 20 per cent. of the contents of the solution.

Alcohol may be formed synthetically from the inorganic elements (C H O) as follows: A current of electricity passed between carbon points in an atmosphere of hydrogen yields acetylene (C_2H_2); this is converted by nascent hydrogen into olefiant gas (C_2H_4). By the action of strong sulphuric acid olefiant gas takes on a molecule of water (H_2O) in such combination that the product is alcohol. ($\text{C}_2\text{H}_4\text{H}_2\text{O} = \text{C}_2\text{H}_5\text{O}$). Olefiant gas or heavy carburetted hydrogen, a constituent of coal gas, passed

through strong sulphuric acid, yields alcohol. Thus alcohol is so close to the inorganic world that it is easily produced from the inorganic elements in the chemical laboratory. This fact discredits its use as a food. It bears a close relation to the coal-tar series of antipyretics, both chemically and in their physiological action on the heart and circulation and the central nervous system. It bears a close chemical relation also to the ptomain poisons, and their physiological action on the nervous and circulatory systems is strikingly analogous (Vaughan, Hall and Jauregg).

Its chemical and physiological relation to the following drugs is very close: Chloroform, ether, chloral, iodoform and nitrous ether, all powerful depressants and paralyzants.

The chemical changes that alcohol undergoes when ingested is imperfectly understood. It is generally supposed that it splits up into carbon dioxide and water. We have, however, but little proof of this, and herein lies a wide field for study by physiological chemists. The mischief it does upon the various organs of the body before it undergoes any chemical change is well known, and is being worked out by a number of scientists.

Physiological Effects.—The vapor of alcohol is anesthetic, and if used in sufficient quantities for a long enough time is destructive to animal and vegetable life. The local action of alcohol upon the surface of the body is irritant; if kept from evaporating this action is more pronounced. When taken in the stomach by the mouth there is a feeling of warmth, irritation and dryness of the mouth, fauces and throat. In the stomach it produces irritation, congestion, increased secretion and anesthesia of the terminal nerve filaments. When taken in the stomach repeatedly, it causes acute and chronic inflammation, with perverted secretions. It arrests digestion by directly diminishing the digestive power of the pepsin.

Alcohol is absorbed and readily enters the general circulation. It increases the frequency of the heart beat and usually for a few minutes increases its force. This action is perhaps due partly to its local irritant action on the delicate endocardium and partly to its paralyzing action on the pneumogastric nerve. It has been repeatedly demonstrated by competent observers with instruments of accuracy and precision, that after the first few minutes the force of the heart beat is reduced below the normal, which continues throughout the action of the alcohol. The rapid action continues for a time and then slows down below the normal if a narcotic amount is taken.

It dilates the peripheral blood vessels, and thus widens the blood paths. This action is perhaps brought about by its paralyzing action upon the vasomotor nerve centers. This action promotes heat radiation and thus causes the bodily temperature to be lowered.

It is upon the nervous system that the most pronounced action of alcohol occurs. If taken in lethal amounts its action is first excitant, irritant, then anesthetic and narcotic, producing death by its paralyzing action on the respiratory and cardiac centers.

Its several phenomena of action, as modified from Prof. A. B. Palmer, is somewhat as follows in a healthy adult: First stage, irregular and peculiar excitement, restless movements, flushed face, hasty exclamations, or impetuous loquaciousness; rapid but unsteady mental action, restlessness of expression and conduct. The expression will occasionally be bright, but oftener silly, usually coarse and vulgar. The subject feels stronger, but the muscular strength is actually weakened. He feels mental excitement and exhilaration, but the intelligence is impaired. Second stage, a continuance of the excitement, but with less muscular direction or control; irregular movements, with little persistency or precision; mental confusion, which is increasing. Subject feels strong and often wants to fight. Considerable strength is manifested in some muscles, but others are much weakened. The entire muscular and mental power is much below the normal. The saliva is dried up and the throat is parched. The thirst is intense, and to the subject it seems as if it can only be relieved by more alcoholic liquor. Third, a stage of distinct muscular failure in direction and power, struggles cease or become feeble, and there is great mental confusion. Subject in this stage loses all sense of mental restraint, and his actions are usually filthy and repulsive. His intense thirst causes him to take more alcohol if he can get it. Fourth, a stage in which there is complete failure of the voluntary muscular movements, with entire mental insensibility or unconsciousness. Anesthesia is complete. Subject breathes slowly, stertorously and heavily, similar to profound anesthesia or apoplexy. The circulation goes on feebly and the heart's action is usually slow. There is a great fall of temperature, sometimes as much as 5 or 8 degrees. Subject in this stage is near the boundaries of death; sometimes he passes over, but most generally recovers. The recovery is much slower than after profound narcosis from ether or chloroform.

It dries up the salivary and lacteal secretions; it paralyzes the will power and the higher faculties of the mind and brings out prominently the inferior faculties and animal passions, so that under its influence the human race reverts to a prehuman condition. The physiological effect of alcohol on the human race is always, if continued in sufficient quantities, to produce degeneration, not only of the vital organs of the body, but of the intellectual and moral faculties. It produces irritability of temper, enfeebled will, impaired judgment, sluggish thoughts and defective moral character.

It combines with the hemoglobin in the oxygen carriers of the blood and prevents them from giving up their oxygen readily to the tissues. It arrests protoplasmic activity within the cells. By its power to coagulate albumen, condenses, thickens and clogs the delicate dialyzing cell and tissue membranes, thereby hindering assimilation of food materials and exosmosis of excretory products. Normal metabolism is thus interfered with in such a way as to keep from the cells the food it needs, and in the cells the poisons that it should get rid of.

The continued use of alcohol induces a diseased condition known as alcoholism or disease of inebriety, manifesting itself in lesions of the brain, spinal cord, peripheral nerves, stomach heart, kidneys, liver and many other organs.

Capability for muscular work is lessened where small quantities are used. This is why trainers prohibit its use by the athlete and why its use is forbidden by the British army.

Much discussion has gone on lately concerning the food value of alcohol. That 2 to 2½ ounces of alcohol are used up in the average healthy adult in twenty-four hours is quite likely true. What the chemical change is is not proved; it is easy to jump at the conclusion that it is oxidized, producing heat and force. It is easy to think that alcohol in the tissues or blood takes up oxygen, and is converted into carbon dioxide and water, as it is in the spirit lamp when ignited, but we have failed to find any substantial proof of this.

It seems quite probable that alcohol is a food, because it is not a normal constituent of any of the tissues of the body. It is never found in nature, and nature has provided all necessary foods without the aid of bacterial action. All authorities recognize alcohol as a narcotic poison, and we cannot comprehend how a drug can enjoy the double rôle of a food and a poison. If a food, it certainly is a very uneconomical and dangerous one. The matter that concerns us most is the mischief it is doing in the body before its chemical decomposition.

Alcohol possesses that peculiar power over the human appetite and desire that after once used an appetite or desire for more is developed. It is near to a universal law that any person taking alcohol a number of times will have within them a craving developed for more. Whether this is a physiological or pathological craving we do not know; certain it is that when well established the subject has not the will power to control his indulgence. Kassowitz demonstrates the depressing influence of alcohol on a child's capacity for study. Crothers found in 1,744 inebriates 1,080 had a distinct history of heredity.

In France the death rate of infants has been steadily increasing, until now it is nearly 200 in 1,000. It is attributed to the increased use of alcohol. In England a similar condition exists. Dr. Forel says that history teaches that no race

has ever become immune to the use of alcohol, but that whole tribes have become extinct by its use. An individual may acquire the faculty of taking large quantities without producing its ordinary characteristic effects, but it does produce degeneration of the tissues and diseased conditions. So in a community of individuals large quantities may be consumed, with its resultant degenerations of the mental, moral, intellectual and physical faculties, until destruction of the community undoubtedly would result were it not that no community is so isolated, but that outside non-alcoholic individuals are constantly getting in to give it new life and vigor, they in turn becoming similarly degenerated. The users of alcohol are not limited in their reproductive powers; on the contrary, it promotes thoughtless procreation of bad quality (Dr. Ford).

The basis for correct or successful scientific therapeutics rests upon a correct knowledge of the physiological action of a drug. A drug does not have a destructive action in a healthy individual and a constructive action in an unhealthy one.

The Therapeutics of Alcohol.—There have been questions of different therapeutic uses of alcohol, and they still exist. It will be our aim to point out its usefulness in the sick room in all conditions where all physicians are agreed as to its action.

It is a drug, powerful in its action, and should be prescribed only where clearly indicated, and then with great care. It is a narcotic and protoplasmic poison. We are obliged to reject alcohol as having no food value either in health or disease, for no claim has ever been made for it in this particular that has not been successfully disproved. My own experience proves that it not only possesses no food value, but is detrimental to the nourishment of the body when given with foods. This is in accord with its physiological action.

Its action is cumulative like other poisons. We class it with that list of nerve and muscle poisons that embrace chloroform, ether, sulfonal, chloral hydrate and paraldehyde. It has with them in common a marked effect in lowering the functional activity of the central nervous system. Reflex excitability is also lowered or destroyed. Mental processes are slowed. Locally, it may be used as an irritant if its evaporation is prevented; if promoted, it may be used as a cooling lotion. It hardens the epidermis. It may be used as an astringent gargle.

In stomached pains it may be used because of its anesthetic and paralyzant action upon the terminal nerve filaments. In sudden chill, during the cold stage, it is useful in hot drinks; it promotes perspiration, dilates peripheral blood vessels and causes increase of blood to flow, thus bringing warmth to the skin. This action may also relieve sudden internal congestion. In acute inflammatory conditions no positive

beneficial results are obtained. In chronic nervous diseases any benefit is offset by the dangers of its continued use.

It may be taken as a mild hypnotic in small quantities, but its action here is not constant. Brandy, especially blackberry, has a certain reputation in curing some mild forms of diarrhea.

When taken habitually in small quantities it is quite likely to cause formation of the alcohol habit. These are the only clear indications that we are able to find for its use. The more one studies the therapeutic use of alcohol in connection with its physiological action the narrower its field of use becomes, for in every instance more efficient and less dangerous drugs may be used. In pneumonia, typhoid fever, tuberculosis and other wasting diseases there is a growing tendency among the ablest and most thoughtful physicians to discard its use altogether, for in hospitals, where no alcohol is used as a therapeutic agent, statistics show that better results are obtained in a lower death rate, a shortening of the attack and a healthier condition of the patient when discharged.

In those cases where alcohol was formerly and is still used by some physicians we would point out the reasons for its discontinuance.

In *infectious fevers*, because it adds a protoplasmic poison to the already poisoned tissues.

In *failing hearts' action*, because it is a muscle paralyzant.

In *faulty nutrition*, because it hinders digestion, absorption and assimilation and retards normal metabolism.

In *hemorrhage*, because it widens the blood paths and thus causes an increased flow of blood in the periphery.

In *respiratory diseases*, because it obstructs the elimination of carbon dioxide and the absorption of oxygen.

In *surgical diseases*, because it interferes with tissue repair.

In *shock*, because, it being a depressant and paralyzant, you would add to the very conditions you are trying to combat.

In *ether or chloroform narcosis*, because, alcohol being an anesthetic, you add more anesthesia.

In *nursing mothers*, because it dries up the lacteal secretions.

In *diabetes*, for it irritates the already overactive liver and kidneys.

In *apoplexy*, because it dilates the blood vessels of the brain and thus favors more hemorrhage.

Closely related to the therapeutics of alcohol we find some facts that may be of interest.

Dr. N. S. Davis treats thousands of cases of pneumonia without alcohol. His rate of mortality is one-half the average mortality in this disease. Dr. Seufert treats forty-three consecutive cases of typhoid fever without a drop of alcohol. All got well.

Statistics of hospitals where no alcohol is

used, either as a therapeutic agent or otherwise, when compared with those hospitals where they are freely used, show invariably a lower rate of mortality and a shortening of the period of the disease.

It is universally admitted that alcoholic users are bad patients, especially marked in pneumonia and surgical operations. Dr. Roger, professor in faculty of medicine of Paris, says: "There is striking parallelism between increase of insanity, suicides and crime and alcohol consumption."

It is always necessary in making examination of a case to find out if subject uses alcohol. If so, cause is quite likely found. Why do insurance companies, examinations for the civil service and other institutions where the health of the individual is of importance, ask: "Do you use intoxicating liquors?"

Dr. Laiknau, Finland, made between 500 and 600 experiments on animals and demonstrated to the satisfaction of Professor Fränkel that, when given alcohol, even in small doses, animals become more susceptible to infectious diseases, and that alcohol was not only useless in the treatment of these diseases, but it was deleterious. His experiments proved also that pregnant animals and their offspring are markedly affected and devitalized by the continued use of even small quantities of alcohol. Dehio carried out a series of experiments on influence of acute alcohol poisoning on nerve cells, and found that it produced pathological changes not only in the cortical brain cells, but also in the multipolar cells of the spinal cord. Dr. Clouston points out that alcohol is the leading cause of mental diseases, and says it is responsible for from 20 to 25 per cent. of cases.

Dr. Affleck believes that the evidence of the post-mortem rooms would bear him out that the effect of habitual small doses of alcohol was very often disastrous. He also points out the fact that medical men are invited and very often coerced in ordering it. Dr. James Richie points out that the work of one insurance company for sixteen years found that among abstainers there were 23 per cent. fewer expectant deaths than in the general class. Another company found death rate $1\frac{1}{2}$ per cent. below expected rate on the general side, while on total abstainers' side it was 26 per cent. below.

This appears to be the experience of all insurance companies, either in this country or Europe, and insurance companies who adhere only to cold business facts will insure a total abstainer in the total abstainers' class for about two-thirds of the rate of the general class.

Mr. James Whyte Actury, Manchester, Eng., sums up British alcohol statistics thus: "We are warranted in concluding that total abstainers at 20 years of age have an expectation of life of at least ten years more than that of alcohol users."

The Jews as a race are comparatively free

from alcoholism and syphilis, and their death rate is absolutely lower than that of the people among whom they live.

In societies insuring against sickness it is found that in a society not abstainers the sick rate is three and one-half times that in another society of total abstainers living in the same locality. A society not total abstainers showed a death rate of $7\frac{1}{2}$ per 1,000, while a total abstainers' society showed a death rate of only 5 per 1,000.

It has been demonstrated that the amount of alcohol in the blood of the fetus and in the mother's milk is equal to that in the mother's blood and that nursing mothers who take alcoholic beverages cause derangements of the nervous system as well as the development of the alcoholic appetite in their offspring.

We would point out the fact, as has already been shown, that users of alcoholic liquors are more prone to contract contagious and infectious diseases, which liability is augmented by their associations and environments. The alcoholic user is incapacitated much of his time for work and his associations are, and his moral condition becomes, such as to lead him to the commission of crime or a misdemeanor, entailing additional suffering and expense to the State. The public drinking place is the schoolhouse of crime and the rendezvous of the criminal. For these reasons physicians should ever be on their guard against making alcoholic appetites, and should never prescribe alcohol unless they are prepared to take their full measure of responsibility for the harm it may do.

The tendency of the profession is to use fewer drugs of a concentrated or alkaloidal nature, and only to meet well-defined indications, based on their physiological action. This being so, drugs of doubtful utility or dangerous are being dropped. Only tradition, prejudice and lack of knowledge of its effects keeps alcohol in common use.

Physicians are looked up to as authority and guides on all matters pertaining to foods, drinks and drug using, and have an opportunity of making, unmaking or promoting alcoholic appetites.

Alcohol a Factor in Causing Disease.—Children born of alcoholic parentage stand a good chance of being defective.

Bourneville found in 1,000 idiots examined 62 per cent. were of alcoholic parentage. Marro noted alcoholic parentage in 46 per cent. of criminals. In Swiss juvenile prisons 45 per cent. of criminals had alcoholic parentage. Children of alcoholic parentage have an unequal chance for life, as more than 50 per cent. die under 2 years of age. Dr. Dana says the lifetime of a drunkard is not more than fifteen years. Dr. Biggs calls attention to the fact that mortality from diseases of the heart, blood vessels and kidneys, organs readily diseased by alcoholic liquors, has increased 150 per cent.,

while population has increased only 50 per cent.

Dr. Brouaidel, the greatest sanitary authority of France, says that "alcoholism, in fact, was the most potent factor in propagating tuberculosis."

In one of New York City's largest hospitals one-fourth of all cases last year went through the alcoholic wards.

One department of the State government calls attention to the alarming increase in insanity (22,000 dependent insane in the State; alcohol produces 10 to 60 per cent.), while another to the increasing number of imprisonments for drunkenness (over 32,000 last year). If alcoholism is a disease, and highest authorities say it is, why imprison for a disease?

The first stage of alcoholic intoxication is usually accompanied by sexual excitement. Many places where alcoholic liquors are sold are supplied with dissolute men and women who are constantly enticing the young of both sexes to join their ranks. The disposition and opportunity makes illicit intercourse common, with chance of bringing into the world numbers of defective and dependent children. Abundant evidence is at hand to show that a large percentage of venereal diseases are thus contracted. In 219 cases of venereal disease Dr. Forel found more than three-fourths were under the influence of alcohol when infection occurred. Alcoholic liquors is the cause, as all will acknowledge, of most social misery, and this condition, we all know, is favorable for the propagation of many diseases, especially venereal diseases and tuberculosis.

The following diseases are caused directly by the use of alcohol: Chronic endocarditis, aortic and mitral incompetency, chronic myocarditis, fatty degeneration of heart, palpitation, tachycardia, bradycardia, arithmia, arterial sclerosis, acute and chronic gastritis, catarrhal jaundice, fatty degeneration of liver, cirrhosis of liver, acute and chronic pancreatitis, acute and chronic nephritis, multiple neuritis, general paresis, acute delirium, delirium tremens, insanity alcoholism or disease of inebriety, polyneuritis and epilepsy—594 cases of epilepsy examined by Fere, 258 had parents who were hard drinkers; 572 cases of epilepsy examined by Echeverria, 257 were traced to abuse of alcohol.

The list of diseases in which alcohol is an important predisposing cause is a long one which we omit for lack of time.

Summary.—It becomes the duty of the physician to help stay the adverse tendencies that are sapping our physical vigor, undermining our mental strength and debasing our moral natures.

A man or woman stands an unequal chance in the race of life if addicted to the use of alcohol. They are deprived of entering the employ of many institutions, as railroads, corporations, banking establishments and others where

honor, judgment and responsibility are required. Even the civil service debars a man who drinks alcoholic liquors.

It is gratifying to find that in medical associations, meetings, societies, conferences and in international congresses leading physicians and scientists are studying the effects of alcohol on the individual and the race in the light of modern research with instruments of delicacy and precision, never known when many of our text books were written, and are discussing it as freely and fearlessly as they would enter upon the investigation of a fatal epidemic.

Some national governments, notably Mexico and France, are alarmed at the increase of poverty, crime and disease due to alcohol, and have already taken steps to stay the progress of its devastating blight.

In the Philippines the evil has borne its fruit. Alcoholic liquors for distribution among the natives have established a firm foothold in these our new possessions. The inhabitants are adopting our vices, adding them to those possessed from time immemorial and producing the physical and moral impoverishment of a race already of itself weak and miserable. In this hot climate it promotes almost every disease known there.

The profession has not been and is not awake to the awful dangers accompanying the use of alcohol as beverages, and this is the less excusable, because no one knows better than the physician the appalling results to humanity—physical, mental and moral—of alcoholic indulgence.

In the last annual report of the State Board of Health we observe that the number of deaths for the year was 121,000. Deaths due to diseases in which alcohol is often the direct cause, and to diseases in which it is a frequent cause or etiological factor, was 93,000. Deaths due to diseases in which alcohol is not a causative factor was 28,000.

Health reports never give alcohol as the direct or contributory cause of a death; in this correct information is suppressed. Health reports should inform the public the true cause of death. If from alcohol, direct or indirect, they should say so, the same as if the cause were due to typhoid or tubercular poison. The public should have a correct knowledge of the ravages of alcohol poison, and nothing concerning its destructive nature should be concealed from the public eye.

The State should prohibit the importation, manufacture and sale of alcoholic liquors to be used as a beverage, and should collect all data concerning its evil effects upon its people and diffuse this knowledge as it does knowledge of poisons that affect cattle or fruit trees. Surely the life of its people should be of as much value as that of its stock or its trees.

As the State government is largely responsible for its alcoholics it should establish sana-

taria for the treatment of alcoholics at public expense, and should compel every alcoholic to take the treatment until cured or dead. They should be removed from society as soon as their disease is recognized, the same as a smallpox case or a leper would be. Proprietary institutions bordering on quackery and charlatany have sprung up in large numbers within the last few years for the cure of inebriety. There has been a public demand for these, and the profession has disgraced itself by not recognizing the necessity for these institutions and establishing them on a professional basis. Of course, we recognize the fact that there are a few scientific institutions of this kind.

Dr. Robert Koch says in combating a pestilence we should strike at the root of the evil; that would be a sensible thing to do, and in combating the greatest evil of modern civilization and in suppressing the use of the most dangerous drug that is debasing and killing off our people, Dr. Koch's idea should be the watchword of every physician, and it is the highest duty of the State to strike at the root of the evil and make laws that will save its people.

THE USE AND ABUSE OF THE OBSTETRICAL FORCEPS.¹

BY EDWARD A. AYERS, M.D.,
New York.

THREE major points are involved in the use of the obstetrical forceps: To know when, and how, to apply them, and to possess the manual skill to use them. They are more often applied too soon than too late. As to the relative evils of these respective errors, the premature application is more likely to provoke cervical and perineal lacerations, over-compression and skin bruising of the fetal head. Delayed application has a larger per cent. of maternal and fetal deaths, and also of infection.

Some degree of cephalo-pelvic disproportion exists in 13 per cent. of cases. Maternal expulsive forces and head molding overcome the obstruction in a major number of such cases, although subnormal expulsive capacity necessitates using the forceps in quite a number. Of the cases of disproportion from 5 to 10 per cent. are undeliverable with the forceps. About one case in every twenty to twenty-five is benefited by proper use of forceps.

Every pregnant uterus in labor has a definite amount of contractile force, or expulsive power, which can be applied in dilating the cervix, in molding the fetal head, in dilating the vagina, in compressing the soft parts lying between the vagina and pelvic walls—no small obstruc-

¹Read before the New York County Medical Association, February 17, 1902.

tion in very fat patients—in dilating and extending the perineal tissues and in expelling the fetal head and body.

Complete utilization of this contractile power is required in but a small per cent. of labors, but when this is once exhausted it cannot be regained within a reasonable time for the completion of delivery. The uterus is in a state of paresis—it is suggestive of an electric battery whose fluid has lost its strength. It is capable of making short and weak contractions, as is the battery of giving a few mild sparks. Spurring it to renewed effort is a cruel folly. From the time when this exhausted state is reached the anatomical changes which ensue obstruct rather than assist delivery.

The cervix begins to swell instead of dilate, the helpful mucus ceases to flow and the outlet grows thick with venous congestion.

The imminence of contractile exhaustion should invariably be accompanied by the application of the forceps, if the case is one of normal presentation and presumably subject to delivery with their assistance. But no patient should ever be intentionally allowed to reach such a stage before having the forceps applied. The evils of edema, laceration and infection are more surely avoided by earlier application.

It is easier to draw the fetal head through the undilated and unsoftened cervix without laceration than when it has become soft but edematous.

We hear much of "cicatricial cervix" as a cause of delay and an indicator of the need of forceps assistance. If by this term is meant an abnormal proportion of connective tissue in uninjured or primiparous cervices, it is, in our opinion, largely a misnomer and misinterpretation. Imperfect development more correctly defines it, and this stunted condition is usually applicable to the entire uterus. Hence, delayed dilatation in such cases is usually due to inefficient uterine contractions. It is a wise rule in supposed cases of cicatricial cervix delay to quiet the patient, if necessary, with a sedative, for there is usually little expulsive force being expended, or reason for haste. Too early application of the forceps in such cases usually results in familiarity with the ways of that obstetrical camp follower—the gynecologist. Traumatic cicatrices from healed lacerations, cancer and atresia can be easily recognized. I have never found it necessary to employ Dürsen's method of multiply cutting of the cervix, and confess to a strong dislike to it.

The most frequent obstetrical demand for the forceps is in cases requiring more or less molding of the fetal head.

To properly estimate the indications one should be able to make an accurate diagnosis of the presentation and position of the fetal head, both to know that it is normal and to apply the blades correctly; to estimate with reasonable accuracy the relative size of the head

to the pelvic caliber; to judge the amount of uterine power that has been and can be applied in expulsive effort; to what extent the cervix obstructs descent, as compared with cephalopelvic disproportion; to determine the degree of molding that has been accomplished, and to conclude from this and the dynamic condition of the patient, together with the amount of molding yet needed, that the time has arrived for forceps application.

Let us cite a typical case with which to indicate the need of forceps. The patient is a healthy woman of 25 years, of average weight—128 pounds—of average height—5 feet 4 inches—with external pelvic measurements of normal dimensions; with a diagonal conjugate sufficiently long to make it difficult to reach the promontory with the second finger in the vagina, and with the occiput of the child presenting in the left transverse. Pains began eight hours ago, becoming rhythmic and strong three hours ago. Palpating the bladder we find it prominent and empty it with a soft rubber catheter. Standing with our left side by the patient's right, or vice versa, we palpate the fetal head by pressing the fingers of both hands gently into the groins.

During pains it is immovable in the pelvic inlet; between pains it can be moved, but only slightly. With fingers in the vagina we find the rectum empty, the cervix flattened out, soft and open to the size of a silver half-dollar. During a pain it is fairly, but not fully pressed against by the head, although the pain is a strong one, which indicates that opposition lies at the pelvic brim.

Stretching the cervix with two fingers, it measures $2\frac{1}{2}$ to 3 inches; is soft and elastic uniformly. It says to the novice: "You can dilate me fully in five minutes." It says to one who has tried it often—nothing, for it sees that he knows better. The fruit sac, as Barnes calls the amnion, is intact, but not interfering with engagement or descent of the head. The amnion is not responsible for delay when the head is firmly against the brim and the uterine muscle is not overstretched by excessive amount of fluid. The crown of the occiput lies about $1\frac{1}{4}$ inches below the level of the brim. The scalp is slightly wrinkled, but not edematous. Pressing the sutural margins of the parietal bones we find them lying close together, with less wing motion, or elasticity, than when the head is in equilibrium, and with some overlapping of their borders. The fontanelles are smaller than normal and the intracranial tension is increased. Upward pressure on the head as a whole gives very little motion, with a general sense of "fixation." Contrapressure with the other hand's fingers on the head above the pubes informs us that the head is partially engaged, and that it can be pressed slightly lower into the pelvic basin, but that it cannot be made to sink further under reasonable pressure.

Returning to abdominal palpation we note that the abdominal muscles are strong, the wall not fat; that the uterine muscle is firm, tonic and normally thick; that it is not overstretched by excess of amniotic fluid, and can, therefore, apply its full force in contraction. We estimate that the fetus is of normal weight—7 to 7½ pounds—and that the head is neither hydrocephalic nor encephalocelic. We pass over here Perret's method of measuring the head diameters as impracticable. The patient's constitutional and moral conditions are satisfactory. Nevertheless, she complains greatly, and we note little or no advance in descent of the head.

It would be a mistake to apply the forceps now. The biparietal diameter is larger than the conjugata vera, and the cervix occupies some space. The head is entering the brim, but molding is necessary. The cervix is behind in dilatation, only because the head cannot descend against it. Extreme molding may reduce the head diameters one-half inch, which half inch covers a multitude of sins in obstetrical mensuration. Such extreme molding is seldom required and still more seldom achievable by the patient. The obstetrical moment for forceps application is when sufficient molding is accomplished to render descent under traction comparatively easy. The surest sign of this is a well-formed caput succedaneum.

The patient's moment is considerably earlier, and just in proportion to the operator's skill and gentleness of effort at the beginning can the doctor apply the forceps in advance of the obstetrical moment and relieve his patient of moral, mental and physical suffering without harm. Weakening and slowing of labor pains are an almost unexceptional indication for forceps application. So is a rise of the fetal pulse above 150, or its fall below 120.

There are a thousand and one variations to this sample case which involve the question of forceps application—cases of expulsive incapacity, of eclampsia, partial placenta previa, premature separation of the placenta at the normal site, of malpositions, of tumors, of maternal heart, lung and other diseases, which cannot be considered in a short paper; but in the majority of such cases, usually those of urgency, the cervix is not sufficiently dilated, and first efforts with the forceps should be, not to bring down the head, but to gently secure its passage through the cervix.

The most important part of our topic is: To know how and to possess the skill with which to apply and use the forceps.

Generally speaking, the proper use of the forceps combines blind mechanism and adaptable art. The ideal use of the forceps requires that we shall make traction in the axis of the inlet; that we shall secure proper head application; that we shall make only sufficient compression of the head to avoid slipping of the blades; that during traction we shall constantly note the

amount of compression required; that we shall have a finger in contact with the cervix to note its tension and to prevent laceration; that we shall, knowing that the forceps interfere with normal mechanism in rotation of the occiput forward, so apply the blades that traction will enforce rotation forward; that at all times during tractions we shall be able to stop instantly, should the head pass an obstruction suddenly; that tractions should not last longer at a time than labor pains; that the blade pressure on the head should be instantly removed at the end of a traction, and that we should avoid mashing the perineum with the shafts while directing our attention to the head above.

No one style of forceps meets all these requirements. That the classic blades of Elliott, Simpson, Hodge and others would be preferable to the Tarnier forms on account of their comparative simplicity, if they could be brought to meet these demands, none will deny. Suppose we suggest the following method of using the classic form as the most artistic and scientific, and consider what is wanting that the traction-rod form can render: First, in applying the blades endeavor to grasp the head so that one blade lies against the posterior parietal eminence and the other against the anterior malar bone. This will insure anterior rotation of the occiput and not injure the maternal pelvis. It necessitates absolute knowledge of the position of the occiput, as a mistake would compel the very movement we wish to avoid—posterior rotation.

Such diagnosis can be obtained by slipping the fingers into the cervix enough to recognize an ear or other compass mark. Second, in taking hold of the handles we do not use both hands, nor grasp the outer ends, but place the left hand under the handles just back of the shafts, taking hold with the first and second fingers in front of the first notch, making all traction with these two fingers only and using the thumb and remaining fingers solely to artistically adjust compression. The wheel in the end of the blade which limits compression should be thrown away. Third, we place the right-hand palm upon the upper end of the shafts, so that downward pressure on the fenestrated ends can be applied, whereby the axis of traction can be brought very nearly parallel with the axis of the inlet, and the shafts will press more lightly on the perineum. Fourth, we keep the tip of the second finger of the right hand against the head, that we may apply compression with the left hand just as needed, noting at the same time with the right finger the degree of tension of the cervix which passes over the back of the finger. Fifth, instead of having the patient's limbs flexed on to the abdomen, which shortens the conjugata vera and puts not only tension on the posterior commissure of the vulva by dragging the buttock skin away, but draws the commissure nearer the

pubes and in the way of the forceps, place the limbs in extension, though not necessarily in the extreme of Walcher's posture.

The two points claimed in favor of the traction-rod forceps are: That they enable us to pull the head along the axis of the inlet, making less pressure on the perineum at the same time, and that they automatically permit rotation of the occiput. Although the older "classic" blades can readily be made to secure as much as 90 per cent. of axis traction that can be obtained by the traction-rod forceps, yet in cases of unengaged head of the most difficult class for forceps delivery we need that 10 per cent., and I favor the Tarnier blade. The second point, that they permit rotation of the occiput, is of no real value to me, inasmuch as the older blades not only avoid dependence upon automatic action, but absolutely control rotation. The chief objections to the Tarnier forceps lie in their clumsiness, to their interference with the individuality and skill of the operator, to the necessity of binding them for the time being to the fetal head and favoring overcompression, to the loss of time in loosening them between tractions and to the innate difficulty of applying them to the fetal head rather than to the pelvis. Further, during tractions, we do not have so constant a knowledge of the strain we are putting upon the cervix. In difficult cases we remove the older blades altogether at intervals, to help restore equilibrium in the circulation in the fetal head and in the maternal parts and to vary the points of application to the head; the traction-rod form involves too much manipulation to favor this plan. Are we far from right when we say that something of the same choice for the classic blades affects the obstetrical artist that the musician feels for the freedom of the open keyboard in preference to the automatic Pianola?

Mediocrity seeks the assistance of mechanism, and while the highest attainments in commercial productions are obtained by machinery, in surgery art must ever outrank mechanism. No two surgical operations are ever identical, and mechanism knows naught but blind and exact repetition. The obstetric artist would get better results with Chamberlain's primitive blades than the novice with the finest Tarnier traction-rod forceps; but the obstetric artist will at times get the best results only with the Tarnier traction-rod forceps.

There have been a number of appliances brought forward which aim to make traction-rod forceps out of the old classic blades—rods which hook into the fenestra, tapes which are passed through the same, Reynolds', Pouillet's and others' inventions. If I were without a properly constructed Tarnier forceps, I would much prefer to use the classic blades without any compromise appliances. The loose rods are dangerous, as they are liable to slip and tear the soft parts between the fenestra and the

vulva. The Fry forceps, which are applied to the head parallel to the promontory and pubes, and aimed to compress the head between these points, promised well theoretically, but have not given satisfaction clinically.

My own choice of forceps as the one most generally applicable is the long pattern of Elliott. First, because they are long enough to have the joint and place of taking hold just outside the posterior commissure in high applications; second, because they are comparatively straight and also narrow, thereby permitting more latitude in rotary manipulation and application to the head, and third, because the shafts overlie one another, their narrow width over the perineum permitting one to hold the handles somewhat lower than in such blades as Simpson's. But they should always be used in the way described above, which avoids overcompression, otherwise they are quite liable to wound the scalp.

A very useful forceps is the short Hale, which finds a special place in those cases in which the energies of the patient give out when the head has been forced to the floor of the pelvis, leaving the mother to lie in great pain for several hours unless assisted.

A little chloroform and a few minutes' gentle traction will bring the head into the vulva and under control for delivery.

The speed of delivery must be carefully regulated to the needs of the perineum. Nearly all of our text books give illustrations of delivery of the head with the forceps attached. Unless the outlet soft parts are unusually large the forceps should always be removed as soon as the two hands can control the head and draw it out. May I add here further that the limbs should be extended during delivery of the head? It is a simple demonstration to show that flexed thighs increase the tension on the outer portion of the perineum during passage of the head.

In summary: Use the "classic" blades whenever they will accomplish delivery without fetal injury. Select the time of application nearest the obstetrical moment—completion of cervical dilatation and head molding—permissible by the character of the patient's expulsive powers. Apply the blades to compel anterior rotation of the occiput. Make the first aim in tractions delivery of the head through the cervix, rather than its descent into the pelvic brim. Remember that tractions are similar to convulsions in their effect on the fetus, which, prolonged, provoke asphyxiation.

Keep the shafts off the perineum during the tractions high up. Remove and reapply the blades at studied intervals in prolonged and difficult cases. Extend the limbs when the head reaches the vulva.

Remove the blades when the hands control the head. Keep constant watch of the fetal pulse.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. No 5.

MAY, 1902.

\$1.00 PER ANNUM.

THE DUTY OF THE HOUR.

The reorganization of the American Medical Association, which was accomplished at St. Paul last year, is destined to inaugurate a new epoch in the history of the Association. Every effort is being made to make the organization as complete as possible, with such intimate relations between component parts that it can be utilized as a machine for great power in the interests of the public and the profession. Among these details a most important feature has been the close scrutiny and correction of the list of its members. The importance of this was set forth clearly and ably in a recent circular issued by the president, Dr. Wyeth. Not only is it imperative to have an accurate and full list of the physicians in affiliation with the Association, but it is important that every member of the profession within the borders of the United States should become a member. This is said not so much from the viewpoint of the organization itself as that of the individual physician. It is a high privilege to be a member of this organization, and in that capacity participate in the progressive efforts that are being made to advance the interest of the individual members of the profession and the standard of scientific and ethical requirements. Especially does this fact appeal to the profession of New York State at the present time. The American Medical Association comes as a guest of the profession of the State of New York to hold its fifty-fifth anniversary meeting at Saratoga this year. It should be the ambition of every member of the profession in the State to contribute his name and influence to the generous hospitality that the New York State Medical Association will extend to the national organization. That the members of the profession are responding to this sense of duty is apparent from the number of men who are now becoming members. The only method by which one can become a member is to join the local County or District Branch Association. To facilitate this process the Committee of Arrangements of the A. M. A. appointed a local Committee on New

Members, consisting of Dr. Arthur G. Bennet, of Buffalo; Dr. Maynard G. Burgess, of Herkimer; Dr. Franklin J. Kaufmann, of Syracuse; Dr. T. Floyd Woodworth, of Kinderhook, and Dr. Frederick Holme Wiggin, chairman. Through their efforts the following new members have been received:

FROM MARCH 13TH TO APRIL 21ST.

- Dr. Oswald Joerg, 12 Schermerhorn street, Brooklyn, N. Y.
- Dr. Homer E. Fraser, 18 South Portland avenue, Brooklyn, N. Y.
- Dr. F. A. Jewett, 282 Hancock street, Brooklyn, N. Y.
- Dr. William A. Downs, 47 West 44th street, New York City.
- Dr. Charles B. Gay, 236 West Genesee street, Syracuse, N. Y.
- Dr. Frederick A. Baldwin, 129 West 77th street, New York City.
- Dr. Edward Broquet, 268 Willis avenue, New York City.
- Dr. Samuel Alexander, 5 West 58th street, New York City.
- Dr. Pierson C. Curtis, Round Lake, N. Y.
- Dr. Daniel Franklin Curtis, 494 S avenue, Rochester, N. Y.
- Dr. L. A. W. Alleman, 64 Montague street, Brooklyn, N. Y.
- Dr. A. J. Colton, 25 East Ferry street, Buffalo, N. Y.
- Dr. Eberhard W. Dittrich, 303 East 23d street, New York City.
- Dr. Horace L. Hulett, Allentown, N. Y.
- Dr. George A. Leitner, Piermont, N. Y.
- Dr. William Henry Lockett, 112 West 119th street, New York City.
- Dr. Edward J. Hogan, 308 Madison avenue, New York City.
- Dr. Charles Stanton James, 316 East 18th street, New York City.
- Dr. Otto Maier, 316 East 18th street, New York City.
- Dr. Frederick Huhn, 35 Hone street, Kingston, N. Y.
- Dr. William A. Hulse, Bay Shore, N. Y.

Dr. Henry Moeller, 341 West 57th street, New York City.

Dr. Henry D. Nicoll, 51 East 57th street, New York City.

Dr. John Aspell, 105 Madison avenue, New York City.

Dr. Philip M. Neary, 17 Tompkins street, Cortland, N. Y.

Dr. Francis Michael O'Gorman, 1298 Jefferson street, Buffalo, N. Y.

Dr. Earl P. Lothrop, 153 Delaware avenue, Buffalo, N. Y.

Dr. Martin Cavana, 70 Madison street, Oneida, N. Y.

Dr. Sylvester Emory Strong, 88 Circular street, Saratoga Springs, N. Y.

Dr. Mary T. Greene, Castile, Wyoming County, N. Y.

Dr. David F. Lucas, 552 Pacific street, Brooklyn, N. Y.

Dr. Jesse Williams Hedden, 149 East 21st street, New York City.

Dr. Clayton E. Shaw, 16 Main street, Hoosick Falls, N. Y.

Dr. A. Warner Shepard, 126 Willoughby street, Brooklyn, N. Y.

Dr. Charles L. Fletcher, Wings Station, N. Y.

Dr. Thomas Darlington, Kingsbridge avenue, Kingsbridge, N. Y.

Dr. George H. Fish, 483 Broadway, Saratoga Springs, N. Y. (old subscriber).

Dr. Malcolm M. Wickware, 90 Circular street, Saratoga Springs, N. Y.

Dr. H. S. Strauss, 111 West 119th street, New York City.

Dr. W. E. Sullivan, Brooklyn.

Dr. Jacob Teschner, 134 East 61st street, New York City.

Dr. S. Hendrickson, Brooklyn.

Dr. H. N. Hoople, Brooklyn.

Dr. W. J. Cruikshank, Brooklyn.

Dr. E. F. Pearce, Brooklyn.

Dr. P. J. Prendergast, Brooklyn.

Dr. J. J. Keyes, Brooklyn.

Dr. T. J. Cleland, New Lebanon.

Dr. A. W. Fairbank, Chazy.

Dr. W. S. Renner, Buffalo.

Dr. E. M. Merrins, New York City.

Dr. W. Van V. Hayes, New York City.

Dr. S. Cohn, New York City.

Dr. R. Abrahams, New York City.

FROM APRIL 21ST TO APRIL 23D.

Dr. Henry R. Purdy, 149 Lexington avenue, New York City.

Dr. Joshua J. Sweet, 11 Bridge street, Unadilla, N. Y.

Dr. Henry Mitchell Smith, 64 Montague street, Brooklyn, N. Y.

Dr. Von Beverhout Thompson, 111 West 43d street, New York City.

Dr. William Lawrence Hogeboom, 2179 Fifth avenue, Troy, N. Y.

Dr. Benjamin Herchey Grove, 334 Pearl street, Buffalo, N. Y.

Dr. Fletcher A. Smith, 20 Maple street, Corinth, N. Y.

Dr. George L. Mayer, Stone Arabia, N. Y.

Dr. Frederic William Loughran, 744 Prospect avenue, New York City.

Dr. Daniel S. Dougherty, 352 West 42d street, New York City.

Dr. Alfred M. Young, Salem, N. Y.

Dr. William Angus White, 461 West 43d street, New York City.

Dr. Frank E. A. Stoney, 229 82d street, Brooklyn, N. Y.

Dr. Jay D. Van Wirst, Johnsonville, N. Y.

FROM APRIL 23D TO APRIL 28TH.

Dr. Henry M. Caldwell, Pulaski, N. Y.

Dr. Foreman Ford Ward, 6 East 58th street, New York.

Dr. Stephen H. Lutz, 551 Madison street, Brooklyn.

Dr. William Alanson White, Binghamton, N. Y.

Dr. Daniel Burr Van Wagenen, Suffern, N. Y.

Dr. Charles Jewett, Brooklyn.

Dr. Frank L. Winsor, Laurens, N. Y.

Dr. Charles C. Knight, 1018 Park street, Peekskill, N. Y.

Dr. Herman Knapp, New York.

Dr. William M. Polk, New York.

Dr. Frank W. Robertson, Elmira Reformatory, General Superintendent.

Dr. Warren Stone Bickham, 922 Madison avenue, New York.

Dr. C. M. B. Comac, 108 East 65th street, New York.

Dr. Albert E. Koonz, 105 E. 19th street, New York.

Dr. L. Spiegel, 304 West 99th street, New York.

Dr. Bond Stow, 56 W. 51st street, New York.

Dr. Ludwig Weiss, A. M. A., 77 East 91st street, New York.

Dr. Thomas S. Southworth, 47 West 56th street, New York.

Dr. A. E. McDonald, State Hospital.

To facilitate the securing of membership in the American Medical Association, we publish in our advertising department this month a blank form of application. Cut this out, fill it in as indicated, and forward at once to the chairman of the Committee on New Members, Dr. Frederick Holme Wiggin, 55 West 36th street, New York.

Delinquent Members.—It will facilitate very much the distribution of certificates of membership if those members of the Association who are still in arrears for annual dues will send their checks promptly to the treasurers of their respective County or District Branch Associations. These certificates are guarantees of completed membership in the Association in case any question arises as to eligibility in the Ameri-

can Medical Association. Not until the annual dues are paid can a member be counted in order to determine the number of delegates to which the State Association is entitled in the House of Delegates of the American Medical Association. Do not delay; send checks at once.

THE SARATOGA MEETING.

We cannot keep too constantly in mind the fact that the meeting of the A. M. A. at Saratoga Springs will be held on Tuesday, Wednesday, Thursday and Friday, June 10th, 11th, 12th and 13th. This will be the fifty-third annual session and the fifty-fifth anniversary of the founding of the Association, no meetings having been held during the two years of the Civil War.

The general opening session of the Association will occur at 11 A. M., Tuesday, June 10th. This will be the first meeting held under the re-organization plan adopted at St. Paul last year, embodying a new constitution and by-laws. The general meetings will be relieved of all the executive business, the latter being conducted by the House of Delegates. Each State and territorial society entitled to representation shall have the privilege of sending to the House of Delegates one delegate for every 500 of its resident regular members, and one for any additional fraction of that number; but each affiliated State and territorial society shall be entitled to at least one delegate. It is interesting to note the membership of the various State and territorial organizations and the number of delegates to which their membership entitles them, which is officially announced by the Journal of the A. M. A. as follows:

Alabama, membership 1156, delegates, 3; Arizona, 87, 1; Arkansas, 270, 1; California, 315, 1; Colorado, 326, 1; Connecticut, 684, 2; Delaware, 119, 1; District of Columbia, 394, 1; Florida, 160, 1; Georgia, 650, 2; Idaho, 75, 1; Illinois, 1203, 3; Indian Territory, no response, but will be entitled to only one delegate; Indiana, 1625, 4; Iowa, 719, 2; Kansas, 109, 1; Kentucky, 550, 2; Louisiana, 316, 1; Maine, 445, 1; Maryland, 678, 2; Massachusetts, 2644, 6; Michigan, 606, 2; Minnesota, 446, 1; Mississippi, 314, 1; Missouri, 270, 1; Montana, 113, 1; Nebraska, 410, 1; New Hampshire, 365, 1; New Jersey, 1038, 3; New Mexico, 42, 1; New York, 1421, 1; Nevada, no response, but will be entitled to only 1 delegate; North Carolina, 485, 1; North Dakota, 126, 1; Ohio, 989, 2; Oklahoma, 145, 1; Oregon, 212, 1; Pennsylvania, 3518, 8; Rhode Island, 251, 1; South Carolina, no response, but will be entitled to only 1 delegate; South Dakota, 68, 1; Tennessee, 317, 1; Texas, 352, 1; Utah, 87, 1; Vermont, 193, 1; Virginia, 1033, 3; Washington, 156, 1; West Virginia, 306, 1; Wisconsin, 628, 2; Wyoming, 37, 1.

The scientific sessions of the various sections will be held as usual, and the first meetings will occur at 2 P. M., Tuesday, June 10th. At the general sessions the addresses in surgery, medicine, etc., will be given as usual. The address on medicine will be delivered by Dr. Frank Billings, of Chicago; on surgery, by Dr. Harry M. Sherman, of San Francisco, Cal., and the State medicine by Dr. J. M. Emmert, of Atlantic, Ia.

Saratoga Springs has become the favorite convention town of the United States for national organizations of every kind. It owes this distinction partly to its natural advantages and partly to its unequaled, indeed we might say its unapproached, facilities for the entertainment of such gatherings. Nature has made it the great health resort of this continent, and one that is not surpassed in its comforts and attractions anywhere in the world. Situated on a plateau at the end of the foothills of the Adirondacks, a region deservedly famed for its salubrity, it has an elevation of 312 feet above the tidewater level, and is swept by the breezes of the great northern forests. The celebrity of Saratoga is largely owing to its natural mineral waters.

HOW TO REACH SARATOGA.

Saratoga Springs is readily accessible from the south and west by the lines of the Vanderbilt system, the New York Central and the West Shore roads bringing their passengers to Albany and Schenectady, from which points the Delaware and Hudson has but a short run to the Spa. From the north the Delaware and Hudson gives connection with the Canadian lines, and with several New England systems. By the Boston and Maine, Massachusetts and other portions of New England find easy access directly to the village. The fine river steamers plying on the Hudson, both by day and night, afford a charming trip to those who choose to travel by water. Arrangements for reduced rates have not been perfected as yet, but it is absolutely assured that a concession of a fare and a third will be given, with a possibility that a further reduction in the rates may be made. An extension of the usual time allowed on excursion tickets will be made to allow indulgence in trips to points of interest after adjournment of the meeting.

The Boston and Maine Railroad, in connection with the committee, have arranged the following nine-day trip: Friday, June 13th, a tour through the beautiful Lake George and Lake Champlain, stopping at historic "Fort Ti," reaching Burlington, the "Queen City" of Vermont, and taking an electric car ride through her fine streets to the U. S. Army Post; then to Montreal, and Saturday morning taking in the famous Lachine Rapids and the sights of the city. Sunday P. M. a sail down the St. Lawrence to the quaint city of Quebec. Monday evening by special train to the White Mountains, with a stop here amid some of the most beautiful scenery in the world, until Wednesday, when the party will journey past many points of interest to one of America's most famous Spas, Poland Springs, stopping there on the invitation of Messrs. Ricker, the proprietors; from thence to Boston, past Old Orchard and other famous summer resorts. On the arrival here a reception Friday evening and carriage drive about Boston and vicinity Saturday morning will be tendered

to the party by Dr. Henry O. Marcy, president of Greater Boston Association. During the journey the party will stop at some of the most famous hotels in the country. The rates on railroads in first-class coaches and steamboats and at hotels have been reduced, so that if a party of fifty or more take the trip, they will be only \$52. The above amount will not include electric car or carriage fares about the cities visited, or single or private bathroom at hotels, but each individual member can have these and seat in parlor car if he chooses, at slight additional expense.

MINERAL SPRINGS.

The mineral springs of Saratoga have a world-wide fame. There are more than forty of them, and they are not more remarkable for their number than they are for their variety. They embrace many kinds of mineral waters—saline, alkaline, sulphur, chalybeate, lithia, etc.—with a wide range of hygienic and therapeutic action. It will be a matter of additional interest to the members of the convention to have the opportunity to familiarize themselves with these marvelous fountains of health and thus become acquainted with special virtues of each of them.

THE HOTELS.

There are no summer-resort hotels anywhere that can be compared with the caravansaries of Saratoga. They are not the frail, combustible structures one generally associates with the idea of accommodations at a watering place, most of them and all the larger ones being solid, fire-proof buildings of brick and stone and iron. Some of them cover all or practically all of a block, with courtyards, which are really parks, of several acres, with forest trees, fountains and flowers, broad walks and large greenswards, which are as unique as they are beautiful. Some of these great hostelries often accommodate as many as 2,000 guests at a time. One of these, the United States, will be the headquarters of the Association, where a band of music will give open-air concerts morning and evening, and where a grand reception and ball will be given on Wednesday evening of the convention week. There are, in addition to these large hotels, about 150 smaller hotels and boarding-houses, accommodating comfortably over 10,000 guests.

Saratoga Springs is so compactly built that most of these houses are in the vicinity of Convention Hall, where the general sessions will be held, and none of them is more than five minutes' walk away. This is a matter of great importance, facilitating the interchange of friendly visits and promoting that social intercourse which is one of the most charming features of such a gathering.

Below we give a list of the most important hotels of Saratoga Springs, with prices. Besides those mentioned, there are a number of boarding-houses, whose rates vary from \$1 to \$2 per day. The chairman of the Committee

on Hotels is Dr. J. R. Swanick, Saratoga Springs, who writes that he will be glad to engage rooms in advance for those who will write to him.

HOTEL.	No. Rooms	Single Room.	Single, with Bath.	Double Room.	Double, with Bath.
Grand Union.....	1500	\$4.00 up.	\$6.00 up.	\$8.00 up.	\$10.00 up.
United States.....	1200	4.00-5.00	6.00-7.00	8.00-10.00	10.00-12.00
Kensington.....	500	3.00 4.00	....	6.00- 7.00	8.00-10.00
American-Adelphi..	300	3.00	4.00-5.00	6.00- 8.00	8.00
Columbian.....	250	3.00	....	5.00	....
Worden.....	250	3.00	....	6.00	....
Everett House.....	200	2.00	....	4.00	....
Huestis House.....	200	2.00	....	4.00- 5.00	....
The Commercial....	150	2.50	3.00	4.00	5.00
Continental.....	150	2.00	....	3.00	....
Franklin House.....	150	1.50-2.00	....	3.00	....
Vermont House.....	125	2.50	....	5.00	....
The Carlsbad.....	100	2.00	2.50	3.00	4.50
Woodbridge Hall...	100	2.00	....	3.00	....
Elmwood Hall.....	100	1.35	....	2.00	....
The Waring.....	75	2.00	....	3.00	....
Spencer House.....	75	2.00	....	3.00	....
The Linwood.....	50	2.50	....	4.00	....
The Washburne.....	50	2.00	....	3.00	....
The Moriarta.....	50	3.00	Suite.	6.00	Suite.
The Ashton.....	50	2.50	....	4.00	....
Broadway House...	50	2.50	....	4.00	....
Pleasant House.....	40	2.50	....	4.00	....
Washington Hall...	35	2.00	....	4.00	....
Summer Rest.....	35	2.00-2.50	....	4.00	....

PARKS AND PLEASURE GROUNDS.

Saratoga is itself a splendid park, with broad, shaded avenues, with hundreds of elegant villas and spacious mansions to delight the eye of the visitor. But there are special grounds set apart for the enjoyment of guests. One of these, the Congress Spring Park, almost immediately adjoins Convention Hall. It is ten or fifteen acres in extent, with a handsome spring pavilion and a long colonnade, a miniature lake, over which is a band-stand, where a concert will be given on Wednesday morning. The grounds are diversified with hill and dale; there is a trout pond and a deer paddock, and, altogether, it is said to be the finest park of its size in the world. Adjoining the village on the north is the famous Woodlawn Park, the country seat of the late Judge Henry Hilton, of New York. These magnificent grounds, open to the public, comprise over two thousand acres, with lake, forest and fine villas, and over twenty miles of smooth roadways. The views through vistas are wonderful in their sweep. To the east one can see the Green Mountains, to the south the Catskills are visible and to the west are the lovely and picturesque Kayderrosseras Hills, a spur of the Adirondacks. East of the village, a drive of one mile from Convention Hall brings one to the Saratoga Racing Park, upon which more than \$250,000 has been expended since last summer, making it the most splendid racing track in either Europe or America. It can be visited by carriage, or, if one prefers, on foot, as there is a paved sidewalk extending all the way to the gates. Immediately east of the park lie the magnificent grounds of "Yaddo," the country home of Mr. Spencer Trask, the New York banker. These grounds are open also to carriages or pedestrians. The great stone mansion, with its lofty and spacious ter-



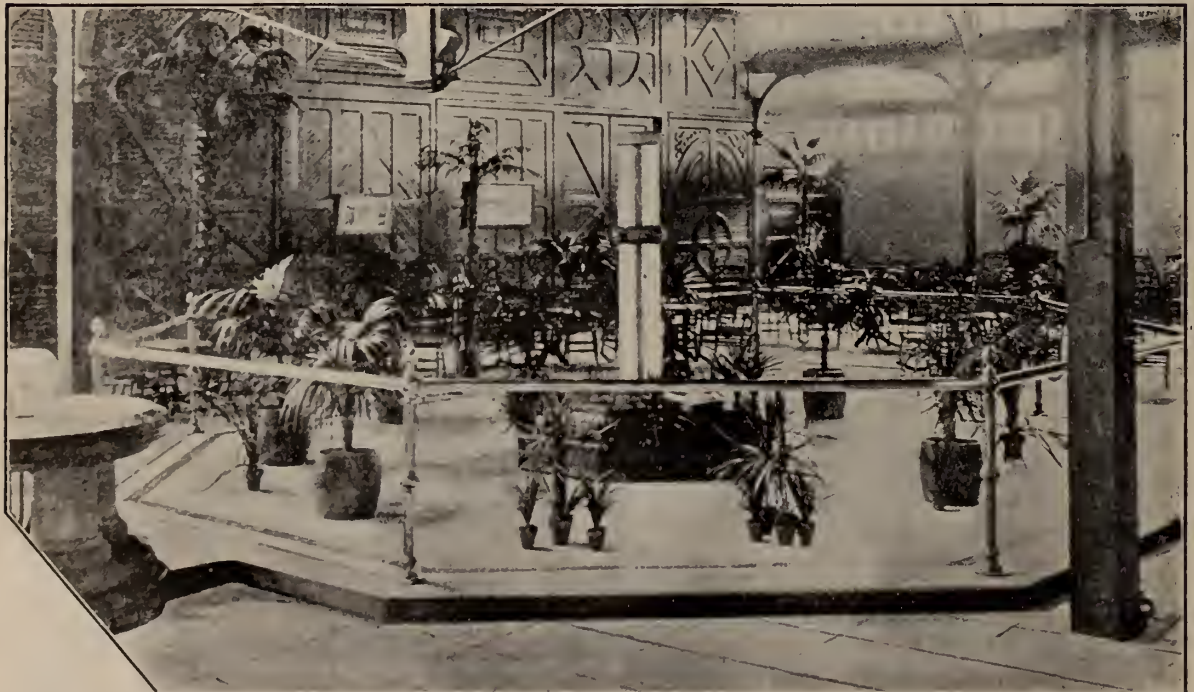
VIEW OF UNITED STATES HOTEL—HEADQUARTERS OF OFFICERS AND COMMITTEE.



VIEW OF CONVENTION HALL WHERE THE GENERAL SESSIONS WILL BE HELD.



CONGRESS HALL HOTEL.



PORTION OF INTERIOR OF HATHORN SPRINGS PAVILION.
IN THIS PAVILION WILL BE LOCATED THE BUREAU OF REGISTRATION, BUREAU
OF INFORMATION, POST-OFFICE AND EXHIBIT HALL.

race and the finest rose garden in America, will be objects of interest.

OTHER VICINITY ATTRACTIONS.

Extending east and west, a couple of blocks north of the racing park, is the recently completed Speedway. It is an extension of one of the village streets, over a mile in length, with a roadway for speeding sixty feet wide, and a carriage drive thirty feet wide on either side, separated from the Speedway by strips of lawn, set out with forest trees. Four miles east is Saratoga Lake, reached by a wide avenue and also by a trolley line. This is a lovely sheet of water, with picturesque shores, on which are many hotels famed for their fish and game dinners. Saratoga Lake has been the scene of many regattas, including those of the Intercollegiate Rowing Association, where no less than fourteen crews once contested for supremacy. The lake is supplied with steam launches, which may be chartered by excursion parties, some of them also making regular trips through the lake, which is nine miles long and three miles in width at the widest part. It is a great fishing ground, and rowboats may also be secured with fishing outfits for those fond of piscatorial sport. South of the village, one mile away, is the remarkable group of geysers, or spouting springs, which may be visited by carriage or trolley. Just to the west of the village and reached by a fine drive are the grounds of the Saratoga Golf Club, by many said to be, for their extent, the finest links in the United States. The club is always ready and glad to extend its courtesies to transient guests, and to those who remain for any length of time it extends the privilege of temporary membership under proper restrictions.

Close to the golf links, a little to the north, the Saratoga Polo Association has its beautiful grounds. Although this association is not old in years, it has already achieved distinction in the polo world, and, under its direction, this year, from July 28th to August 9th, there will be held the championship contests of the country.

EXCURSIONS.

Saratoga offers many delightful excursions. To the north, six miles distant, is Mount McGregor, on whose summit Gen. U. S. Grant spent the closing days of his life. The cottage in which he died is in charge of a Government custodian, and is kept unchanged as it was while General Grant occupied it. It is open to visitors, and is accessible by a good carriage road. On the western side of the mountain, along which the Hudson River flows, is the great dam across this historic stream. From this power electric machines are to be operated for supplying the motive force for manufacturing establishments within a radius of fifty miles. Some thirty miles to the north lies Lake George, renowned for its grand scenery and historical association. This may be reached by

steam or trolley railroad. An excursion to Lake George will be made during the convention.

Luzerne, a thriving village, with falls in the upper Hudson and a remarkably pretty lake, is only one hour away by the Adirondack Railroad. East of Saratoga, a half hour by rail, is Schuylerville, where a noble battle monument overlooks the scene of Burgoyne's surrender and the Burgoyne battlefield nearby. The points where the decisive struggle for American independence was made are plainly marked by tablets suitably inscribed.

IN SARATOGA SPRINGS.

There are many interesting features in the village itself. Among these is the Pompeia, adjoining the Convention Hall. This is an exact reproduction of the "House of Pansa." The rooms, furniture, decorations, statues, etc., are of exceeding interest. The hotels and the many mineral springs will be found filled with interest. The Saratoga Baths, one of the finest bathhouses in the United States, will be found exceedingly interesting to the members of the convention. Saratoga's fine water supply and modern system of sewage disposal are well worthy of attention.

MEETING PLACES.

The feature of the Saratoga meeting which will unquestionably meet with the favorable consideration of those who are in attendance, and will redound to the credit of Saratoga as a convention city, will be found in the close proximity of the various places of meeting. Three minutes' walk is the outside time measurement required to walk between the most remote sections. The places of meeting are as follows:

General Sessions.—Convention Hall, Broadway.

Post-office, General Exhibits, Bureau of Registration, Bureau of Information.—Hathorn Spring Building, Spring Street.

Pathological Exhibit.—Congress Hall ballroom, Broadway and Spring street.

Practice of Medicine.—Grand Union Parlors, Broadway.

Obstetrics and Diseases of Women.—Theater Saratoga, Philadelphia street, just east of Broadway.

Surgery and Anatomy.—Patterson Spring Building, Philadelphia street, opposite theater.

Hygiene and Sanitary Science.—United States Hotel.

Ophthalmology.—Y. M. C. A. Building, Broadway, opposite Caroline street.

Laryngology and Otology.—Same as ophthalmology.

Diseases of Children.—Parish House, 17 Washington street.

Stomatology.—G. A. R. Hall, Post-office Building, opposite United States Hotel.

Nervous and Mental Diseases.—Grand Union Hotel.

Cutaneous Medicine and Surgery.—American



AMERICAN-ADELPHI HOTEL.



THE WORDEN HOTEL.

Hotel, Broadway, opposite Philadelphia street.

Materia Medica, Pharmacy and Therapeutics.—Grand Union Hotel.

House of Delegates.—Supreme Court Room, Town Hall.

Trustees and Judicial Council.—United States Hotel.

The convention hall, where the general meetings will be held, is in the heart of the village. It is one of the largest and best-equipped places for great assemblages in the United States. It has seats for 5,000 people, with stage, telegraph facilities, committee rooms and everything required for the speedy and successful despatch of business.

The general exhibit will be displayed in the Hathorn Spring Building, an immense room on the ground floor, within a block of Convention Hall. Under the same roof will be found the post-office and telegraph office and the bureaus of registration and information. The various sections will hold their sessions in hotel parlors and halls in close proximity to each other.

SCHEDULE OF ENTERTAINMENT.

Tuesday evening, June 10th—Piazza concert at the United States Hotel.

Wednesday morning, June 11th—Concert in Congress Spring Park.

Wednesday afternoon—Carriage drive about village and reception at "Yaddo."

Wednesday evening—Reception and ball at the United States Hotel.

Thursday morning, June 12th—Excursion to Lake George for the ladies.

Thursday evening—President's reception at the United States Hotel.

The Committee of Arrangements for this meeting has been fortunate in having the warm support of the Saratoga Business Men's Association and of the community at large in its efforts to make adequate preparations for the coming of the American Medical Association.

Under the direction of the officers of the A. M. A. great care has been exercised in making the plans for the entertainment of our guests. It was early impressed upon the committee that the scientific work of the meeting must have first place, and that nothing should be permitted to interfere with this, the primary object of the meeting. For this reason certain features which appeared on the program of entertainment heretofore have been eliminated this year, and so far as the committee has received information from members of the Association this action has been most heartily commended. It need not be feared, however, from the foregoing explanations that there will be any lack of the elements which go to make up the social features which add so greatly to the pleasure of the annual gatherings.

Any special or further information will be promptly and cheerfully supplied by addressing

DR. GEORGE F. COMSTOCK,

Chairman of Committee of Arrangements.

SUBSTITUTION BY DRUGGISTS.

A very flagrant case of this abuse has come to light recently in New York. Charles N. Leigh, who has for a number of years conducted a drug store in the Park Avenue Hotel, as reported in the daily papers, was prosecuted by the Poland Spring Company on the charge of refilling Poland Water bottles with bogus water and selling them at the price of genuine water. To this extraordinary charge the druggist pleaded guilty and was sentenced to pay a fine of \$280, or to be committed to the City Prison for 100 days. In passing sentence the Court declared that this was one of the meanest offenses and pointed out that the offender defrauded not only the owner of the trademark, but also the public. Of course, a party who will prove false in a matter of this character will prove false in all things, and is unworthy of any confidence. The pharmaceutical profession has been vigilant during recent years in weeding out its irresponsible and unworthy members, and the feeling of unalloyed confidence has been greatly growing, not only among the medical profession, but also the public, in the reliability of the work done by pharmacists and druggists. Under the circumstances the sentence of the Court seems to be very light.

There is nothing more important in the conduct of medical and pharmaceutical business than absolute assurance against substitution, deception and fraud. According to a recent decision rendered by the Superior Court of Massachusetts, its protection extends even to the style of the package. It seems that a Boston firm made use of a wrapper and style of package for its preparation of iron manganese, corresponding in color and general appearance to that employed by the Gude Pepto-Mangan Company. The Court found that it was calculated to deceive the public and enable the firm to pass off its compound as the preparation known as "Gude's Pepto-Mangan." The Court ordered that the firm forthwith deliver to the Pepto-Mangan people "to be destroyed all the terra-cotta wrappers and packages which the defendant now has on hand or in stock or under its control in any way;" also that the firm account for all profits which it has made from the sales of its preparation and for all the profits which the Pepto-Mangan people would have made in the sales of its preparation but for the use made by the defendant of the said wrapper and package, and also for the damages to the reputation and standing of the plaintiff's preparation known as "Gude's Pepto-Mangan." The defendant was also ordered to defray the cost of the suit.

PRESENT OUTBREAK OF CHOLERA.

The latest news from Manila indicates that a serious fight will have to be made in those islands to suppress the sudden outbreak of

cholera. Up to the 2d of April 117 cases of cholera had been reported, and seventy-three deaths from the disease. When cholera appeared in Manila vigorous steps were taken at once to prevent the spread of its infection and to free the city from the invasion. At this season of the year the conditions there are unfavorable, and the latest reports bring news of the spread of the disease to the Island of Samar. With a well-organized health board at Manila, and the precision that comes from the enforcement of all quarantine and sanitary regulations, little need be feared from Manila as a center of infection to the rest of the world.

The outbreak of cholera at Mecca, however, is received with entirely different feeling. For centuries Mecca has been the starting point, whence the disease has been distributed broadcast throughout the Oriental countries, and even throughout the world. The annual pilgrimage to Mecca is now at its height, and with it thousands of Mohammedans are bathing in the pools and using the same water for drinking and culinary purposes. The difficulty in the way of enforcing sanitary measures involves, of course, serious interference with religious customs and superstition. Great Britain has had a difficult problem upon her hands in dealing with this matter, and the method that she has adopted of making the regulations educational rather than tyrannical has been lost upon these fanatic subjects. The march of cleanliness must take its way with unbroken front, and Mecca must be made to conform to ordinary rules of hygiene and sanitation if the annual pilgrimages are to be allowed to be continued.

HIGHER EDUCATION IN THE MEDICAL PROFESSION.

The *Columbia Literary Monthly*, a paper published by the undergraduates of Columbia University, has taken the stand editorially that only students holding the degree of Bachelor of Arts should be permitted to enter the medical department of Columbia University. On general principles the article maintains that the man of education, mainly the Bachelor of Arts, from this time forward is destined to take up work that has been done, and carry it forward with more directness and speed than has been attained in the past. His starting point is the goal others have striven for; his era is at hand. The science of medicine is founded upon broad principles, which should be understood before medicine itself is undertaken as a study. The college is the proper place to learn these truths. In medical schools the tributary brooks and streams of knowledge should have already been left far behind and the true current of work should take us with it from the outset. It asserts that at the College of Physicians and Surgeons, the medical department of Columbia University, those who have made the correct start are retarded by those who have not, while

the latter are at a disadvantage when compared to their fellows. "Leaving aside, however, the question of fitness to do work, and turning to the wider sphere of the physician's effort, it must be admitted, to state it mildly, that culture and refinement are desirable in a doctor, and it must further be admitted that the greater number of students at our medical schools are not only uncultured, but often even uncouth, thus being fundamentally unfit to become the highest type of their profession. A degree as an entrance requirement ought to remedy this state. Unfortunately many worthy men would thus be barred out, but the good results from such an injustice would far outweigh the injustice itself and the benefit to the institution would be vast, although the number of students might be greatly diminished."

While this editorial has much of the exuberance of youth in it, and not a little of the traditional prejudice of the literary department against the "Medics," there is no denying the fact that the present trend of educational matters is toward greater requirements for admission to our medical schools. The preliminary degree is already a requirement at the medical schools of Harvard and Johns Hopkins, and Columbia University will doubtless insist upon this at no distant date.

EMPIRE BUILDING BY FORCE AND BY METHODS OF PEACE—A CONTRAST.

Nothing more clearly shows the power of the sentimental and the dramatic to make an impression on humanity at large than the life and death of Cecil Rhodes. Every paper in the English language has devoted space during the past month to the story of his life, and while a few of them lay stress on the turmoil and misery he caused in his part of the world rather than on his services to the human race, all agree in admitting the innate strength and force of his personality, and that death has proven his motives as noble as life had proven his ambitions great.

The medical profession has no fault to find with this idealization of the man who leads the strenuous life, for it appeals to us as it does to others, but it is an appreciated hardship that our professional life is so lacking in large-sized dramatic situations that no individual member can ever occupy a very large place in the public eye. The whole continent of Africa, except a narrow strip at each extremity, is absolutely uninhabitable by the white race because of the virulent type of malaria present. The strenuous Rhodes, with the noblest of intentions, carries fire and the sword through one of these habitable areas, while the world looks with admiration at the man who can accomplish so much in the intervals of amassing \$30,000,000 and hails him as the empire builder. But of Saveran and Ross and Monson and the other investigators whose work will eventually make possible the opening of the dark continent to

civilization, the present generation knows little, and the future will know less. There is nothing dramatic about the patient examination of drops of blood for plasmodium; and the dissection of living mosquitoes among a large number of people excites far more opposition than the infliction of misery upon men, women and children in Rhodesia.

We see the same phenomena on our own side of the Atlantic. We all applauded the courage of the man who sunk the Merrimac in the mouth of Santiago Bay, but how much appreciation did Dr. Lazear get for being voluntarily bitten by an infected mosquito to prove the mosquito theory of yellow fever? The action of one required courage of a comparatively common type, and his plan has since been proven imperfect in theory and unsuccessful in practice; but he returned to enjoy plaudits and honors in his country. The other faced and met a miserable death, and proved a theory which has made Cuba as healthy as other countries, and removed a standing menace to our coast cities far more dangerous than any Spanish fleet. Some of the papers devoted a few lines to his death, but the public took no interest, for there is nothing dramatic about being bitten by a mosquito. Dr. Lazear was a contract surgeon, one of those men who, engaged in times of necessity and enjoying the pleasures of war and escaping the sufferings incident to peace, are not pensionable, but Congress, by special act, granted his widow a pension far exceeded by that of many a soldier who had the sense to desert on the eve of battle and the influence to get an honorable discharge afterward.

The value of the work of Finlay and Lazear and others of the army medical department is beautifully demonstrated in the report of Major Gorgos, chief sanitary officer of Havana for 1901:

"The general sanitary methods adopted by the American administration, upon its occupation in January, 1899, had a rapid effect in reducing the general mortality. In 1898, the last year of the Spanish occupation, Havana had 21,252 deaths; in 1899, the first year of the American occupation, 8,153 deaths; the next year, 1900, there were 6,102 deaths, and in 1901, 5,720 deaths, which would be a small number of deaths for cities of similar size in any civilized country. This is a much smaller number of deaths than had ever occurred for a year in Havana before. For the past 31 years the maximum death rate during this period occurred in 1898, when it was 91.03; the minimum in 1885, 29.30; average, 41.55. This year we have 22.11.

"The data above given would indicate that the hygienic conditions of Havana, at the end of 1899, were better by far than they had ever been before; but when we consider the table for yellow fever our conclusions will be very different as to that disease.

"For the past 45 years, with scarcely an exception, some deaths have occurred from yellow fever in every month of the year; the maximum—2,058 deaths—occurred in 1857; the minimum—51 deaths—occurred in 1866; average, 751.44.

"In 1898, on account of the Spanish war, there was very little immigration to the city, and, therefore, we

had few non-immunes to contract yellow fever; we had during this year only 136 deaths from the disease.

"The next year, 1899, there was little or no immigration during the first six months, and, consequently, few non-immunes, and we had only 5 deaths. During the last six months of that year over 12,000 immigrants came in, and 98 deaths from yellow fever occurred. The winter epidemic for 1899 was unusually severe. The next year, 1900, we had 310 deaths from yellow fever. This demonstrates that the general sanitary measures had had a marked effect upon the general death rate, but very little upon the death rate for yellow fever. Neither labor nor expense was spared. The floors and walls of the room occupied by the patient were washed down with a solution of bichloride, applied with a force pump; then the room was carefully sealed and filled with formalin gas. All the fabrics were taken to the disinfecting plant and passed through a steam sterilizer. Every case was carefully isolated, and the quarantine enforced by an employee of the Department, who was on guard at the room quarantined.

"By the end of 1900 the authorities were convinced that general sanitary methods could not, in a short time, eradicate yellow fever from Havana. In the smaller cities and military camps entire success had resulted from the deportation of the non-immune population, together with general sanitary methods; but in a city the size of Havana, with a non-immune population of between 30,000 and 40,000, such a measure was entirely impracticable.

"At the beginning of 1901 the prospects, as far as yellow fever in Havana was concerned, were very unfavorable. We had a large non-immune population, probably larger than it had ever been before. The city was thoroughly infected, cases having occurred in all parts. During the preceding year there had been 1,244 cases and 310 deaths, and all classes of non-immunes had suffered severely. On the staff of the Military Governor, the chief commissary, the chief quartermaster and one of the aides had died.

"January commenced with an unusually large number of deaths from this disease, the record showing 24 cases and 7 deaths; February was equally severe, 8 cases and 5 deaths occurring during the month.

"The Military Governor, being determined that no precaution should be omitted, directed that, in addition to former measures, work be started on the line that the mosquito was the cause of the transmission of the disease. This work went into effect about the 1st of March, with the result that during the whole year we had only 13 deaths from yellow fever, and 12 of those 13 deaths occurred before the mosquito measures were started.

"This difference is too marked to be a matter of chance. That the yellow fever year of 1901-2 had only 1-25 of the number of deaths that had occurred in the minimum year of the preceding 11 years must be due to some cause that did not act during these years. Still more marked is the fact that since September 28, 1901, no cases at all have occurred, particularly when it is considered that October and November rank among the worst months for yellow fever.

"Not only was this result obtained with the city full of non-immunes, with infection in all parts of it, but there were half a dozen infected towns in railroad communication with Havana. Constant intercourse was kept up and no interference with commerce occurred. Goods of all kinds were allowed to come into the city freely. No restriction was put upon bringing in clothing, bedding, and so on, from those infected points. The only infected material from the towns looked after was the sick man, who was carefully sought out and screened from mosquitoes."

The results of the supervision of the health of Havana by the army medical department are well stated in the language of Colonel Gorgos, and this statement applies to the whole of Cuba, as well as to Havana:

"The army took charge of the health department of Havana when deaths were occurring at the rate of 21,252 per year. It gives it up with deaths occurring at the rate of 5,720 per year. It took charge with smallpox endemic for years. It gives it up with not a single case having occurred in the city for over eighteen months. It took charge with yellow fever endemic for over two centuries, the relentless foe of every foreigner who came within Havana's borders—which he could not escape, and from whose attack he well knew that every fourth man must die. It found Havana as a thing unclean by all her neighbors of the United States, and quarantined against as too dangerous to touch, or even to come near anything that she had touched, to the untold financial loss of both Havana and the United States. It leaves, after careful study of the question of yellow fever by its officers, undeterred by personal risk—for several of the investigators have died of the disease, contracted at their work. It has established the fact that yellow fever is only transmitted by a certain species of mosquito, a discovery that, in its power for saving human life, is only excelled by Jenner's great discovery, and as time goes on it will stand in the same class as that great boon to mankind.

"The army has stamped out this disease in its greatest stronghold—there having been only five deaths in the last nine months of the past year, and no deaths and no cases during the last three months of the same year; and it has demonstrated a system by which yellow fever can certainly be controlled, without interference to commerce."

The Fourteenth International Medical Congress will be opened in Madrid, Spain, on April 23, 1903, and close on the 30th of the same month.

Dr. Abraham Jacobi, having been requested by the officers of the Congress to form the American Committee, has arranged that the plan devised by Dr. William Osler, which worked so well in preparation for the Thirteenth Congress, shall be followed also for the Fourteenth.

Invitations to accept places on the committee have, therefore, been sent to the president of the American Congress of Physicians and Surgeons, the president of the American Medical Association, the presidents of the fourteen constituent societies and associations of the American Congress, the surgeons-general of the Army, Navy and Marine Hospital Service, the president of the Canadian Medical Association and the president of the National Dental Association. Acceptances have been received from nearly all of those invited.

Dr. Howard A. Kelly, of Johns Hopkins University, will deliver the address at one of the general meetings of the Congress, and has chosen for his subject "The Passing of a Specialty."

Dr. Ramon Guiteras has been appointed delegate to the Congress by the New York Academy of Medicine.

The committee, to date, consists of W. W. Keen, M. D., of Philadelphia, president of the American Congress of Physicians and Surgeons; John C. Wyeth, M. D., of New York, president of the American Medical Association;

R. H. Chittenden, M. D., of New Haven, president of the American Physiological Society; Walter S. Christopher, M. D., of Chicago, president of the American Pediatric Society; Joseph Collins, M. D., of New York, president of the American Neurological Association; John W. Farlow, M. D., of Boston, president of the American Laryngological Association; Samuel A. Fisk, M. D., of Denver, president of the American Climatological Association; S. C. Gordon, M. D., of Portland, Me., president of the American Gynecological Society; Geo. T. Jackson, M. D., of New York, president of the American Dermatological Association; Horace G. Miller, M. D., of Providence, president of the American Otological Society; Presley M. Rixey, M. D., of Washington, Surgeon-General of the Navy; F. J. Shepherd, M. D., of Montreal, president of the Canadian Medical Association; George M. Sternberg, M. D., of Washington, Surgeon-General of the Army; O. F. Wadsworth, M. D., of Boston, president of the American Ophthalmological Society; DeForest Willard, M. D., of Philadelphia, president of the American Surgical Association; H. August Wilson, M. D., of Philadelphia, president of the American Orthopedic Association; James C. Wilson, M. D., of Philadelphia, president of the Association of American Physicians; Walter Wyman, M. D., of Washington, Surgeon-General of the Marine Hospital Service; Abraham Jacobi, M. D., of New York, chairman.

JOHN H. HUDDLESTON, M. D.,

Secretary,

126 West 85th street, New York.

Expectorators Punished.—Expectorators to the number of fifty were recently arrested during one day in New York on the charge of having violated the law by spitting in public places. Eighteen of this number were discharged on various pleas, but the others were fined \$5 each and warned that if arrested again for the same offense they would be given the full penalty, a \$500 fine, a year's imprisonment or both.

NEW YORK STATE LABORATORY.

The Antitoxin Laboratory of the State Department of Health, which was inaugurated in 1901, is located in the Bender Laboratory, Albany, while the animal house is located several blocks away, with a capacity of fifteen large animals. The State has already made an appropriation of \$20,000. The object of the laboratory is to manufacture under State control the various antitoxins for use in all State institutions and for the indigent poor. Diphtheria and tetanus antitoxins are now ready for use. It is hoped that effective antitoxins for tuberculosis, typhoid fever and various other infectious diseases may be obtained by original research. The laboratory is under the direction of Dr. Herbert D. Pease.

The Association.

New York County Association, annual meeting, April 21, 1902, Parker Syms, M.D., president.

Ovarian Cyst Removed Intact.—Dr. Augustin H. Goelet presented this specimen, which had been taken from a young woman, who gave a history of profuse menstruation and attacks of pelvic peritonitis. Both tubes were found at the operation to be sclerotic.

Kidney Removed for Pyonephrosis.—This specimen Dr. Goelet removed by operation on March 4th from a woman who had come to him a year before with a markedly prolapsed kidney. She was not willing to be operated upon at that time, and he had seen no occasion then to urge it. On returning to him in January he found that the kidney was very large and fixed, and she stated that she was suffering a good deal of pain. At the operation it was found that this kidney had been converted into a shell, and instead of kidney tissue there were three abscesses.

Intraligamentous Fibroid and Ovarian Cyst.—Dr. Goelet removed this fibroid from a woman of 34 years. The tumor was not attached to the uterus or to the broad ligament.

Tubo-Ovarian Cyst; Ovary Concealed in Pocket in Broad Ligament.—Dr. Goelet also presented these specimens. In the first case the mass at the side of the uterus so closely simulated ectopic gestation that he had at first made that diagnosis, but on opening the abdomen this mass was found to be a tubo-ovarian cyst.

The Treatment of Cancer by the X-Ray.—Dr. Charles Warrenne Allen was the author of the paper. (This paper will appear in our next issue.)

Dr. Albert C. Geysler complimented Dr. Allen on the excellent work that he has done in this new and interesting field, and referred to a case of internal cancer on which he had been using the X-Rays. The patient had been originally operated on by Dr. Pryor, but since the operation it had been necessary to tap her every five or six weeks. The X-ray treatment had given the patient great comfort, and had materially diminished the unpleasant odor.

Dr. Eden V. Delphey spoke of the need of carefully reporting these cases, giving such data as the following: The nature of the apparatus: if a coil, the length and size of the wire, the number of interruptions and the kind of interrupter; if a static machine, the number and size of the plates and the number of revolutions made per minute, whether or not the current was interrupted by a spark-gap and whether or not Leyden jars were used in series; the kind of X-ray tubes used; the distance of the tube from the patient; the length and frequency of exposures. Last, but not least, it should be remembered that cases kept under observation for a

few months should not be reported as cured, no matter how favorable the result appeared to be.

Dr. W. B. Snow spoke of a case in which he had used the X-ray.

Dr. Milton W. Franklin discussed the difference in action of the static machine and induction coil as sources of the X-ray. He said that the exact electromotive force of static machines giving sparks greater than one inch had never been determined. When the static machine was the source of the X-ray, the difference in potential in the machine was never greater than the resistance of the vacuum tube employed; in other words, with a low tube there was a greater number of discharges than with a high tube. The conditions were different with the coil, for, no matter what the resistance of the tube, the number of discharges is equal to the number of interruptions in the primary current, and as the voltage in the secondary coil remains constant a larger amount of current passes when a low tube is used.

Dr. Allen, in closing the discussion, said that he had used the high, or hard, and the low, or soft, tubes, but was now using the hard tubes because all of the X-ray burns that he had encountered in this work had been produced when using the static machine and low tubes. Formerly he used exposures of half an hour, but he had become convinced that these were undesirable and inconveniently long, and at present the exposures average eight minutes.

The following officers and seventy-two fellows and alternates were elected for the ensuing year: President, Alexander Lambert, M.D.; first vice-president, Wilbur B. Marple, M.D.; second vice-president, Frederick P. Hammond, M.D.; secretary, Ogden C. Ludlow, M.D.; corresponding secretary, Frederic W. Loughran, M.D.; treasurer, Charles E. Denison, M.D.; member of Executive Committee for three years, Parker Syms, M.D.; member of Nominating Committee, Fifth District Branch, E. Eliot Harris, M.D.

* * *

Kings County Association.—The regular monthly meeting was held at 315 Washington street, Brooklyn, Tuesday, April 8th, the president in the chair. About thirty members were present. Seated beside the president was the president of the Kings County Society, Dr. H. A. Fairbairn, who later opened the discussion of Dr. Biggam's paper, and said a few words in regard to the bright outlook for closer harmony in the medical profession throughout the State.

After the meeting had been called to order Dr. Wm. H. Biggam read a paper entitled: "Prognosis and Treatment of Diabetes," which will be found elsewhere in the JOURNAL. Dr. Fairbairn, in opening the discussion, said that the first thing to determine in a case of diabetes was the class to which it belonged. It might be a simple glycosuria, which is always transient; it might be of a mild type, in which case the

patient is uncomfortable, but not seriously sick; or it might be of the severe type with diacetic acid and other toxins in the blood—a general toxemia—all the indications of excessive tissue waste. In treating these severe cases these facts ought to be remembered. The old idea of diet was all wrong, because it meant rapid starvation to an already starving man.

The pancreas seems to have some relation to glycosuria, and pancreatin is useful in some cases, but it is probably the internal secretion, not the pancreatic juice, that is at fault. Bacterial infection is another source to be considered, and, therefore, salophen and guaiacol carbonate are useful drugs. After all is said, diabètes is a disease about which we know little.

Dr. Bierwirth also spoke of the different degrees of severity and agreed with Dr. Pavey in regard to symptoms and prognosis. One class of cases is often overlooked—those in which the thirst is not marked; there is a daily secretion of 40 to 50 ounces of urine, but an appreciable amount of sugar. This means that there is something lacking in the system for the conversion of starch and sugar. These patients get well enough to eat starch, but not sugar. They are usually people who have been high livers. The composite form of diabetes, on the other hand, is a true wasting disease in which the fat is converted into sugar. These cases are not curable, although we may give temporary relief. In treatment, arsenic is good because a reconstructive; arsenic-auro a dangerous preparation. Codeine is, of course, the sheet anchor for comfort. Gluten bread is very useful. Dr. Bierwirth closed by presenting the Ultzmann polariscope as a very practical instrument for physicians.

Dr. Gildersleeve spoke briefly of the surgical aspects of diabetes. He gave a few brief histories to indicate the danger of operative procedure and the hopelessness of gangrene in these cases. He called attention to the frequency of furunculosis, carbuncles and balanitis in conjunction with diabetes.

Dr. Sherwell mentioned eczema, xeroderma, zanthoma and pruritis as the skin complications of diabetes, and the preparations of arsenic as most useful drugs in these conditions.

Owing to the lateness of the hour Dr. Goodrich's paper on stercoral ulcers was postponed to the next meeting.

After the executive session, at which the treasurer read a very encouraging report, and the executive committee announced the selection of Dr. Louis B. Baker as counsel, the meeting adjourned for the usual collation.

* * *

The Broome County Association held its annual meeting at Binghamton, Tuesday, April 8, 1902. An interesting paper on "The Treatment of Cancer" (this paper may be found in this issue of the JOURNAL) was read by Dr. Stearns, of Binghamton; the discussion that fol-

lowed was participated in by Drs. Farrington, Stanwix, Quackenbush, Greene, Eggleston and Forker. Dr. Higgins, of Cortland, read a paper on "The Examination of the Blood," with microscopic demonstrations. All the officers were reelected as follows: President, Dr. L. D. Farnham; vice-president, W. A. White; secretary, Clarke W. Greene; treasurer, W. H. Knapp. Dr. Farrington was elected delegate and Dr. Greene alternate to the New York State Medical Association, and also to the American Medical Association, which meets at Saratoga Springs, June 10th to 13th. Dr. Stearns was elected member of the Nominating Committee of the Third District Branch. Dr. George B. Stanwix was elected to membership.

* * *

The Rockland County Association held its regular quarterly meeting at Suffern, N. Y., April 16th. There were a good many members present. Dr. Emil Mayer, of New York City, was present and read a paper on "Tuberculosis of the Upper Air Passages." There is much enthusiasm in our County Association. The next meeting will be held in Haverstraw, July 16th.

* * *

The Fifth District Branch will hold its annual meeting in Hosack Hall of the New York Academy of Medicine on Tuesday afternoon, May 6, 1902, at 1.30 P. M. The attention of the members of this Association, those of the Fifth District Branch and the Fellows and Alternates in particular, is called to the announcement of this meeting. In addition to the reports of the officers and various committees, nominations and election of officers take place and matters of direct interest to the profession presented. A scientific program has been prepared. The officers of this branch who have labored arduously for the success of the Association earnestly request the members to be present as an encouragement to them and to their successors.

Program—President's address, Emil Mayer. "The Use and Usefulness of the X-ray in Medical and Surgical Practice," Walter M. Brickner.

"The Province of the General Physician in Diseases of the Upper Air Passages," D. Bryson Delavan.

"Illustrations of Skin Affections," stereopticon exhibition, William S. Gottheil.

* * *

The Orange County Association held its regular monthly meeting at the office of Dr. M. C. Conner, Middletown, N. Y., on Wednesday, April 16, 1902, at 2 P. M. There was a good attendance of the members from all parts of the county. As usual the scientific session preceded the business meeting. Dr. Conner opened the scientific work by inviting those

present to report cases of interest or to present specimens. Dr. Woodhull, Monroe, gave an interesting account of two cases of epilepsy in very young subjects; one in a delicate child 7 weeks old, the other combined epilepsy and chorea in a child a year old. The first case had epileptic convulsions almost every five minutes for a week or more, but under bromides these subsided. The family history was epileptic; the convulsions ceased entirely and have not reappeared, although nearly a year has intervened. This case was discussed with a view to the possibility of its being tetanus or trismus, but the doctor's diagnosis was finally decided to be correct.

Dr. Dennis, Unionville, reported a recent instructive case of strangulated hernia, where, notwithstanding the strangulation existed for a considerable time before relieved by operation, the intestine was not gangrenous and full recovery occurred. The question of complete strangulation or simply omental hernia, irreducible without true intestinal strangulation, was discussed.

Dr. Conner gave an interesting account of a recent autopsy on a case in which during life the individual had complained of intense pain in the epigastric region, and for which he was compelled to give one-quarter grain morphia every two hours for a time; also the symptoms of acute gastritis. The patient apparently recovered from this affection, only to die unexpectedly of cerebral hemorrhage. At autopsy there were found some pericardial effusion, marked sclerosis of the valves of the heart, old pleuritic and peritoneal adhesions, but most interesting was the condition of the stomach walls, in which there had occurred submucous ecchymoses, apparently due to minute emboli of the gastric arterioles, possibly carried from the thickened and sclerosed cardiac valves. These spots of hemorrhage were disposed along the lesser curvature and anterior wall of the stomach. The question was raised that probably the same sclerotic process that led to the embolic hemorrhages in the stomach had also brought on the fatal issue. Most of those present considered that the logical and proper view of the case.

After quite a lengthy discussion of all the cases reported, Dr. Conner then introduced Dr. W. E. Douglas, Middletown, who read a very concise and instructive paper on "Gastric Carcinoma." The doctor in the beginning called special attention to the etiology of cancer of the stomach, making a special point that in his experience he had noticed that all those so affected had exceedingly poor teeth, some of them being badly decayed and in a very foul condition. He thought that possibly there might be some important and vital connection between this very fatal disease and the condition of the teeth.

The usual symptomology of gastric carcinoma,

indigestion, acidity and eructations of gas, heartburn, vomiting of undigested and foul-smelling food particles, with occasional "coffee-ground" material, intense pain in the epigastrium and under the scapula, emaciation and the presence of a tumor usually situated at the pylorus, were all mentioned. The differential diagnosis was fully reviewed, especially with regard to gastric ulcer and cancer. The doctor then gave five interesting personal cases illustrating some of the points brought out in his paper, especially regarding the presence of very much decayed teeth. Regarding treatment, little could be done to check the inroads of this most fatal disease, except to aid in the digestion of the food and make the patient as comfortable as possible.

Following the reading of the paper a very spirited discussion took place, all those present participating. Dr. Redfield raised the question of the value of the ordinary tests for hydrochloric and lactic acids in cases of malignant disease of the stomach, citing two instances—one of cancer, the other of sarcoma of the stomach—in which the chloroglucin vanillin test for hydrochloric acid was markedly present, and Uffelmann's lactic test was not shown at all. In one instance a tumor of large size was present; in the other no tumor was distinctly found. Discussion elicited the fact that the tests were only of value in conjunction with other symptoms and not reliable.

Dr. Conner reported five cases of gastric cancer, verified by autopsy, and instanced one of especial interest on account of the long duration of the case—at least three years—and another of several years' standing, in which the autopsy revealed an oblong tumor at the cardiac orifice of the stomach. Dr. Dennis gave some valuable points in the feeding of this class of patients, especially regarding the food value of alcohol, which, in his experience, was entirely contraindicated, as it made the stomach more irritable. In the general discussion of the paper Drs. Preston, Woodhull and Wise gave many valuable ideas.

At the business meeting little of importance was transacted beyond the reading and approval of the minutes of the previous meeting. An invitation from the Rockland County Medical Association, inviting the Orange County Medical Association to meet with them on April 16, 1902, was read, and it was the sense of the Association that they regarded that on account of the late receipt of the invitation they were unable to accept.

A vote of thanks was given Dr. Douglas for his excellent paper. Those to read papers at the next meeting are Drs. Hullett, Purdy and Preston, of Middletown, and Dr. Many, of Florida.

There being no further business before the Association, adjournment was made until Wednesday, May 21, 1902.

First District Branch and the Oneida County Association will hold a joint meeting at Rome, May 21st. A most interesting and attractive program has been arranged and a large and interesting meeting is predicted. Dr. Matthew D. Mann, of Buffalo, and Dr. Parker Syms, of New York City, will read scientific papers. It is the ambition of the president of the First District Branch to make this the largest and most noted meeting of medical men ever held in Oneida County. At the close of the meeting a dinner will be given by the president in honor of Drs. Mann and Syms. This meeting will afford an opportunity for members of the profession living in the counties embraced in the territory composing the First District Branch to become members of the County, District Branch and State organizations, and through them secure membership in the American Medical Association, preparatory to the coming meeting at Saratoga. No doctor living in these counties should fail to embrace this opportunity.

* * *

The Ulster County Association will hold its regular quarterly meeting at Kingston, May 19th.

* * *

The Erie County Association will hold a special meeting on Thursday evening, May 15th, for the purpose of giving those desirous of becoming members of the American Medical Association, previous to the Saratoga meeting in June, and who are not already members of the New York State Medical Association, an opportunity of joining the latter and thus obtaining the necessary credentials.

Erie County Association, at the March meeting, elected the following officers: President, Joseph W. Grosvenor, Buffalo; vice-president, Howard L. Hunt, Orchard Park, N. Y.; secretary, Jacob S. Ott, Buffalo; treasurer, William I. Thornton, Buffalo; member of Executive Committee, Lorenzo Burrows, Jr., Buffalo.

Fellows: W. H. Thornton, Bernard Cohen, Chas. A. Wolf, Chester T. Stewart, De Lancey Rochester, A. G. Bennett, Ray H. Johnson, Geo. F. Cott, A. E. Woehnert, Chas. G. Stockton.

Alternates: Wm. H. Chace, C. C. Frederick, Benj. Gipple, A. G. Gumaer, Herman E. Hayd, E. P. Lothrop, F. M. O'Gorman, F. W. McGuire, Hiram P. Truex, Wm. G. Taylor.

* * *

The New Consumptive Pavilion at the Erie County Hospital, Buffalo, has been opened for the reception of patients.

* * *

Saratoga County Association held its annual meeting in the Utopian Club rooms, Ballston Spa, N. Y., March 11th, with thirty-four in attendance. The scientific portion of the program consisted of the following:

Etiology and Prophylaxis of Puerperal Sepsis, Dr. D. R. Kathan, Corinth.

Diagnosis, Symptoms and Course, Dr. W. C. Crombie, Mechanicsville.

Complications, Prognosis and Treatment, Dr. G. S. Hudson, Stillwater.

The reports of the secretary and treasurer show that the Association closed the first year of its existence in a very flourishing condition.

Resolutions upon the death of Dr. Tabor B. Reynolds were adopted.

The following officers and fellows were elected: President, Dr. F. A. Palmer, Mechanicsville; vice-president, Dr. H. J. Allen, Corinth; treasurer, Dr. W. E. Swan, Saratoga; secretary, Dr. J. T. Sweetman, Jr., Ballston Spa; member of Executive Committee, three years, Dr. F. W. St. John, Charlton.

Fellows, American Medical Association: F. J. Sherman, G. F. Comstock, J. F. Humphrey, D. C. Moriarta, D. R. Kathan.

Alternates: G. S. Hudson, A. W. Johnson, G. T. Church, F. A. Palmer, W. E. Swan.

The following gentlemen were elected to membership: Dr. G. Scott Town, Saratoga, N. Y.; Dr. Frederick J. Resseguie, Saratoga, N. Y.; Dr. M. M. Wickware, Saratoga, N. Y.; Dr. George H. Fish, Saratoga, N. Y.; Dr. S. H. Strong, Saratoga, N. Y.; Dr. Arthur W. Johnson, Mechanicsville, N. Y.; Dr. William Van Doren, Mechanicsville, N. Y.; Dr. Charles F. Sherman, Hadley, N. Y.; Dr. W. S. Donnelly, Ketchum's Corners, N. Y.; John Cotton, Burnt Hills, N. Y.; Dr. Smith M. Rood, Milton, N. Y.

* * *

The Sullivan County Association held its annual meeting in the new Liberty House, April 9th. The following officers were elected for the coming year: President, C. S. Payne, Liberty, re-elected; first vice-president, H. P. Deody, Liberty; second vice-president, G. R. Bull, Bloomingburg; secretary, J. L. C. Whitcomb, Liberty, re-elected; treasurer, C. W. Piper, Wurtsboro, re-elected; fellow to State Association, Frank Hauser, of Bloomingburg; J. L. C. Whitcomb, alternate; Nominating Committee to Fifth District Branch, C. W. Piper; Committee on Legislation, Whitcomb, Bull, DeKay; Public Health, Sullivan, Maynard, Paine; Ethics and Discipline, Piper, Poindexter, Meyer. Six new members were received. Papers were read by the following gentlemen:

President's Address: "Puerperal Eclampsia—Its Prophylactic, Medical and Surgical Treatment," C. S. Payne, M.D., Liberty, N. Y.

Paper: "Differential Diagnosis of Some of the More Common Skin Diseases and Their Treatment," E. L. Cocks, M.D., New York.

Paper: "Some of the Advances Made in Medicine, as Observed by the Writer," C. W. Piper, M.D., Wurtsboro, N. Y.

Paper: "Dextrocardia Due to Pulmonary Cirrhosis, with Presentation of Case," H. Levien, M.D., Liberty, N. Y.

Book Reviews.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A practical exposition of the methods, other than drug-giving, useful in the prevention of disease and in the treatment of the sick. Edited by Solomon Solis Cohen, A.M., M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic. In eleven octavo volumes. American, English, German and French authors. Volume VI., **DIETOTHERAPY AND FOOD IN HEALTH**—By Nathan S. Davis, Jr., A.M., M.D., Professor of the Principles and Practice of Medicine in Northwestern University Medical School, Chicago. P. Blakiston's Sons & Co., 1012 Walnut street, Philadelphia.

This volume fully sustains the standard set by its predecessors in this valuable series. From cover to cover its contents are interesting and instructive to an unusual degree. The author's style is clear cut and forceful, and he treats of the entire subject of dietetics in a masterly manner. The scope of the book may best be understood by the follow quotation from its preface: "The preservation of health is of as much importance as the treatment of the sick, and in order that food may be adapted to both these purposes the principles underlying its use must be understood. It has, therefore, seemed best to review the chemical and physiologic data concerning the nutritive and other qualities of various kinds of food; to discuss briefly their relations to the digestive organs and to the organism as a whole; and to trace many of the changes that food must undergo before it can be appropriated to the needs of the human system and prepared for elimination. The first part of this volume treats of these subjects, with such brevity as has seemed compatible with thoroughness. For a similar reason, in the section devoted to the consideration of diet for invalids, attention has been given to the causation of disease, especially as diet and digestive and nutritional processes are related to it. Symptoms are described whenever it seems best, in order to make clear the indications for dietetic and general hygienic treatment."

In "General Principles of Diet and Diet in Health" the subject matter is treated under thirteen separate heads, each of which is again many times subdivided. Among these are chapters devoted to food in health, the uses of water in dietetics, the elements of food, animal and vegetable foods, beverages, infant feeding, food as a cause of disease, etc. Under "Diet in Disease" are found chapters on feeding the sick, diet in infectious diseases, and diet in diseases of the stomach, of the blood, of the intestines, the liver and peritoneum; of the respiratory and circulatory organs, of the kidneys, and of the nervous system and of the skin.

The work is of such uniform excellence that it is difficult for a reviewer to select any particular chapter for especial commendation. It reflects great credit on the author and on the publishers, and will prove invaluable to the specialist as well as to the general practitioner.

DAVENPORT'S DISEASES OF WOMEN. A manual of gynecology for the use of students and general practitioners. By F. H. Davenport, A.B., M.D., Assistant Professor in Gynecology, Harvard Medical School. New (4th) edition, revised and enlarged in one 12mo volume of 402 pages, with 154 illustrations. Cloth, \$1.75 net. Lea Bros. & Co., publishers, Philadelphia and New York, 1902.

This compact, attractive and handy volume was originally prepared with two objects in view: First, to give to the student the best methods for examination and the most trustworthy therapeutics of the more common diseases of the female pelvic organs; and, second, to assist the general practitioner in dealing, on a common sense basis, with the gynecological cases which he meets in his every-day practice. As in

former editions, the strength of the work lies in its attention to the medicinal and mechanical treatment of this class of cases. In obstinate cases, however, the treatment is extended to the appropriate operation designed to accomplish a cure. The chapter on diagnosis is rich with suggestions, and is excellent in the minutia of detail with which it handles this difficult subject. The common ailment of the displacement of the uterus is also discussed most admirably. The use of the pessary, its indication and methods of application, are described with such clearness and completeness that a blind man could not err therein.

THE AMERICAN YEAR BOOK OF MEDICINE AND SURGERY, in two volumes, under the general editorial charge of George M. Gould, M.D. Philadelphia and London, W. B. Saunders & Co., 1902. **Surgery.** This standard recapitulation of the best surgical thought and work that has appeared in print during the year 1901 is a most welcome contribution to the doctor's table. The volume on surgery is under the same editorial management as during preceding years, with the exception that Dr. W. W. Keen has relinquished the department of general surgery and Dr. J. Chalmers DeCosta, with the assistance of Dr. J. H. Gibson is responsible for that part of the work. In addition to general surgery, the departments of obstetrics, gynecology, orthopedic surgery, ophthalmology, otology, diseases of the nose and larynx and anatomy are fully and interestingly presented. The thoroughness with which the literature of the year has been scanned and the discrimination that has characterized the work are apparent throughout the entire volume. It would be impossible to attempt to give the least idea of the variety of subjects considered; at the same time it is surprising, even to one who prides himself more or less on following the progress of surgery, not only in his own country but throughout the world, to discover in this volume how much valuable information has escaped his notice. This is another illustration of the fact that, to do a thing well, one must have a definite purpose and object in view, beyond the mere accumulation of information in a general way. The publisher deserves credit for the attractive appearance of the book, the excellence of the paper and the clearness of the type. It is a most agreeable volume to have in one's hands and absorbing and instructive to an unusual degree. The index is well elaborated, convenient and satisfactory.

THE INTERNATIONAL MEDICAL ANNUAL. A year book of treatment and practitioners' index. E. B. Treat & Co., 1902. PP. 688. Price, \$3.

The vast increase in the number of medical journals of recent years has made it increasingly difficult for the physician to keep track of the advances in medical science which are recorded from time to time, and this causes a constantly increasing demand for books like the subject of this review. It makes no attempt to give all the knowledge on a given subject, but only such as has appeared during the past year, presupposing the amount of knowledge which is permanent enough to have found a place in the standard textbooks and guarding against the admission of the unworthy or the unauthoritative by careful editorial supervision.

That the "International Medical Annual" answers the purpose for which it was designed is evidenced by the fact that the present is the twentieth annual volume. Taken by itself, the volume has an uncertain value, but used as it was intended—as a supplement to the standard works—it keeps the practitioner posted on methods and theories which are too new or uncertain to have found a permanent place in medical literature. It is impossible in a notice of this kind to give more than a general idea of the scope of the work. Suffice it to say that it covers the literature of the year in every department of medicine and surgery, and that selection and condensation have been entrusted to an editorial staff of specialists who are entitled to the confidence of the whole profession. Among other chapters we notice one on arsenical poisoning, inspired

by the recent epidemic in England through the consumption of contaminated beer, which is illustrated by several colored plates; a chapter discussing the latest theory of the action of toxins and antitoxins; another on the several late methods of treating phthisis by inhalations of formic aldehyde and by electric currents of high frequency. The volume, like its predecessors, is well bound and much more liberally illustrated than would be expected in a book of this character.

MANUAL OF CHILDBED NURSING, WITH NOTES ON INFANT FEEDING—By Charles Jewett, A.M., M.D., Sc.D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth edition. F. B. Treat & Co., 241-243 West 23d street, New York, 1902.

Jewett's Manual is a very small work in pages, but all the more valuable because it is small, for a close perusal of its contents shows that it has well gained the two essentials of books of its class: practical completeness and thorough condensation.

The necessary duties of a bedside nurse are here presented in a few short chapters in plain and concise order. There is no effort at fundamental reasoning—no "why"—but simply the most direct statement of what the nurse is to do. Nurses are often in much confusion of method in their early work through trying to apply the theories of medicine taught, and through the difference in practice of physicians. The value of this work is, that it provides at once a working system—tells the nurse just what to attend to in caring for a woman in pregnancy, then in labor, after labor, and in handling the child. The instruction on infant feeding is as clear and simple as it is possible to make this difficult subject.

This book would also prove of decided utility to the medical practitioner who has not given much time to passing obstetrical literature, by quickly bringing him into line with the main features of up-to-date obstetrical practice. For nurses the book should prove destructive to confusion and lead, at the same time, to thoroughness in care of mother and child, than which no higher compliment can be paid to the worth of any practical work.

THE MENTAL STATE OF HYSTERICALS: A STUDY OF MENTAL STIGMATA AND MENTAL ACCIDENTS—By Pierre Janet, Litt.D., M.D., Professor of Philosophy at the College Rollin, with preface by Prof. J. M. Charcot. Translated by Caroline Rollin Coison. Published by G. P. Putnam's Sons, New York and London, 1901.

A title so pretentious, together with the deserved repute of the author, as one familiar with the subject through ample clinical opportunity as a student of Charcot at the salpêtrière, led your reviewer to expect too much, perhaps, of interest and enlightenment in the reading of Janet's latest production. Whatever the cause, the result was disappointing. It is difficult to conceive of any practical working value as resulting from a study of the volume under consideration. It is written, or, possibly translated, from the standpoint of the metaphysical philosopher rather than the practical physician. The text is prolix and often obscure. There is evidence of profoundly studious, philosophical research, but we doubt the value of the book as an addition to a working library. The publishers have quite acceptably fulfilled their obligations.

SYPHILIS. A symposium containing special contributions. By L. Duncan Bulkley and others. E. B. Treat & Co. Pp. 120. Price, \$1.

This little volume contains in a permanent form a series of short contributions on the subject by seventeen different writers, originally published in the *International Medical Magazine*. While the papers are all interesting and readable and fully subserve the purpose of a magazine article by throwing light on certain phases of the subject, they accomplish this by leaving other phases entirely in the shade. They make no pretense of being anything more than the ephemeral mat-

ter which the consultant dashes off to keep his name before the profession or to escape the importunities of his publisher. No matter how interesting and readable such a book may be, it has no permanent value since it contains nothing not much more fully stated in the ordinary text-books.

BOOKS RECEIVED.

MANUAL OF CHILDBED NURSING, WITH NOTES ON INFANT FEEDING—By Charles Jewett, A.M., M.D., Sc.D., Professor of Obstetrics and Diseases of Women in the Long Island College Hospital. Fifth edition, revised and enlarged. New York, E. B. Treat & Co., 241-243 West 23d street, 1902.

THE INTERNATIONAL MEDICAL ANNUAL. A year book of treatment and practitioners' index. 1902—Twentieth year. New York, E. B. Treat & Co., 241-243 West 23d street. Chicago, 199 Clark street. Price, \$3.

MORPHINISM AND NARCOMANIA FROM OTHER DRUGS. Their etiology, treatment and medicolegal relations. By T. D. Crothers, M.D., Superintendent of Walnut Lodge Hospital, Hartford, Conn.; editor of the *Journal of Inebriety*, Professor of Mental and Nervous Diseases, New York School of Clinical Medicine, etc. Philadelphia and London, W. B. Saunders & Co., 1902.

A PRACTICAL MANUAL OF INSANITY. For the medical student and general practitioner. By Daniel R. Brower, A.M., M.D., LL.D., Professor of Nervous and Mental Diseases in Rush Medical College, in affiliation with the University of Chicago, Professor of Mental and Nervous Diseases in the Women's Medical School of the Northwestern University and in the Post-Graduate Medical School of Chicago, and Henry M. Bannister, A.M., M.D., formerly Senior Assistant Physician, Illinois Eastern Hospital for the Insane. Philadelphia and London, W. B. Saunders & Co., 1902.

TRANSACTIONS OF THE NATIONAL ASSOCIATION for the study of epilepsy and the care and treatment of epileptics. First annual meeting held at Washington, D. C., May 14-15, 1901. Edited by William Pryor Letchworth, LL.D. C. E. Brinkworth, Buffalo, N. Y., 1901.

THE DIAGNOSIS OF SURGICAL DISEASES—By Dr. E. Albert, late Director and Professor of the First Surgical Clinic at the University of Vienna. Authorized translation from the eighth enlarged and revised edition, by Robert T. Frank, A.M., M.D., with fifty-three illustrations. New York, D. Appleton & Co., 1902.

DEATHS.

Dr. Moses T. Babcock, Hammondsport, N. Y., died March 31, 1902.

Dr. E. Newton Beale, Schaticoke, N. Y., died March 22, 1902.

Dr. Henry M. Bishop, Brooklyn, died March 31, 1902.

Dr. Delevan Bloodgood, Brooklyn, died March 21, 1902.

Dr. Meredith Clymer, New York City, died April 20, 1902.

Dr. John L. Eddy, Olean, N. Y., died April 6, 1902.

Dr. Nathaniel Marston Freeman, New York City, died April 18, 1902.

Dr. John E. Laning, Oneonta, N. Y., died April 7, 1902.

Dr. John Kennington Leaning, Cooperstown, N. Y., died April 4, 1902.

Dr. Sanford J. Murray, New York City, died March 27, 1902.

Dr. Edward Spiller Oliver, Saranac Lake, N. Y., died March 18, 1902.

Dr. John E. Richardson, Brooklyn, died March 23, 1902.

Dr. Theodore Walser, New Brighton, N. Y., died April 23, 1902.

Dr. Thomas Dunn English, Newark, N. J., died April 1, 1902.

Original Articles.

PERFORATION OF GASTRIC ULCER.

With Report of a Case Operated Upon Successfully, After a Lapse of Sixty Hours.

BY LUCIUS W. HOTCHKISS, M.D.,
New York.

PERFORATION into the peritoneal cavity is one of the most fatal complications of gastric ulcer, and is probably responsible for about one-half the deaths in this disease. As the accident seems to be peculiarly incident to certain localities, the statistics of the various countries vary widely; and the percentages of mortality from this cause, out of all the cases of ulcer, vary from 6.5 per cent. to 28.4 per cent. Successful cases of operation for perforated ulcer of the stomach have long since ceased to be novelties, and the day perhaps has passed when the reports of single cases have any great value on account of the mass of experience upon which rational rules of procedure have already been formulated. In this country, however, where the complication is a comparatively infrequent one, the publication of such individual records of experience should still hold its place and be not entirely without its influence for good.

The following case, which has some interesting features, is placed on record as a very small contribution to the knowledge of this most important subject.

History.—Nora D., Irish, domestic, age 25, was admitted to the hospital on the evening of March 14, 1901, supposed to be suffering from an acute intestinal obstruction. Her previous history, in so far as it related to her condition at the time, was negative. She said she had never been especially subject to gastric disturbances, nor to attacks of vomiting and pain, and she had never vomited blood.

About six weeks before she began to suffer from occasional attacks of pain in the abdomen, with more or less flatulence and constipation. These attacks, however, were not generally severe enough to confine her to bed, and a cathartic, as a rule, furnished her prompt relief.

Two weeks before she had quite a severe attack of pain in the epigastrium and left side of the abdomen, which was accompanied by constipation, and her condition was not relieved for twenty-four hours. After this attack, however, she had remained entirely well until the sudden onset of her present illness, which brought her to the hospital.

She says that two nights before she had gone to bed feeling perfectly well, but that early the following morning, at about 2 o'clock, she thinks, she was suddenly awakened from a sound sleep by an intense pain in the upper part of the abdomen, and soon after this she had vomited once. She said her bowels had moved

naturally the day before the seizure, but since then the constipation had been absolute and her physician had not been able to overcome it by cathartics or enemata. As the pain had continued and her abdomen was becoming swollen and her condition was all the time growing worse, she was sent to the hospital.

On admission the patient, who appeared to be a well-nourished and not especially anemic subject, seemed to be suffering considerably from pain and appeared greatly prostrated.

The skin and conjunctivae were slightly jaundiced and the expression was apathetic. Heart and lungs were negative.

The abdomen was distended, the muscles tense, and general tenderness was present on pressure, all over, but was much more pronounced in the upper portion, where also an indistinct mass was made out. Temperature 103, pulse 132, respiration 30.

Urine showed marked trace of albumen; no casts found. The patient was put to bed, an ice cap was applied to the abdomen and a high enema of oxgall, glycerin and turpentine in soap-suds was administered. This was effectual in bringing away considerable gas and a small movement and giving her great relief from the pain, and her condition began to improve. As the temperature and pulse had fallen and the patient was evidently much relieved, she was allowed to rest until morning. In a few hours pain and vomiting reappeared and she was given another enema, which relieved her greatly, and this was followed three hours later by a large, natural constipated movement. This caused a very marked improvement in her condition, which lasted several hours, the temperature falling to below 100° F. and her pulse to 90.

At 2 P. M., March 15th, the case was first seen and examined by the writer.

At this time there was marked abdominal distention, although the pain, which came on at intervals, was not so severe as it had been. There was marked tenderness all over the abdomen, but this was especially developed in the epigastrium. In this region and a little below it there was a distinctly palpable mass. Liver dulness was absent.

Taking into consideration all the symptoms, together with the existing evidences of a perforative peritonitis from some cause, and feeling reasonably sure that appendicitis and inflammation of the gall bladder could be excluded, a diagnosis of peritonitis from perforating gastric ulcer was made, and in this my colleague, Dr. Le Boutillier, concurred. Operation was immediately performed, and, reckoning from the time of probable perforation, sixty hours had certainly elapsed.

Operation.—The abdomen was opened by a long, median incision above the umbilicus. When the peritoneum was incised bubbles of gas escaped and also a considerable quantity of yellowish, turbid, seropurulent fluid, full of flakes

of fibrin. The omentum was thickened and matted together in places and lightly adherent here and there to points on the anterior abdominal wall, the intestines and the stomach.

The peritoneum of the stomach and of such parts of the intestines as appeared at the wound was intensely congested and flecked with numerous patches of soft fibrin. The whole upper portion of the peritoneal cavity—*i. e.*, that portion lying above the level of the transverse mesocolon—showed a moderately intense serofibrinous purulent peritonitis, and the pockets under the liver and about the spleen, the fundus of the stomach, and the splenic flexure of the colon were filled with fluid which contained great flakes of fibrin and a few small particles which had apparently escaped from the stomach. In the right side of this upper segment of the peritoneal cavity the peritonitis seemed less intense than in the left flank. The small intestines below were much congested and distended and flecked here and there with fibrin; but there was comparatively little free fluid in the lower part of the abdominal cavity and probably none in the pelvis. The stomach was examined and a perforation measuring probably a quarter inch or less was readily found upon the anterior wall, near the lesser curvature and toward its pyloric end. The edges of the perforation were necrotic, and the tissues beyond this were thickened and infiltrated, and apparently represented the edges of an ulcer about three-quarters of an inch in diameter. Bubbles of gas and some yellowish fluid were squeezed out of the opening in the stomach.

No attempt at excision of the ulcer was made. It was not possible to suture the edges on account of the softened state of the tissues surrounding the perforation. The stomach wall was therefore broadly infolded in a line at right angles to the long axis, and the broad peritoneal surfaces were sutured together with a double row of Lembert sutures, completely closing the point of perforation and turning it into the cavity of the stomach. Great care was given to the cleansing of the various pockets in the flanks and beneath the liver. As the left flank contained much fibrin and seropurulent fluid, it was first washed out with hydrogen peroxide solution, which was immediately followed by repeated washings of hot normal salt solution until the fluid came away clear. The general cavity was then thoroughly irrigated with the hot saline fluid, and, as far as could be seen, washed clean. After this a liter or more of hot sterile salt solution was poured into the peritoneal cavity and allowed to remain. The peritoneum was closed without drainage and the external wound was rapidly sutured.

The patient stood the operation fairly well and her stomach was carefully washed out before she was removed from the table.

The subsequent history of the case was made

eventful by an attack of parotitis (mumps) which developed on the third day, the patient having worked in a family where the children were all down with the mumps.

Otherwise, barring some external wound infection, the recovery went on smoothly enough, and she was discharged well on April 23d.

The abdominal distention continued for a day or two, but was relieved by the use of the rectal tube and occasional enemata. She was fed by the rectum entirely for the first week and after this hot water was allowed, then small quantities of milk, kumyss, etc., and after this the special diet of the hospital was given. Before the patient left her digestion seemed perfect and she was free from any gastric symptoms.

Cases of perforating gastric ulcer are divided by Mayo Robson* into the acute, subacute and chronic, and the symptoms which he prescribes are somewhat as follows:

Acute Cases.—The initial symptom in this group is sudden, sharp, intolerable pain in the region of the epigastrium. Sometimes the patient declares he feels that something has "burst inside," or may even remark upon the feeling of some trickling or gushing fluid within the abdomen. The pain may radiate backward into the left shoulder, or into both shoulders, or into the interscapular region. It rapidly spreads all over the abdomen, and very soon a condition of abdominal shock is developed, which, though always severe, may, only in very rare cases, develop into an immediately fatal collapse.

Vomiting, with or without blood, is a more or less inconstant symptom, and its occurrence is thought to be due to the amount of fluid contained in the stomach and to the degree of collapse (Mayo Robson).

Traube, on the other hand, explains it by the size of the perforation and the facility with which the stomach contents can escape into the peritoneal cavity.

The abdominal wall is at first hard and retracted, but later becomes more or less widely distended as the peritonitis advances.

Liver dulness is generally absent, but this is an unreliable guide in diagnosis.

General abdominal tenderness, more marked as a rule, in the upper segment of the abdomen, is generally present. It should be remembered, however, that morphin in considerable doses often masks this most important symptom, and the patient's condition under its influence may be so good as to deceive one who has not carefully analyzed the initial symptoms, or who has failed to regard them in their proper light until it is too late. This point has been insisted upon by a recent writer, who utters a warning note which should be regarded. According to Fenwick 4 per cent. of the cases die in collapse.

*Diseases of the Stomach and Their Surgical Treatment.—Robson and Moynihan.

When the patient rallies from shock the symptoms are those of a more or less rapidly generalizing peritonitis.

The subacute cases are those in which a small perforation occurs, or in which the stomach is empty, or nearly so, at the time, or where a few adhesions have formed which diminish the rapidity of the leakage. The symptoms in these cases are the same as in the former group and lack only in intensity. Some of these patients, after having begun with subacute symptoms, suddenly become very acutely ill and die in a few hours. These latter cases are explained by a second or larger leakage and a rapidly developing general peritonitis.

The smaller and more favorably situated perforations imply, as a rule, a less acute and less extensive peritonitis, and in some of them the condition may become merged into what Robson calls chronic perforating ulcer, wherein the inflammation being over a limited area only, and shut in by adhesions, may result in a localized abscess, such as a subphrenic abscess, and lead to later complications in the shape of fistulas of various kinds communicating with different viscera, thoracic or abdominal, or even in rare instances opening upon the outer surface of the abdomen.

Hamburger, Kitasato and others have shown that practically every kind of pyogenic organism may be found in the stomach under certain conditions, and it is not probable that the gastric contents under the ordinary conditions which obtain in ulcer are ever sterile.

Although normal gastric juice is inimical to the life of certain microorganisms it is still an undeniable fact that many germs not only resist its action successfully, but even remain, as has been shown, for considerable periods of time, imbedded in the deeper layers of the mucosa.

The symptoms of perforation are generally preceded by a history of gastric trouble, otherwise the differential diagnosis would be much more difficult than it is. Where the ulcer is situated upon the anterior wall the antecedent symptoms may be meager, as in my own case, or entirely wanting, as occurs in about 8 per cent. of all the cases reported.

The differential diagnosis is not, however, always easy, as in cases of perforating ulcer the stomach fluids may quickly penetrate to the lowest parts of the peritoneal cavity and simulate a perforative peritonitis from other causes. For example, an acute appendicitis, as frequently happens, or a cholecystitis, or a ruptured tubal pregnancy, or an acute hemorrhagic pancreatitis, or an acute intestinal obstruction.

An ordinary pneumonia, with its sudden, sharp, pleuritic pain, may occasionally simulate a perforating gastric ulcer; also acute poisonings and acute dilatation of the stomach, or thrombosis of the superior mesenteric vein (Mayo Robson).

Careful examination of the patient, together with a consideration of the previous history, will help to make the diagnosis clear in the majority of cases, although the operation is many times undertaken without the cause of the peritonitis having been determined before the belly is opened.

In all cases of doubt an exploratory incision under cocaine, as recommended by Miculicz, Mayo Robson, Kocher and Finney, or under general anesthesia, is the proper course to pursue.

Perforating ulcer of the stomach has been observed much more frequently in women, and especially in young women, than in men. Relatively, however, allowing for the greater number of cases of ulcer in females, one finds perforation more common in men, and in those over 40.

Perforation of the stomach generally occurs at one point only, but in 20 per cent. of recorded cases it was found at more than one point, and simultaneous perforations of gastric and duodenal ulcer, though extremely rare, has been observed.

The size of the perforation varies widely, from a pinhole opening to a wide gap, admitting two fingers or more.

Although the posterior wall and region about the pylorus are said to be the favorite sites for gastric ulcers, those which are situated upon the anterior wall of the organ are the more liable to perforate.

Brinton estimated that 70 per cent. of all perforations occur upon the anterior wall, and Miculicz says that 80 per cent. of the perforations in his operated cases were in this situation.

Gluzinski (Wiener Klin. Woch. No. 40, 1900. Abstract in Centralblatt für Chirurgie, September 28, 1901) maintains that, in his observation, twice as many men have died as a result of perforation as women, and that men have been brought to operation for this cause three times as often. Further, reviewing the autopsy material of the Krakau Clinic for the ten years between 1890-1900, he finds that out of 11,298 post-mortem subjects 95 had old ulcers, or the scars thereof, and of these 66, or 61 per cent., had died directly or indirectly as a result.

	Males.	Females.	Mortality, Per cent.
27 died of perforation and peritonitis	18	9	28.4
17 died of hemorrhage	12	5	18
6 " " cachexia	3	3	6.3
8 died of operations for stenosis of pylorus	6	2	8.4
8 died of cancerous degeneration of ulcer	4	4	8.4
66	43	23	61

It will be noticed that these figures vary widely from those generally quoted, and show

a considerable increase in the mortality due to perforation, as compared with older statistics.

The variation in observations as to the question of the site of the ulcer are no less remarkable. In contrast with Welch's table, so frequently quoted, Armstrong (Montreal Med. Jour., August, 1900), in a review based upon a study of 240 cases, found the ulcer upon the anterior wall in 125, and upon the posterior wall in only 32, which differs from Welch, who found the anterior wall affected in 69 and the posterior in 235 out of a series of 793 sections.

The same discrepancy exists as to the relative frequency of ulcer at the pylorus and cardia. Welch found 95 near pylorus and 50 near cardia. Armstrong, in his series, 40 near pylorus and 75 near cardia. As this paper is not intended to be a statistical one this point need be discussed no further. It is enough to say, perhaps, that although ulcers are thought, as a rule, to be more frequently found at or near the pylorus, it is believed those near the cardia are more apt to perforate.

The prognosis in all cases depends upon the size, the number and the situation of the perforation; the character of the gastric contents and upon the fulness or emptiness of the organ; the time elapsed before operation, the presence or absence of severe vomiting, and upon the character of the work done by the operating surgeon.

Ninety-five per cent. of all cases not operated upon probably succumb and die. In a very small percentage of cases there is evidence furnished by both post-mortem and clinical observations that minute perforations upon the posterior wall or elsewhere where adhesions have been efficient have recovered without operation.

Of course, the number is too small to be for a moment considered as a rational basis for non-interference. The following table, based upon the study of 133 operative cases, shows the great advantage of early operation:

	Cases.	Recovery.	Died.	Mortality, Per cent.
Under 12 hours	49	35	14	28.5
Between 12-24 hours.	33	12	21	63.6
" 24-36 " 	36	2	14	87.5
" 36-48 " 	2	..	2	100
Over 48 hours	33	16	17	51.5

These figures vary but slightly from the table of Weir and Foote, except that in the latter the mortality figures for the period over 48 hours in 14 cases rise to 85.71 per cent.

Armstrong, reversing the statistics of Tinker and adding 16 cases not in the original, besides 8 of his own, comments upon the great lessening in the death rate from 71.51 per cent. in the tables of Weir and Foote in 1896 to about 40 per cent. in 1900.

Miculicz reported a series of 103 cases, with 33 deaths, a mortality of about 32 1-3 per cent. This represents the total mortality and the

marked improvement in the latter statistics is a sufficient commentary upon the value of early diagnosis and early and efficient surgical work. Indeed, Tinker emphasizes the fact that between 1897 and 1900 83.78 per cent. of cases have recovered where the operation has been done before twelve hours had elapsed.

Treatment in these cases depends as much upon the early diagnosis by the attending physician as upon the prompt and correct operative treatment by the surgeon. The operation consists in making an incision above the umbilicus, the exploration, the location of the perforation and its closure by appropriate sutures, or, where this is impossible, in packing drainage and exclusion of the affected area. It is not generally advised under these conditions to attempt excision of the ulcer, as the dangers from hemorrhage and other causes are considerable, and where speed is an essential factor in the successful outcome of the case a gastro-enterostomy in appropriate cases, after the perforation has been closed, is regarded at present as the safer and better procedure. If the stomach wall about the site of perforation is soft and infiltrated it should be infolded broadly, to secure good holding ground for the two layers of suture, taking care, of course, not to produce an occlusion of the pylorus. If the opening is a large and ragged one, the edges may be trimmed and an omental flap stitched to them, as it has been experimentally shown by Enderlen and Sundholm that such an omental graft is capable not only of closing the breach, but also of permitting the subsequent restoration of the stomach wall itself. The wall of an adjacent portion of intestine has, in a like manner, been used to stop the hole.

The question of irrigation of the general peritoneal cavity and the question of drainage must be settled by the conditions found in each case. Unless there be some localized necrotic area which calls for local drainage and exclusion from the general cavity, upon general surgical principles, the writer's preference is for repeated flushings with the hot sterile normal salt solution as the most effective method to remove all foreign particles and cleanse all pockets, and this to be followed by the closure of the external wound without drainage, relying upon the saline solution which has been left within the abdomen to accomplish the task of diluting the toxins which may have remained behind and stimulating their absorption along physiological lines through the lymphatic channels.

The question of operating during the period of shock must be answered by referring to the larger percentage of recoveries in the earlier periods. When the patient rallies at all he will often stand a rapid operation well, the heart being seemingly stimulated by the anesthetic ether, and the consensus of opinion seems to be in favor of very early operation, even if the shock has not been fully recovered from. Prep-

arations for operation should go along simultaneously with the stimulation of the patient, and although, of course, cases in collapse cannot be operated upon until there is some evidence of life, still, in most cases, under free stimulation and the use of saline infusions the pulse improves and an early operation may be done with advantage.

ASTHMA OF BLOOD ORIGIN AND NOT NERVE OR REFLEX.

BY G. N. JACK, M.D.,
Depew.

THE most misleading feature of asthma, and that which has successfully thrown investigators off their guard through all time past, is that all asthmatics have the same story to tell about some smell or some dust bringing on the attack, and which the poor victim firmly believes is the sole cause of his misery. Where, as a matter of fact, he has long had a vicious circle established, which usually is: faulty digestion, intestinal toxemia, unstable blood and an irritated and sensitive condition of the mucous membranes of the entire respiratory tract, with perhaps an engorgement of the numerous glands there situated, with waste products from a rapidly disintegrating blood.

How plain now to see this vicious circle stealthily and slyly creeping over its prey, to successfully conceal itself behind the innocent odors that spring the trap so secretly set, and which the poor, deceived asthmatic so vehemently fights.

Along with the rose season, to increase the confusion in getting at the true cause, we have more bowel trouble, more unstable blood, more catarrhal condition, more asthma.

When the asthmatic is loaded for an attack he is playing close to the oxygenating margin, and any chemical combination with the inhaled oxygen, as odors, or mechanical, as dusts, that interfere with oxygenation will hasten the oncoming attack, which he would have had anyway, as has been shown by attacks coming on asthmatics while at midocean, who theretofore had always supposed their asthma to be due to pollen dust.

If the patient cannot recall any offending odor he will, to the satisfaction, or perhaps suggestion, of his physician locate some supposedly reflex cause which closes the investigation.

Another misleading feature that has ever helped to encourage the nerve and pollen dust theory is that the blood of all asthmatics is very susceptible to the malarial-like changes found in damp and swampy, ill-drained districts; hence, many will do better in our modern cities, with a perfect sewerage system and asphalt pavements, than in the country.

Asthma in its hereditary aspect also is peculiarly illustrative of an unstable blood and an enfeebled digestion, extending usually in an alternating manner through a long ancestral line. Thus we not infrequently find asthma in one generation alternating with migraine, eczema or

rheumatism in another, to be followed again by asthma.

It will be seen, then, that asthma is not a disease by itself, having a well-established entity, but that it is only a symptom, a part of a vicious circle, or an abnormal biochemical and complex pathological process, originating usually in the intestinal canal, through a long-standing intestinal indigestion and toxemia, with faulty absorption and metabolism, producing a toxic or lymphogenous chyle that generates an unstable blood, characterized by its extremely varied, numerous and alarming paroxysmal, morphologic changes, often alternating between a lymphocytosis, an intestinal toxemic leukocytosis, or an anematosis; accompanied anatomically by a hyperplasia of the lymphatic and glandular structures and clinically by a most wretched and agonizing dyspnea.

This definition makes it plain that the one characteristic pathological feature of asthma is the unstableness of the blood.

During long periods of quiescence the blood of the asthmatic usually presents no demonstrable pathognomonic constituents, but repeated blood analyses during attacks most vividly picture its unstableness. During some attacks the blood will present quite constant pathologic changes, indicating throughout the attacks a decided lymphocytosis, an intestinal toxemic leukocytosis or an anematosis, but most frequently we find the blood rapidly oscillating between these three varieties, and occasionally there will be a blending of two of the three abnormalities or of the entire group.

Asthmatic Lymphocytosis.—The most serious forms of this variety of asthma develop during lactation, and most frequently in fat, flabby-muscled and scurvy-like infants, or in infants that are reared among unhygienic surroundings.

Infants of this class that are taking on and rapidly absorbing and assimilating large amounts of milk not infrequently, from some slight digestive disturbance, have their metabolism thrown out of balance sufficiently to generate a lymphogenous chyle that, when carried to the blood, acts more as a lymphagogue than a true hematogenic substance, and which when in turn carried to the lungs for oxygenation and separation, nearly, and in fatal cases actually, drowns the infant in its own secretions.

I now have under my observation a typical case belonging to this class, and one that has so beautifully identified itself that I have had it, during an attack, before several physicians who are interested in this subject.

This case was that of a healthy-parented German infant of five months, whose mother was a profuse milker. The infant was excessively fat and had had attacks of asthma since birth, which, however, were becoming more frequent and alarming.

During the attacks it had an extreme and alarming degree of cyanosis, and a dyspnea that

nearly equaled breathlessness. With each respiration mucus would bubble from the mouth in a frothy manner, and by turning the child over on its belly and shaking it, a thick, slimy mucus would string from its mouth. The digestive disturbance was manifested by flatulency and some vomiting.

This alarming condition was almost instantly relieved by draining the lymph from the blood with Epsom salts and expelling the mucus from the respiratory apparatus.

The blood count showed 94,300 white cells, 75 per cent. of which were lymphocytes. A vast majority of these lymphocytes were small, showing that they had come directly from the lymph channels and the chyle.

It is now one month since the infant has had a severe cyanotic attack, but it has developed the constant lympho-anemic dyspnea, which, however, is always worse at night. It has become flabby muscled, thin and pale, and has a pronounced intestinal indigestion. The clinical pictures of these cases carry with them a vast amount of valuable, open and unimpeachable evidence that to the unbiased mind furnishes satisfactory proof of their lymphogenous origin, even without the clinching verdict of the microscope.

From the first year on this alarming variety is usually substituted for the more chronic lympho-anemic form, which frequently results in adenoids of the nasopharynx, adenolymphocetes, and more or less engorgement and hypertrophy of the lymph spaces of the entire respiratory tract.

The two cardinal factors in the production of the asthmatic dyspnea, when due to a lymphocytosis, are (1) the hemoglobin cannot reach the oxygen in the lungs; (2) the oxygen cannot reach the lungs.

The hemoglobin is handicapped in reaching the oxygen in the lungs, first, by its being diluted with and thickly surrounded by lymphocytes; and, second, by a thickened and airtight condition of the partition between the oxygen and hemoglobin, due to an accumulation of mucus in the lung substance. The hemoglobin is also often in grave or fatal cases still further excluded from oxygen, by a collateral engorgement of the lung capillaries with lymph. The oxygen is debarred from reaching the lungs by their partially filling with mucus, together with the trachea and larynx. In favorable cases, after an hour or so, the pathology changes and the lymph is gotten rid of, by some being metamorphosed into normal blood substance and the rest by elimination.

Asthma Due to a Toxemic Leukocytosis.—*Etiology.*—Having had the lymphocytic variety in every life, secondary syphilis, intestinal toxemia, improper food, rapidly changing temperatures, as in autumn, with its accompanying bowel troubles, and where the blood is thrown out of balance by an excessively hot day, during which the blood is drained by quarts through a

profuse perspiration, being followed by an extremely cold night or day, that suddenly stops the skin secretions.

Pathology.—The pathology begins with the intestinal indigestion and toxemia, which usually continually exist in a variable degree, having, as a rule, a marked exacerbation preceding an attack. This exacerbation in the intestinal toxemia is especially pronounced when preceding an attack following a comparatively long interval of freedom. After the vicious circle of the asthmatic has become established, and the attacks continue or follow at short intervals, the process becomes chronic, and there are only slight exacerbations in the intestinal toxemia.

In some cases months before an attack this intestinal indigestion manifests itself by a constant alteration between watery mucus, liquid, fetid or hard, dry stools, flatulency and urinary disturbance.

Frequently from seven to ten days previous to an attack the intestinal condition becomes decidedly toxic; the stools are small, frequent, soft, accompanied by much flatus, and possessed of a nauseating, disgusting, irritating and penetrating odor that forces the inspector to turn away.

After such an inspection one does not wonder that the blood, a substance essentially sensitive to gases, should rapidly undergo a disintegration from having the field from which it absorbs its sustenance, as the intestinal canal, encompassing such a gaseous toxic material.

The stools will change in character from an acid, gaseous, fermenting and irritating condition to an alkaline, putrid, cadaveric and mucous one. This intestinal toxemic condition continues during the asthmatic attack, with days of improvement, to be followed by an exacerbation.

Months before the attack, or soon after the intestinal involvement, the blood commences to become unstable, as detected by the kidney, the blood's faithful guardian, which is the first organ to become irritated and worried over the blood's dangerous situation, and it endeavors to correct matters by filtering off as much as possible the waste material from the already rapidly disintegrating blood. Indican can occasionally be detected, but about the only catabolic evidence in the urine at this stage is its paleness and its excessiveness.

The urine of the asthmatic is as changeable as the unstable blood from which it is filtered. At one urination it may be pale, abundant and of a very low specific gravity, to become in a few hours, especially if following an attack, scanty, high colored, from a disintegration of blood substance, and loaded with uric acid from an increased destruction of leukocytes. The characteristically high acidity of the urine during and following attacks furnishes another evidence of the blood's diminished alkalinity during attacks.

At the stage of intestinal toxemia the urine begins to show decided evidences of a destructive metamorphosis. It becomes scanty, exceedingly

high colored, of a high specific gravity and loaded with uric acid. The indicanuria is decidedly augmented.

Next in turn, or about three weeks before an attack, toxic products are absorbed from the intestinal canal sufficient to produce an enlargement of the numerous glands situated in the larynx and trachea. This glandular enlargement can be detected by the snugness of the collar and change of voice. The vocal cords also now have difficulty in adapting themselves in speech, and soon become exhausted. The increase in the size of the neck previous to and during the attack is so pronounced that patients are often compelled to keep two sets of collars on hand, one size one inch and a half larger than the normal for the asthmatic period.

About twenty-four hours before an attack the blood usually gives a positive demonstration of its disintegration, in the production of a severe chill, lasting half an hour or so, which, however, is followed by no febrile reaction, and on the following day the patient may feel as well as usual.

Under the microscope, before the chill, the blood of the average asthmatic will show no appreciable pathognomonic constituents, but after the chill, from the pronounced leukocytosis and eosinophilia, one can positively foretell the oncoming attack.

In characteristic cases, after the chill, the leukocytic count rapidly runs up to 50,000 or 60,000, 25 or 30 per cent. of which are by a differential count eosinophiles.

This count will rapidly oscillate throughout the attack, but there is constantly and decidedly a pathological leukocytosis.

After the chill and blood analysis we are positive that we have a blood that has disintegrated and one that is loaded with a waste and useless material that must be gotten rid of, and we find that they are so on eliminated through the mucous membranes and expelled from the body in one or all of three ways, viz.: expectoration, diarrhea or vomiting.

The special or, if combined, principal route of elimination would be determined by both intrinsic and extrinsic etiological factors. The intrinsic factors would be (1) the excessively large number of dead leukocytes and other foreign matter in the blood, together with (2) the essential vital power that the blood has of separating itself from useless material, combined with (3) the fact that the only outlet or "dumping ground" for the blood is the mucous membranes. The extrinsic factors would be (1) the acquired, and (2) the induced. Under the acquired we would have habitually an impaired vitality or chronic catarrhal condition of the mucous membrane of the region involved, which would constitute to the blood the line of least resistance, and, therefore, most naturally its chief "dumping ground." In the asthmatic we find this state of affairs in the mucous membrane of the respiratory tract.

That a weakened, chronic catarrhal, mucous membrane offers the line of least resistance and is taken advantage of by the blood in the expulsion of dead leukocytes and other foreign substances has been clinically so numerous, vividly and beautifully illustrated that the only strange thing about it is that more has not been written on the subject.

We continually meet with, especially in early life, cases of so-called "colds" that rapidly alternate with diarrhea, and I have reported a case of asthma that did the same thing, until it was decided to let the diarrhea go, after which the asthma never returned.

To resume, then, the blood already has its oxygen absorbing and carrying properties greatly crippled, to be still further handicapped by a mechanical respiratory obstruction, which usually commences in the larynx, by the blood dumping or filtering process engorging the numerous glands there located. In many instances this glandular engorgement can be detected several hours before the attack by the base-like change of voice and unusual snugness of collar.

The dyspnea comes on gradually, the patient experiencing difficulty in expiring the air, and each expiration is accompanied by a loud whistling, wheezing noise, coming directly from the larynx. In two hours' time there seems to be almost a complete occlusion of the larynx, and asphyxia seems imminent. A glance at the anatomical structure of the larynx will readily explain the mechanism of laryngeal dyspnea, with its painfully prolonged difficult wheezing expirations.

The ventricular bands or false chords located in the larynx have a valve-like arrangement, said valve having its free edges extending downward in such a manner that the ingress of air would tend to open the valve, and its egress to close it. In normal respirations this valve has no action, but in the pathology of laryngeal dyspnea it plays a very important rôle. The ventricular bands are so thickened and hypertrophied by the accumulation of waste fluids from the rapidly disintegrating blood, in the numerous wide lymph spaces found in them, that they project into the lumen of the larynx far enough to catch sufficient air on expiration to produce a valvular action that nearly closes the air-tube. The process is also aggravated and the ventricular bands pushed farther into the lumen of the larynx by a great engorgement, with dead leukocytes, of the many mucous glands located in the ventricles of the larynx and their ascending pouches.

After about twenty-four hours of this laryngeal dyspnea, the glands undergo a resolution and degeneration, with the expulsion of thick mucus, which is expectorated in lumps the size of a pigeon's egg, and of a tough, tenacious, viscid consistency, which gives it an appearance of fat tissue and enables one to pick it up and handle it about with the fingers.

On inspection it is found to contain several

little grayish-pearly balls which, on being unraveled and viewed under the microscope, are found to be composed of delicate convoluted spirals (Curschmann's), made of numerous individual filaments. Other portions of the sputum under the microscope, without staining, are found to contain numerous leukocytes, exhibiting bright, yellowish, coarse granulations; among these are numerous colorless, pointed octahedral crystals (Charcot-Leyden's). Disseminated throughout the field are numerous eosinophile granules derived from ruptured eosinophile cells.

The origin of Curschmann's spirals, which heretofore has been a disputed question, can now positively be shown to be due to a plugging of the minute ducts of the small glands with dead leukocytes, until finally the tissue about the duct softens and gives way, which permits the expulsion of the filament-like plug. As these filament-like plugs individually exude from the numerous closely crowded minute ducts, into the lumen of the air-tube, their free ends are caught by the air as it passes out and in and twisted together, making the convoluted spirals. That this is the true origin of these spirals is still further proven by the fact that they are contained only in the mucus first expectorated, which would show that after the glands once softened and their minute ducts dilated they expel their contents as fast as formed, without the "duct plugging" or filament formation. The leukocytes, eosinophiles and octohedral crystals found in the sputum do, of course, come directly from the leukocytic blood.

After the softening of the laryngeal glands and the expectoration of their contents, the patient has a few hours of ease, with normal respiration, when the dyspnea begins again, due to an engorgement of the glands of the trachea and bronchioles. The air now passes in and out through the larynx freely, and without any wheezing, to meet with obstructions further down, as indicated by the location of the dry rales and the attitude of the patient.

The duration of this tubular obstructed dyspnea is about the same as that of the laryngeal, and it disappears by the same pathological process, throwing off the same thick, tenacious mucus, which, however, seems to be expectorated in smaller-sized lumps. With the beginning of the expectoration a constant cough develops, eliminating in a few hours over a pint of thick, sticky mucus, loaded with the white balls containing the asthma spirals. So thick is this mucus that when its receptacle is jarred the mass will tremble like so much jelly, and when diluted with water and emptied, it will adhere to the sides of its retainer and string down for nearly two feet, and if the vessel be turned back slowly a large amount of the mucus will draw back into it. Mucus of this nature is expectorated for about ten hours, after which the spirals gradually disappear. With the disappearance of the spirals the expectorations become more profuse; the quantity of mucus expectorated at this period is appalling.

The cough is constant, and each cough usually results in the raising of as large a quantity of leukocytes or mucus as can be forced into the mouth. While this pouring out of leukocytes into the air-tubes, with their free expectoration, continues without interruption, there is but little, if any, dyspnea; but if for any reason the blood has its vitality reduced, as it is very apt to do when, for instance, deprived of the chemical and electrical effect of sun or day light, as in the night, so that it does not readily separate itself from the dead leukocytes, the dyspnea will return, and the expectorations cease or become greatly diminished. A striking proof that the dyspnea at this time is due to an excessively large number of leukocytes in the blood is found in the fact that it will disappear like magic within twenty or thirty minutes after the administration of a large dose of quinine in solution. During the eliminating and expectorating stage dyspneic spells of this nature will occasionally suddenly develop, coming on nearly as often during daylight as darkness. When coming on in the daytime the dyspnea will usually appear an hour or so after the ingestion of food, or when the digestion leukocytosis is at its height.

Not infrequently, however, quite severe attacks will come on suddenly and without warning while the patient is up and about, due to an accumulation of leukocytes or mucus in the trachea, just as one's nose will become stuffed up with mucus during an acute coryza, sufficient to exclude the entrance of air. Such attacks usually last for only twenty minutes or an hour, patient experiencing immediate relief with the first expectoration.

This eliminating and coughing period lasts for about ten days, when it gradually subsides. Here the process usually abates. When, as in protracted cases, it is continued further, the scurvy-like condition next manifests itself by producing spongy gums with extravasations of blood and a rapid accumulation of sordes upon the teeth. In about twenty-four hours the process extends to the larynx and, upon hawking, a rusty-colored mucus can be raised. From the larynx the process soon extends to the trachea, bronchi and bronchioles, resulting in a frequent cough that is accompanied by a feeling of soreness in the chest and the expectorations of a rusty-colored sputum that not infrequently contains streaks of clear blood. The expectoration of mucus of this alarming character lasts about five days, and with its cessation the patients rapidly gain in health and vigor.

In one case the blood here gave another beautiful illustration of its infirmity by the production of a purpura, hemorrhagic-like condition of a patch of skin the size of one's whole hand, located in the right anterior lower portion of the chest.

Prognosis.—Good under proper treatment, although there is a strong tendency to grade off with advancing years into the anemic variety. When unabated, it in many cases terminates suddenly, in early adult life, with a cerebral hemor-

rhage. Sometimes an acute disease, like typhoid fever, sets in, producing a permanent structural chemical and functional change in the intestinal canal, thus breaking up the vicious asthmatic circle, after which the asthma never returns.

The asthma may also permanently disappear, to be replaced by a chronic diarrhea, as in the case before mentioned.

Asthmatic Anematosis.—This is the most interesting group of all to study, as when viewed clinically with our present knowledge of the effect of sunlight, darkness, dampness, altitude and cold sponge baths on the blood, it hourly furnishes new, fascinating and undeniable evidences of its blood origin.

Thus we find the attacks are brought on night after night for simply the lack of the chemical or electrical effect of day or sun light on the blood, as shown by their immediate abatement following sunlight, altitude, or cold sponge baths, all of which, as we now know, stop the dyspnea by either an increase in numbers or a crowding together of the red blood corpuscles.

These demonstrations show positively that this variety of asthma is due wholly to the blood's inability to absorb or carry a sufficient amount of oxygen.

The history of this group also shows its blood origin, in that it is usually found to be a sequela of malarial infection, intestinal indigestion, tertiary syphilis and lead poisoning, or the other varieties of asthma, said varieties having occurred perhaps in infancy and adult life respectively.

The blood's inability to properly perform its oxygenating function, in the asthmatic anematosis, is not alone due to a loss of hemoglobin, as in other anemias, but it is due more to the hemoglobin's unfavorable environments, or the asthmatic's abnormal blood biochemistry.

These unfavorable hemoglobin environments are:

1st. A diminution in the blood's alkalinity, said normal alkalinity constituting the basic principle of its oxygenation.

2d. A diminution in and impaired vitality of corpuscle substance, as found in all anemias.

3d. A slight impairment of the rouleux formation, due to the toxic plasma.

4th. A diminution in animal electro-magnetism.

There are many simple yet positive proofs that the dyspnea is in part due to a deficient biomagnetism.

The four above-mentioned pathological facts furnish a very perfect picture of the pathology of the anemic variety, and serve also to most beautifully illustrate upon what a delicate scale its pathology is balanced. This delicate balancing of the pathology offers a rational explanation for its pronounced and rapid oscillation up or down for seemingly trivial causes. The pathological division between attacks and freedom is so frail and sensitive to altitude, atmospheric and

telluric surroundings that attacks are immediately brought on or relieved by their changes.

Thus it is that we have an innumerable long list of exciting factors that will bring on attacks and as long a list of curative measures.

There is no loud wheezing, tubular obstruction, or Curschmann's spirals, in the purely anemic dyspnea, and their appearance would indicate a complication with the toxic leukocytic variety, which not infrequently occurs.

These facts concerning asthma show positively and conclusively that it is of blood origin and that the lungs and nerves take no part in any of the phenomena of asthma, other than the performance of a physiological duty, which is directly contrary to the anciently established neurotic theory that has so unflinchingly withstood the speculations of all past ages.

DISCUSSION BY GEORGE F. COTT, M.D., BUFFALO.

According to our present knowledge there are supposed to be various types of asthma described in text-books. Still the whole matter of its pathology is shrouded in mystery. Of course, we would hail with pleasure anything new brought to light in the way of facts. We have so far bronchial asthma, hereditary asthma, neurotic asthma, reflex asthma and various other kinds, according to the particular author. I may add that Dr. Jack now describes another form—lymphocytic or leukocytic asthma. He, however, desires to cover the entire old, with his proposed new, nomenclature. In other words, all forms of asthma he claims to be due to abnormal blood.

Now, the cause as at present understood is, according to Bosworth, vasomotor paresis, and certainly he gives us a most plausible explanation. Kidd, of London, holds similar views. Shurly, of Detroit, claims that the pathology of asthma is a difficult one to settle, owing to the complex physiology of the vasomotor system. He says: "Recent observations have shown the existence of fine filaments from the cranial nerves and spinal center and that they were conducting cables having in the same strand nerve channels for various functions. These nerve strands differ in different animals and different men in their connection with the nerve trunk, and consequently the difference in individuals might be explained by these anatomical variations. It is commonly accepted, I believe, that asthma is primarily a neurosis, the cause of which may be leukocytosis or lymphocytosis, intestinal toxemia, whatever that may be; gastric disturbances, diathetic diseases or reflexes variously located. Now, if leukocytosis be present in each of this class of cases—which is probable, because the blood will be found deteriorated in any case of long standing—then the removal of the leukocytosis will only accompany a cure, as the body improves with the blood or the blood improves with the improvement of the body. To better the condition of the blood with drugs may improve many cases of asthma, but stop the drug and your case will relapse. In that event it would be but a coincident condition.

The neurotic type which involves the vasomotor system may disappear as suddenly as it began, leaving no trace behind. Do leukocytes disappear and reappear as rapidly and as periodically in the same patient? In the older text-books asthma was considered a spasmodic condition, and pictures showed how easily it was produced. Now it is acknowledged that no one knows the actual condition taking place in the bronchial tubes. The old theory of spasm is impossible, and could never be demonstrated to have existed. The peculiar wheezing sound is produced by the viscid fluid contained in the bronchial tubes while air is forcing it out of the way. There are as many theories regarding the pathology of asthma as there are writers upon the subject.

Among some peculiar causes mentioned in the *Laryngoscope* of August, 1899, Richards mentions two cases of asthma due to pain in the antrum. Relieving the pain caused the asthma to disappear. Of course, we would not expect this case to be due to leukocytosis.

Redmond Payne, in *Pacific Medical Journal*, May, 1899, found the most frequent cause of asthma to be the mucous membrane of the nose, especially mentioning infiltrated tufts on either side of the vomer, which, in such cases, are hyperesthetic and call for removal, which then relieves the asthma.

McIntyre, of Glasgow, found asthma due in one case to a neoplasm in the mediastinum and in another to sarcoma in the base of the brain.

Asthma is supposed to be bilateral in all cases, and if due to abnormal blood you would expect such to be the case. Yet Ingalls, of Chicago, found distinct unilateral asthma in three cases.

Asthma differs in different parts of the world. Bosworth, of New York, claims that nearly all, if not all, cases are due to some abnormal condition in the nose. Kidd, of England, claims it to be the rarest kind of asthma when caused by the nose. In England, also, we find asthma among the better classes principally, while in this country the wealthy do not suffer as much as the working class. During twelve years that I have been taking care of the city's poor in the first district of Buffalo I have met with but one or two cases of asthma, while among working people, such as laborers, clerks, shopkeepers, mechanics, etc., I have met scores of them.

In closing, permit me to state that the question resolves itself into this: Does leukocytosis cause asthma, or does asthma cause leukocytosis?

State Charities Bill.—Governor Odell has signed the State Charities bill, which provides for a fiscal governor to be appointed by the Governor at a salary of \$6,000 a year to supervise expenditures by State charitable institutions, and for a State board composed of the Governor, the State Comptroller and the president of the State Board of Charities to pass on all plans for additions and improvements to the institutions.

THE USE OF PARAFFIN IN SURGERY.

BY EDWARD PERCY ROBINSON, M.D.,

New York.

IN the *British Medical Journal* of September 21, 1901, I find the following:

"Moskowitz (*Wiener Klinische Wochenschrift*, June 20, 1901) reports thirty cases in which purified paraffin was injected hypodermically in the Clinic of Gersung in which paraffin injections having a low melting point were used without producing untoward symptoms.

"In the case reported by Pfammensteil, in which, after the injection of paraffin with melting point of 113° F. round the neck of the female bladder in order to reduce the size of the opening and cure incontinence of urine after resection of the urethra for carcinoma, there were symptoms of pulmonary embolism.

"Paraffin is probably never absorbed. Two years ago an artificial testicle was made by injecting paraffin into the scrotum after castration; it is now of stony hardness, but has not diminished in size. In cases in which much paraffin is injected, or in which the injection is made into the unyielding tissue, Schleich's infiltration anesthesia should be employed. (Anesthetics, local or general, I have never used, and do not see the necessity for doing so.—E. P. R.).

"Injections of paraffin were employed with success to remedy incontinence of urine in a woman after the removal of the sphincter vesicæ and the whole of the urethra; to improve phonation after an operation for cleft palate (the injection was made behind the posterior wall of the pharynx, which was thus made to bulge forward until the short, soft palate could meet it and completely close the naso-pharyngeal passage); to cure incontinence of feces, due to fistula in ano; to narrow the inguinal rings in cases of hernia and to remedy prolapse of the vagina.

"Paraffin may also be injected into the joints to prevent the articular surfaces coming into too intimate contact if ankylosis is feared, or between the ends of nerves in which a piece has been resected for neuralgia to prevent their coming together again."

Paraffin is a mixture of several of the harder members of the paraffin series of hydrocarbons; usually obtained by the distillation of shale, separation of the liquid oils by refrigeration, and purification of the solid product. In its pure condition it is a white, waxy, inodorous, tasteless substance, harder than tallow, softer than wax, with a specific gravity 0.877. Its melting point is variable, depending somewhat upon its origin. It ranges between 45° and 65° C. (109—115° F.). An ultimate analysis yields, on the average, carbon 85 per cent. and hydrogen 15 per cent. It is insoluble in water, is indifferent to the most powerful acids, alkalines and chlorine, and can be distilled unchanged with strong oil of vitriol. It has been found that this

substance can be injected into living tissue without causing untoward symptoms.

Sterilized paraffin is non-toxic and produces no reaction when injected hypodermically. It remains where placed, and in time becomes encapsulated. The new connective tissue which is formed permeates the paraffin and subsequently envelops it in a gauze-like network. Time does not seem to cause any change in the paraffin, and it is probably never absorbed. An injection made into the peritoneal cavity of a guinea pig produced no reaction. Injected into the liver substance of another animal it caused no disturbance.



BEFORE.



AFTER.

The photographs here shown illustrate a case of paraffin prosthesis. The patient, aged 26 years, suffered from a flattened left cheek, as a result of atrophy of the muscles, brought about by an injury received on that side of the face when at the age of 12 years. She complained of no pain or discomfort physically, but was desirous of having the deformity corrected. Accordingly, several injections were made in various places about the cheek, with the result shown in the picture. No reaction followed any of the injections (eight in all), which were at intervals of a few days; there was no redness, swelling, pain or discomfort, and the patient did not observe any unusual sensation about the face or cheek. The paraffin used had melting points ranging between 99° and 104° F. This because of the difference in the resiliency of the skin in the various locations into which it was injected. It

cannot now be detected by palpating the cheek and is not displaced by pinching or rubbing the face. Contrary to what might have been looked for, the cheek is not hard or resistant to touch. I might add that this patient had previously received treatment consisting of massage and electricity applied to the affected cheek, with tonics internally, for more than a year, with the hope of restoring the wasted tissues, but the results were absolutely nil.

The technique of the operation is simple, but delicate, and it requires considerable tact to adjust the amount of wax to be injected. If too much wax is injected, or if it should slip during the operation into a location where it is not needed, disfigurement would be unavoidable. It is stated that such an accident has occurred, and it would require a careful dissection to recover the wax after it is once injected.

The commercial paraffin, because of impurities present, is not satisfactory. It is practically impossible at the present time to obtain a paraffin sufficiently pure for surgical use. The possible impurities, such as phenol, kerosene and benzine, together with traces of the chemicals used in the process of its manufacture, are probable causes of inflammatory reaction.



BEFORE.

The above photograph shows a case in which paraffin was used to raise the skin of the nose. The deformity was caused by a fall on the face and had existed for about three years. When the correction was made the needle was inserted at the lowest point of the depression and passed



AFTER.

subcutaneously along the dorsum of the nose as far as was required to be corrected. The injection was given, and at the same time the wax

was shaped into the form desired. As soon as a sufficient quantity of the wax had been injected the needle was withdrawn. Paraffin with a melting point of 107° F. was used, and injected while in a semi-solid state.

These slight depressions about the nose, especially at the tip, probably make up the majority of the nasal deformities which are met with, and, although small, are as deserving of correction as the larger deformities.

They can hardly be called deformities because of their size, yet from a cosmetic point of view they are disfiguring. I have corrected several of these small depressions, in some requiring not more than a drop of wax, with the result of greatly improving the appearance. Many are too small to be shown in a photograph. Paraffin can be used to restore the contour of the breast; in cases in which the fat has become absorbed, producing a flabby and pendulous gland. In the depressions above and below the clavicle in females, the injections greatly improve the shape and appearance of the shoulders.

Restoring sunken cheeks by paraffin injections should take the place of the mechanical device now used by dentists for that purpose and known as "plumpers." This contrivance consists of a thickening of the upper plate at the sides, to a degree that when the plate is worn the cheeks are made to bulge outward. It does not restore natural expression and is cumbersome and difficult for the patient to manipulate while speaking or eating. Paraffin will give much better satisfaction.

The injection of paraffin is not entirely free from danger, and it is stated that abscesses have occurred, also sloughing. In one case symptoms of tetanus were observed after an injection, and another case developed evidences of pulmonary embolism. So far I have seen no unfavorable symptoms. In all the cases in which injections were given, varying from one drop to half a dram at an injection, there was no reaction and no change in the tissues.

THE PROGNOSIS AND TREATMENT OF DIABETES MELLITUS.¹

BY WILLIAM H. BIGGAM, M.D.,
Brooklyn.

THE subject of diabetes might be regarded as hackneyed; nevertheless, the literature pertaining thereto, until quite recently, has been somewhat meager. Therefore, in presenting the result of my humble effort in this direction, it must be understood that my object in so doing is the hope that it will bring out in discussion points that will be beneficial to us all.

Diabetes may be divided into two general

types—mild and severe—and the prognosis must be determined after the decision has been reached as to which type the case in hand belongs. Age is a prominent factor to be considered in determining the prognosis, being more favorable in those that have passed the meridian of life. Where the disease develops in children just before or at the period of puberty, the disease runs a short course and quickly becomes fatal.

The etiology of the disease is unknown, but there are certain factors which, if they can be eliminated as possible causes, have a favorable influence as affecting the prognosis, the most important of which I have already mentioned, viz., age. The patient's power of constructive metamorphosis is an important factor. I have had a patient under treatment for two years, female, aged 57, whose urine has contained all this time as high as ten grains of sugar to the ounce, greatly emaciated, yet with a voracious appetite, with digestive and assimilative powers that enable her to keep a neck-and-neck race with the enormous drain. Moreover, she is just recovering from a severe traumatism of the knee-joint that in cases of less severity might have resulted in gangrene, necessitating amputation.

Suppurative processes are unfavorable, and much has been written about cutaneous manifestations in the form of boils; yet of the cases that it has been my privilege to treat I have never seen one with a boil or carbuncle. Gerster makes the assertion that *absolutely* the greatest number of the cases of these affections—viz., boils and carbuncles—occur among those who do not suffer from diabetes, and Halpryn states that among thirty-two of his patients suffering from carbuncles, only two had diabetes.

About 40 per cent. of diabetics have tuberculosis, and this is usually given as cause of death, thereby rendering statistics misleading, but it has to be taken into consideration in forming a prognosis.

The last case I had was complicated with phthisis, yet the patient was under treatment for six years, and died with a bronchiectasis, although he was able to work until within two months of his death; and I attributed his favorable condition to his ability to consume fair amounts of carbohydrates without increasing his diabetic symptoms. This should influence prognosis very greatly; as also the social status, where causes of worry and anxiety can be eliminated, and the means are at hand for procuring the regimen and carrying out the treatment as directed by the physician.

Another frequent and unfavorable complication is nephritis, particularly when associated with arteriosclerosis. The trite axiom as to a man being no older than his arteries is pertinent to these cases as affecting prognosis.

In some instances it is most important to decide whether a case in hand is true diabetes or

¹Read at the stated meeting of the Kings County Association, April 8, 1902.

transient glycosuria, and upon that decision will depend the prognosis. According to Flexner, glycosuria and diabetes are not the same thing, and a distinction is to be made between them. He says glycosuria follows so many and different pathologic conditions that its significance is comparatively minimal. It may be rapid in appearance and just as rapid in disappearance. Such a case came to my hands during the past summer—a woman 45 years of age, the picture of sound health, whose only symptom denoting any deviation from the normal was at times depression of spirits and loss of appetite. The urine intermittently contained from 40 to 50 one-hundredths per cent. of sugar for a period of three months. It permanently disappeared under a moderately restricted diet, and there has been no return of the trouble for five months. Under the ready response to treatment, and in the absence of any organic disease whatsoever, I made the diagnosis of transient glycosuria, and gave a favorable prognosis, which has proven true. The etiology, however, like all of my cases, still remains in obscurity. A guarded prognosis should be given in cases that are on the border-line until the results of treatment can be determined.

It is no doubt the experience of my fellow members, as has been proved by many scientific observers, that with proper care the life of a diabetic patient may be prolonged many years, and when the time arrives when the etiology of diabetes shall be thoroughly understood, as I firmly believe it will, these lives will be still further prolonged.

The treatment of diabetes should be divided into hygienic, medicinal and dietetic. Particular attention should be paid to careful and systematic exercise and bathing, golf, in pleasant weather, being one of the very best forms of exercise, the hours of which can be gradually increased, and, if the patient is able to bear it, the bathing should be daily cold sponging with coarse friction. Surf bathing is apt to tax the patient's strength; his powers of endurance must be subjected to no strain.

For the distressing thirst I prefer lithia water ad libitum, my preference being for the artificial carbonated lithia as delivered by the Clynta Company or Schultz. They contain a definite amount of lithia held in perfect solution, and the carbonic dioxid has a direct beneficial effect upon the gastric mucous membrane.

The medicinal treatment should be somewhat similar to that of an anemic case, making use of any and every agent that will promote constructive metamorphosis and increase the oxygenation of the blood, or the increase of hemoglobin and red-blood corpuscles, and here is where the preparations of arsenic play an important part, combined with gold, if you please, although I am satisfied, after thorough trial, that there is no specific effect in the much-vaunted preparation known as arsen-auro, and

that nothing is gained by the massive doses so loudly advised by the manufacturers. The maximum of benefit is derived from tonic doses of from ten to twelve drops.

Theoretically, urotropin ought to be of benefit, owing to the facility with which it divides into formalin and ammonia after reaching the circulation, and this should render it worthy of trial in diabetic coma, although Reed says of 200 cases that he has treated in the last ten years, either directly or indirectly, he has not known of a single fatality on account of diabetic coma.

Alcohol is of benefit in this disease where there is much debility, and good, old Scotch whisky, in the form of a high-ball, is usually acceptable to the patient when made with the carbonated lithia. It frequently increases the itching from which many diabetics suffer, but this can be relieved in many cases by what Unna has happily termed the opium of the skin, viz., carbolic acid. This, in the form of a lotion, combined with glycerin and camphor water, may be mopped upon the affected parts.

Opium and its alkaloids are contraindicated in cases where there is distressing itching, owing to their well-known tendency to increase that trouble in a large number of individuals, notwithstanding the great credit accorded codeine in the treatment of this disease.

Analyses by Pavy and other investigators go to show that all of the so-called gluten foods contain a large percentage of starch, and that potatoes, that religiously excommunicated article of diet, contain a smaller percentage of starch than the gluten preparations. Acting on the suggestion, I have allowed potatoes in a recent case, with no increase in the percentage of sugar or other bad symptoms.

For the purpose of increasing nutrition I have made use of the Russell emulsion of mixed fats with decided benefit. By gradually increasing the dose the patient can readily take as much as two ounces night and morning. It does not interfere with other proper food and seems to retard any tendency toward intestinal toxemia, to which many diabetics are prone. In addition to this, patients may be allowed cream butter or unskimmed milk, according to their wishes.

It is not my intention to bore you with tables of diet with which you are all familiar, foods allowed and foods forbidden, but I want to impress one fact—diabetic patients cannot be cured by starving them; a liberal diet is necessary. While medicinal treatment is uncertain, depending on dietetic treatment is unreliable and dangerous.

Discussion of the origin of diabetes is outside the scope of this paper, but since writing it I have had the pleasure of listening to a very interesting paper on the pathology of the disease by Van Cott. He described cell collections surrounded by stroma, the cells being collected in small masses and of somewhat flatter ap-

pearance, within the structure of the pancreatic gland, which are known as the Islands of Langerhans.¹ There is considerable evidence that these independent collections of cells or Islands of Langerhans have an internal secretion of their own—a particular enzyme that controls the power of the pancreas to convert starch and sugar into glucose, of peptonizing albumin, emulsifying and splitting fats, and coagulating casein. That interference with the activity of these cells by the inflammatory increase of interstitial stroma is the cause of diabetes mellitus.

The recent interesting researches of Opie² show that in diabetes there may be chronic degenerative lesions that involve the Islands of Langerhans only.

The May Meetings of county associations in the Fifth District Branch are scheduled to take place as follows:

Kings County, Hubert Arrowsmith, chairman, May 13th, at 315 Washington street, Brooklyn.

New York County, Parker Syms, chairman, May 19th, at 17 West 43d street, New York City.

Orange County, Milton C. Conner, chairman, May 21st, Middletown, N. Y.

Ulster County, Frank L. Preston, chairman, May 12th, Kingston, N. Y.

Westchester County, N. J. Sands, chairman, May 22d, White Plains, N. Y.

An Opening for Internes in the State Hospitals.—Students about to graduate who are unable to secure positions in general hospitals, or young physicians whose terms are about to expire in general hospitals and who wish to enlarge their experience, are now offered an opportunity to enter the New York State Hospitals as internes or clinical assistants. These positions provide lodging and board. Appointments are made for a year. Some twenty-eight positions will be open in the fourteen State hospitals situated in the following places in New York State: Utica, Buffalo, Gowanda (homeopathic), Binghamton, Kings Park, L. I.; Flatbush, Brooklyn; Central Islip, L. I.; Ward's Island, New York City (two hospitals), Rochester, Ogdensburg, Poughkeepsie, Willard, Middletown (homeopathic).

Although these are hospitals for the insane, yet they are so large that opportunities for experience in general medicine are abundant. Each hospital is well equipped with clinicopathological laboratory and apparatus, operating-rooms, trained nurses, hydrotherapeutic and electrical devices and good medical libraries. The field for study in general medicine is excellent and surgical operations of all kinds are

frequently performed, either by resident or consulting surgeons. It is thought that many students who wish hospital experience and are unable to obtain it because of the relatively few places available in general hospitals may be glad to learn that positions of this kind have been thrown open to them. It is believed that young physicians wishing hospital experience will profit by a year's residence in one of these hospitals, and such as desire to continue in special work would be eligible for appointments subsequently to salaried positions in the same service. No examinations will be necessary, but application must be made in person, with good references, directly to the medical superintendent of any of the above-named hospitals or to Dr. Frederick Peterson, president of the Commission in Lunacy, 4 West 50th street, New York City.

* * *

Pathologic Exhibit.—The Committee on Pathologic Exhibit for the American Medical Association is anxious to secure materials for the coming session at Saratoga, June 10th to 13th, inclusive. This exhibit was accorded much praise and comment during the sessions at Atlantic City and St. Paul, respectively, where were collected valuable exhibits from all parts of the country. The materials included not only pathologic specimens, but the allied fields—bacteriology, hematology, physiology and biology—were well represented.

It would also be desirable to secure exhibits of new apparatus, charts, etc., used by teachers of pathology and physiology in medical colleges.

This exhibit has already become a permanent feature of the annual sessions of the American Medical Association, and the committee is desirous of securing its list of exhibits as early as possible, and to this end asks those having desirable materials to communicate with any member of the committee.

To contribute to the value of the work it is suggested that as far as possible each contributor select materials illustrative of one classification and by such specialization enhance the usefulness of the display.

Those lending their materials may feel assured that good care will be given their exhibits while in the hands of the committee and due credit will be given in the published reports.

Very respectfully,

F. M. JEFFRIES,

214 East 34th street, New York City.

W. A. EVANS,

103 State street, Suite 1403, Chicago, Ill.

ROGER G. PERKINS,

West. Res. Med. School, Cleveland, O.

Committee on Pathologic Exhibit, American Medical Association.

¹ An American Text-Book of Pathology, Hektoen and Reisman.
² Journal of Exp. Med. V., 1901.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. No. 6.

JUNE, 1902.

\$1.00 PER ANNUM.

A WORD TO THE WISE.

For the first time in twenty-two years the American Medical Association has honored our State and the Association to which we belong by voting unanimously to hold its fifty-third annual session at Saratoga Springs on June 10, 1902.

The necessity for a thorough organization of the medical profession in this State, as well as in the Union, was never more urgent, and the fact that numerous members of the New York Medical Association have not joined the American Medical Association shows that the necessity for this organization is not fully appreciated by many of the most intelligent members of our profession.

Being eligible by reason of your membership in the State Association, you are earnestly invited to send in at once your application for membership in the national organization. The stronger our local representation at Saratoga in June, the greater influence will we exercise in the national body and in the ultimate union of the medical profession in all the States and territories.

The American Medical Association represents organized medicine in this country, and it would seem to be the plain duty of every practitioner who has at heart the highest and best interests of the profession to lend it his personal support. Without this thorough cooperation we cannot enact or enforce rigid health laws, maintain the present high standard of graduation, nor establish reciprocity or interstate comity and a uniform standard of requirements for practice and for graduation.

THE DISPENSARY LAW.

The results of the enforcement of our State dispensary law are set forth in the thirty-third annual report of the Brooklyn Eye and Ear

Hospital for the year 1901. The extract clearly indicates what can be accomplished by the law when it is conscientiously enforced by dispensary managers. The extract reads as follows: "The Superintendent's report shows a falling off in attendance upon the clinics of about 10 per cent. as compared with the previous year, which itself showed a loss of 8 per cent. as compared with 1899. The enforcement of the dispensary law is properly chargeable with a large proportion of this deficit. Seven hundred and thirty-two have been refused treatment by the Registrar as unworthy objects of charity, while knowledge that such a law is on the statute book and is being enforced has become so widely disseminated that, doubtless, very many more have been deterred from applying for treatment. The thanks of the Board are due and are very cordially given to Mr. Nicholas, superintendent of the Bureau of Charities, for his very cordial cooperation and assistance in investigating doubtful cases, as provided for and required by law, thus relieving the hospital of considerable expense and embarrassment."

THE SARATOGA SPECIAL.

Attention is called to the special train over the West Shore Railroad, the details of which appeared in the advertising columns of the JOURNAL last month. There are a few seats still remaining for sale; all those who anticipate going to Saratoga will doubtless find it more agreeable to go in this train, and it is suggested that those who desire seats or who wish accommodations in the train for the proposed excursion to Montreal, Quebec, White Mountains, Poland Springs, etc., should notify Dr. Frederick Holme Wiggin, 55 West 36th street, New York City. In order that the details may be perfected it is important that all those who wish to join in this excursion should make it known at as early a date as possible.

THE PRINCIPLES OF THE AMERICAN MEDICAL ASSOCIATION.

Nations, governments and societies owe their stability, strength and progress to the association of individuals whose aims are worthy, whose aspirations are high, whose designs are wise and whose purposes are steadfast, who thus may hope to reach the goal of their ambition and win the object of such organization.

How does the American Medical Association respond to this test?

1. **Worthy Aims:** The union of all the members of our noble profession of every State and Territory in a representative society for the scientific study of all that relates to our profession, the public welfare and the nation's good, as well as the cultivation of social good-fellowship.

2. **High Aspirations:** The attainment of the highest ideals in medical education and practice, and the application of the "golden rule" in dealing the one with the other.

3. **Wise Designs:** The presentation at the annual meeting and through the columns of the *JOURNAL*, free from all sectarian narrowness, of the results of individual efforts and the latest progress in our arts.

4. **Steadfast Purposes:** The indefatigable pursuit during the past fifty-four years of these ennobling precepts has added constantly to our numbers and influence, and advanced our knowledge and the scientific character of our work, which is studied and assimilated by our brethren throughout the world.

LOGIC APPLIED TO CHRISTIAN SCIENCE.

The Rev. Andrew F. Underhill, of St. John's Church, at Yonkers, N. Y., has rendered the public, and incidentally the medical profession, good service in presenting a little book, consisting of six concise disquisitions, setting forth the valid objections to so-called Christian Science. The book is dedicated to the physicians of Yonkers "in recognition of their progressive scientific spirit and unselfish devotion to the cause of humanity." The Rev. Doctor takes the Christian Scientist seriously, and to a healthy, well-constituted mind presents the case in a most convincing manner. Unfortunately, such minds do not require the revelation of the fallacies of Christian Science, and people who are already tainted with this fatal disease are apparently beyond hope. There is a large class, however, of idle, morbid, restless, dissatisfied people, who live upon the borderland between these two extremes, and who may be saved by a rational appeal to their reason. To them this book may come with saving grace. It also places in the hands of rational people a system of argument that may be extended by them to the wavering class. As a remedy we look upon all such efforts as being somewhat misdirected, but as a prophylactic measure it serves a large and useful purpose. The medical pro-

fession, as well as the public, are therefore under great obligation to Dr. Underhill for his clear insight into the subject and his convincing presentation of it. Copies of the pamphlet may be obtained by addressing the author at Yonkers, N. Y.

THE BEAUMONT MEMORIAL AT FORT MACKINAC.

There has recently been erected at Fort Mackinac, Mich., a massive granite monument, in commemoration of the experiments made by Surgeon William Beaumont, of the United States Army, upon Alexis St. Martin. The monument is capped by a granite boulder, one side of which has been planed off and bears the following inscription:

NEAR THIS SPOT
DOCTOR WILLIAM BEAUMONT U. S. A.
MADE THOSE EXPERIMENTS UPON
ALEXIS ST. MARTIN
WHICH BROUGHT FAME TO HIMSELF
AND HONOR TO AMERICAN MEDICINE.

The "Journal" of the Association of Military Surgeons points with pride to the fact that these important and well-known experiments were directed by a military surgeon. Scientific investigations conducted by members of the Surgical Corps of the United States Army were thus early inaugurated by Surgeon Beaumont. They recently have been conspicuous in the invaluable discoveries evolved in relation to the origin or mode of infection of yellow fever and malaria.

THE NEW YORK STATE HOSPITAL FOR CRIPPLED AND DEFORMED CHILDREN.

The first annual report of this institution has appeared and presents a condition that is altogether creditable and encouraging. The institution is located at Tarrytown and has accommodation for twenty-five patients, with officers, nurses, etc. During the ten months covered by the report twenty-four patients have been treated, five discharged, leaving nineteen for treatment. The institution is supported by an annual State appropriation of \$15,000 and is open for the reception of children suffering from hip-joint diseases, spinal disease, infantile paralysis, etc. There has been a great demand for admittance from the poor children of the State, many of whom, of course, have been refused on account of lack of accommodation. All the children received are from the very poor class, many of them coming from other hospitals, often too poor to procure orthopedic apparatus. Dr. Newton M. Schaffer is surgeon-in-chief and superintendent. He has long been an advocate of a State institution established on the lines of the present one, and was finally successful in securing from the Legislature recognition of the demands upon the State for the care of these little unfortunates. The first State institution of this kind was established in Minnesota in 1897. So far as we know, this is the second State institution of the kind.

The Association.

Albany County Association held its annual meeting at the office of Dr. W. B. Sabin on April 1, 1902. The minutes of the last meeting were read and approved. The report of the treasurer was read and ordered spread on the minutes. The following officers were elected for the ensuing year: Dr. William E. Lothridge, president; Dr. A. T. VanVranken, vice-president; Dr. M. J. Zeh, secretary and treasurer.

* * *

Saratoga County Association.—There have been two meetings of the Association during the past season, the first held in Mechanicsville, September 17, 1901, with eighteen in attendance; the second, the regular annual meeting, in Ballston Spa, March 11th of the present year, with thirty-four members present. The following officers were elected: President, Dr. F. A. Palmer, Mechanicsville; vice-president, Dr. H. J. Allen, Corinth; secretary, Dr. J. T. Sweetman, Jr., Ballston Spa; treasurer, Dr. W. E. Swan, Saratoga; member of Executive Committee for three years, Dr. F. W. St. John, Charlton.

Fellows to the New York State Medical Association, Dr. F. J. Sherman, Ballston Spa; Dr. G. F. Comstock, Saratoga; Dr. J. F. Humphrey, Saratoga; Dr. D. C. Moriarta, Saratoga; Dr. D. R. Kathan, Corinth.

Alternates, Dr. G. S. Hudson, Stillwater; Dr. A. W. Johnson, Mechanicsville; Dr. G. T. Church, Saratoga; Dr. F. A. Palmer, Mechanicsville; Dr. W. E. Swan, Saratoga.

Member of Nominating Committee, Second District Branch, Dr. F. A. Palmer, Mechanicsville.

Sixteen new members have been elected during the past year, making a total membership of forty-nine.

* * *

Oneida County Association held its annual meeting at the Arlington Hotel, Rome, N. Y., May 21, 1902, the president, Dr. W. B. Reid, in the chair. The meeting was the most largely attended of any in the history of the Association.

The president delivered an able address, in which the subject of appendicitis was reviewed, with histories of cases. The paper was warmly discussed.

"Placenta Previa." The author of this paper was Dr. W. L. Wallace, of Syracuse. Histories of eight recent cases were studied. In one, multipara, age 45, central implantation, continuous bleeding for several days, with fever and marked evidence of infection. Cæsarean section and removal of dead seven months' fetus. Hysterectomy was done, with recovery of patient.

Dr. E. H. Douglas discussed the paper at some length, reporting two cases in his own practice.

The following officers and two fellows and alternates were elected: President, John F. Fitzgerald, M.D., Rome; vice-president, J. W.

Douglas, M.D., Boonville; secretary, J. O. Stranahan, M.D., Rome; treasurer, John Groman, M.D., Utica; fellows, J. O. Stranahan, M.D.; J. H. Whaley, M.D.; alternates, G. W. Lehr, M.D.; Dr. W. C. Roser.

The following were elected to membership in the Association: Harry C. Sutton, M.D., Rome; Gilbert M. Lehr, M.D., Rome; William C. Roser, M.D., Northwestern; F. M. Miller, M.D., Utica. * * *

New York County Association held its stated meeting May 19, 1902, Fredrick Holme Wiggin, M.D., chairman pro tem.

"A Three Months' Ectopic Gestation and a Hydrosalpinx." Dr. A. B. Tucker exhibited these specimens: "The case I have to present this evening is that of a three months' ectopic gestation in left side and hydrosalpinx of right tube. The history is as follows: Patient 22 years of age; married eight months. History up to time of marriage good. Menstruated regularly up to March, 1902, when she began to have a slight flow from uterus, which continued until April 1st. She consulted a physician, who made a diagnosis of pregnancy.

"For two weeks after April 1st the flow ceased, then began again to flow slightly, and for this consulted a physician, who made a diagnosis of suppressed menses, and gave medicine and applied poultices to favor the flow. The flow continued up till time of operation.

"Six weeks prior to May 10th, suddenly while walking across the floor, she was seized by a violent pain in the abdomen, and dropped on the floor in a semi-conscious state, but after rest of a few days she was relieved and was able to resume her duties for a week. Upon rising from bed she was again taken with the violent pain, and has suffered ever since.

"She was treated as before described up till May 10th, when I was called to see her. I found the woman recovering from a state of collapse; pulse, 140; temperature, 99°; abdomen distended and exceedingly tender all over; dulness over lower part of abdomen. I ordered her to be removed to the hospital at once.

"Dr. George T. Harrison saw her with me the following day, and agreed with me that it was a case of ectopic pregnancy. Her condition was such that we thought it advisable to stimulate her for a few days before operation.

"On May 15th I made an abdominal incision and found a mass filling the entire left side of pelvis and extending well over to the right side. The uterus, which was enlarged, was pushed well up against the pubic ball. Upon dissecting the mass which was adherent to the intestines and pelvic floor, I delivered through the opening a three months' fetus, placenta and membranes, the left tube and ovary and right tube well distended by hydrosalpinx.

"The abdomen was partially filled with blood clots. The intestines and omentum were con-

gested, and there was every evidence of a recent peritonitis.

Description of Specimen.—Specimen consists of a three months' fetus, a little more than an inch of umbilical cord attached; the placenta and membranes, with the remaining portion of umbilical cord; the left tube and ovary (tube showing point of rupture), and the right tube showing condition of hydrosalpinx and constriction.

"Patient is making uneventful recovery. After removal of specimen and breaking up adhesions, there was considerable oozing, and I packed the pelvis with iodoform gauze, which was removed at the end of seventy hours."

Dr. George Tucker Harrison said that the walling in of the hemorrhage by adhesions had been the means of saving this woman's life. The case was also interesting because it was an exception to the general rule; that hematocoele is generally due to an incomplete tubal abortion with hemorrhage.

"The Therapeutic Use of Suprarenal Extract." Dr. William H. Bates presented the opening paper in this symposium. He was followed by Dr. Samuel Floersheim, who presented a paper on "The Treatment of Diseases of the Heart and Lungs."

"In the Treatment of Diseases of the Nose and Throat." Dr. Emil Mayer read this paper. He said that the contraction of the vessels produced by the application of suprarenal extract or adrenalin to the nasal mucous membrane was very marked and usually lasted for several hours; hence the remedy was of great value in acute inflammatory conditions generally and in vasomotor rhinitis and asthma, to say nothing of its valuable aid in many nasal operations. However, it should not be forgotten that a few persons are very unpleasantly affected by suprarenal extract, that there is nothing curative about its action, and that there certainly appeared to be a greater tendency to secondary hemorrhage after nasal operations in which it had been used. For this reason he made it a rule to use it sparingly and to invariably pack the operated side for twenty-four hours. It would clear the field of view in cases of epistaxis, thus simplifying the treatment. Its use was distinctly contraindicated in operations for the removal of adenoids and tonsils, because of the liability to subsequent bleeding when assistance is not at hand.

"In the Treatment of Diseases of the Eye." Dr. Wilbur B. Marple was the author of this paper. While admitting that its action in removing inflammatory redness was very pleasant to the patient, he contended that it was in no sense curative, and if long continued might even be harmful. These views were based solely on his personal experience with suprarenal extract. Two patients who had used this agent for many weeks without his knowledge were made distinctly worse, and both found it necessary to use a stronger solution and more frequent applica-

tions after it had been employed for a time. The ischemic action of adrenalin was certainly a great convenience to the surgeon, but the danger of infection was increased, and he was inclined to believe that it lowered the resistance of the tissues and interfered with healing. A case was mentioned in which the prolonged use of adrenalin solution had produced a remarkable and wholly unexpected result. The patient was a lady who proved to be unusually sensitive to the action of adrenalin. She had an epitheliomatous growth on the inner edge of the eyelid, and pending its removal by surgical operation a solution of adrenalin was prescribed as a placebo. The patient was not seen again for some months, and then it was learned that under the influence of the adrenalin, probably by interference with the blood supply, the growth had slowly scaled off, and had eventually totally disappeared, leaving a better cosmetic result than could have been secured with the knife.

"In Obstetrics and Gynecology." Dr. George Tucker Harrison read this paper. In his experience suprarenal extracts had proved useful in checking obstinate hemorrhage in a case of chronic hyperplastic endometritis; also in certain cases of uterine myomata. There had been no untoward effect—indeed, its tonic effect on the heart was most salutary. Five grains of the extract were given three times a day in capsule.

"In Diseases of the Genito-urinary Tract." Dr. Edward L. Keyes, Jr., presented this communication. In it he expressed the opinion that suprarenal extract had only a restricted application in this department of surgery. It was useful, for example, in preventing the troublesome bleeding often associated with the simple operation of meatotomy, but even here he felt it necessary to insure against subsequent bleeding by the application of a compound of formaldehyde and gelatin, known as glutol. A 1 to 2,000 solution of adrenalin or a 5 per cent. solution of suprarenal would usually check moderate urethral hemorrhage, and it served a useful purpose in the differentiation between renal and vesical hemorrhage, but in profuse bleeding from the bladder suprarenal extract did not exhibit any superiority over alum and other astringents.

Dr. W. Freudenthal reported a case of obstinate bleeding, following incision of the tonsil, which had been promptly controlled by one application of the powdered extract. He was disposed to differ with those who thought it a stimulant of the heart, because in a case of asthma he had repeatedly noted an irregular heart action and precordial distress in connection with the administration of suprarenal.

Dr. Francis J. Quinlan found suprarenal useful, or, better still, adrenalin, in cases of vasomotor rhinitis, and in nasal surgery generally. He called attention to the diminished liability to cocaine poisoning when used in conjunction with adrenalin.

Dr. George B. McAuliffe preferred a freshly

prepared solution to adrenalin, on the ground that the latter gave no warning by its odor when it had undergone changes rendering it unfit for use. He also disagreed with the last speaker concerning the lessened risk of cocaine poisoning when used with suprarenal. In the treatment of epistaxis with suprarenal solution, the latter should be applied on pledgets of cotton.

Dr. H. D. Saril thought suprarenal and adrenalin were useful in graduated tenotomies on the eye, in small operations on the conjunctiva and in iridectomies in cases of glaucoma, but while admitting that adrenalin was a powerful hemostatic, he considered it absolutely valueless as an antiphlogistic.

Dr. D. S. Dougherty said that adrenalin was a much more pleasant preparation than suprarenal extract. He had found it of the greatest value in acute laryngitis, characterized by great turgidity of the tissues.

Dr. Ernest V. Hubbard remarked that if suprarenal was a stimulant to the heart muscle it should be indicated in just those cases in which we were accustomed to prescribe digitalis.

Dr. Charles G. Am Ende exhibited a solution of adrenalin three months old that had been kept from spoiling by boiling it in a test tube, the mouth of which was plugged with cotton.

Dr. William J. Robinson called attention to the fact that the speakers had used the term suprarenal extract, whereas in most instances they had made use of the suprarenal gland. A scale preparation of the extract was found in the market, but was very expensive and apparently had been little used. He could not see any good reason for using suprarenal in chronic disease of the heart, except as a temporary expedient; it was illogical to suppose that it was curative.

Dr. Bates said that several physiological chemists had shown that there was no secondary dilatation of the blood vessels following the use of suprarenal, hence it could not be responsible for secondary hemorrhage.

Dr. Floersheim said that he had given sixty grains of suprarenal at a dose without causing excessive stimulation of the heart, and had given half an ounce of the suprarenal powder in the course of eight hours without harmful result.

Dr. E. Mayer said that he had never observed any diminution in the effect when suprarenal or adrenalin was used for a long time.

Dr. Marple observed that he was not the only one who had noted the deleterious action of suprarenal on the eye.

Dr. G. T. Harrison mentioned a case in support of the view that there is no secondary dilatation of the vessels.

* * *

Erie County Association.—The special meeting called for the purpose of affording opportunity for members of the profession to join the Association in anticipation of the meeting at Saratoga was held at the University Club, Buf-

falo, Thursday, May 15th. A paper on "Colles Fracture" was read by Dr. John Parmenter, of Buffalo, and the discussion was opened by W. C. Phelps and Eugene A. Smith. Following this case a paper on "Brewers' Yeast in Therapeutics," by Dr. Julius Ullman. The discussion was opened by Dr. Charles C. Stockton. Fifteen new members were received, and at the close of the meeting a collation was served in the clubhouse.

* * *

Kings County Association held its regular monthly meeting at 315 Washington street, on the evening of May 13th, the president, Dr. Arrowsmith, in the chair. About forty members were present. Dr. C. H. Goodrich read a paper on "Stercoral Ulcer," giving the history of a case in which operation was performed and a perforating ulcer was found, due apparently to the stercoral irritation. Dr. Paine discussed the paper at some length, and spoke of an obscure case that he had at the time under treatment, saying that the paper had given him considerable enlightenment in regard to the symptoms. Dr. W. J. Cruikshank read a paper on "Leucoplakia Buccalis," which will be found in full in the JOURNAL. The paper was discussed by Drs. Prince A. Morrow, Harlow Brooks, S. Sherwell and Lefferts A. McClelland.

Dr. Morrow said that the paper was such an excellent résumé of the literature of the subject that there was little more to be said. The etiology of the disease is obscure and the treatment unsatisfactory. Syphilis seems to have some causative relation to the disease, as does the use of tobacco, although antisiphilitic treatment is of no benefit. The disease is almost always found in the male. Among his own forty or fifty cases but one was a female, and she used tobacco. The usual location of the patches is also an evidence of the influence of tobacco.

In the matter of prognosis it is important to remember the tendency to adeno-carcinomatous degeneration—30 per cent. or more of all cases.

For treatment, alkaline washes, thorough cleanliness and avoidance of tobacco are to be remembered. If a caustic is used it must be thoroughly, otherwise it acts merely as a stimulant. Dr. Sherwell and others reported excellent results from acid nitrate of mercury. Antisiphilitic treatment is valueless, except that in some cases the hypodermatic use of calomel seems beneficial.

Dr. Brooks spoke of the pathology of the disease. He said that the matter was somewhat misunderstood. There are certain changes in the epithelium with a deposit of keratin and a proliferation of the connective tissue.

Experimentally Ziegler has produced similar patches by the continued application of iodine and iodine salts. This would seem to counterindicate iodine in the treatment of the disease. Dr. Brooks did not agree with Dr. Morrow that the disease is confined to the mouth. He spoke of

a case of leucoplakia of the penis in a man whose wife had died of carcinoma uteri.

Dr. Sherwell agreed with Dr. Morrow as to the relation of syphilis and tobacco to the disease. His statistics were the same as Dr. Morrow's. In reply to a question he said that he used the acid nitrate of mercury in the regular 50-gr. solution, using absorbent cotton to prevent its coming in contact with the surrounding tissues. He thought that any other equally powerful caustic would do as well, but he preferred the mercury because it was so readily neutralized at the right moment.

In executive session the minutes of the previous meeting and of the Executive Committee were read and approved. Owing to the fact that the date of the June meeting was the same as that of the A. M. A., it was voted to omit that meeting.

* * *

The Fifth District Branch held its eighteenth annual meeting at Hosack Hall, in the New York Academy of Medicine, at 17 West 43d street, on Tuesday, May 6, 1902. The meeting was convened at 2 o'clock by the chairman, Dr. Emil Mayer, and there were present Drs. Mary Gage Day, E. L. Cocks, E. H. Squibb, Irving D. Leroy, M. C. Conner, Gerrit F. Blauvelt, G. F. Leitner, C. D. Kline, E. F. Brush, James L. Preston, F. W. Loughran and others, to the number of seventy.

The minutes of the previous meeting held in the interim were read and approved.

Dr. Loughran presented the report of the Committee on Public Health, and made the recommendation that members of the Association would assist committees on public health materially if the investigations were made in as complete a manner as possible for presentation to the committee.

There was no report from the Committee on Legislation. The treasurer presented his report, and an Auditing Committee was appointed, consisting of Dr. C. E. Denison and Dr. F. W. Loughran, who reported the accounts as correct, and the treasurer's report was then received and adopted.

The amendments to the By-Laws were voted upon and unanimously accepted.

The Nominating Committee presented the names of the following officers: For president, Dr. Parker Syme, New York City; for vice-president, Dr. Charles E. Townsend, of Newburg; for secretary, Dr. C. S. Payne, of Liberty; for treasurer, Dr. E. L. Cocks, of New York City. For Nominating Committee to the State Association, Dr. J. W. S. Goutley, of New York, and Dr. W. H. Biggam, of Brooklyn. These were unanimously elected.

Dr. Wiggin presented a prospectus of the forthcoming meeting of the American Medical Association, and called attention to the fact that special rates were to be made for the round trip from New York to Saratoga, Montreal, Quebec

and Boston, and members and their friends were cordially invited to join the party.

The president read a communication from the American Electro-therapeutic Association, in which the members of the Fifth District Branch and the State Association were cordially invited to be present at the annual meeting at the Hotel Kaaterskill, September 1st to 3d. On motion of Dr. Squibb the secretary was requested to extend the thanks of the members of this Association to the American Electro-therapeutic Association for its kindness in extending the invitation.

At 2.30 P. M. the scientific session began with the address of the president, followed by a paper by Dr. Walter M. Brickner on "The Use and Usefulness of the X-ray in Medical and Surgical Practice," which was discussed by Drs. Knopf, Newman and Gottheil, and the discussion closed by Dr. Brickner.

The second paper was by Dr. D. Bryson Delavan on "The Province of the General Physician in Diseases of the Upper Air Passages," and was discussed by the president and by Dr. Rupp and Dr. Shauffler.

Following this was a third paper by Dr. W. S. Gottheil on "Illustrations of Skin Affections," stereopticon exhibition, which was discussed by Dr. W. R. Townsend and Dr. Lee.

The president then presented Dr. Syme, president-elect, who in a few words thanked for the honor extended, and stated that he would do his utmost for the future welfare of the Association.

The minutes of this meeting were thereupon read by Dr. Cocks and approved. The meeting then adjourned.

* * *

Ulster County Association held its regular quarterly meeting at The Huntington, Kingston, N. Y., May 19th, at 7.30 P. M. The president, Dr. Preston, presided, and the following members were in attendance: Drs. Van Høevenberg, Day, Preston, Thompson, Chandler, Huhne, Stern, Asterout and Divine. Drs. Parker Syme, C. E. Quimby and J. H. Burtenshaw, of New York, were also present.

The Ulster County Medical Society had been invited to meet with us, and fourteen members, in addition to those who belong to both organizations, accepted the invitation.

As is customary, the scientific program preceded the business session.

The president opened the meeting by inviting those in attendance to report cases of interest or present specimens.

Dr. Van Høevenberg presented kidneys removed from a middle-aged woman on dissection, showing marked anomalies. Each kidney had three renal arteries, three renal veins, the right, one outer, and the left, two. There were also depressions showing that cystic degeneration had been present.

Dr. Loughran then presented a specimen re-

moved at autopsy from a woman dying as the result of an extra uterine pregnancy.

The history given was as follows: Six weeks after symptoms of pregnancy were present she complained of considerable pain, which gradually increased, until at the fifth month she was prostrated and by the eighth confined to her bed. At term he was called in consultation by the physician in charge, and found her suffering considerable abdominal distress, but no labor pains were present. The abdomen was much distended, and the pulse 140 and weak.

On external examination both thought there was a twin pregnancy, as something resembling a head was felt in the vicinity of the liver, and in the left iliac fossa another head seemed to be present. Internal examination finally revealed the os behind the pubis and the uterus empty. She died from exhaustion before Cæsarean section could be performed. Autopsy revealed a very large placenta attached to the external uterine wall and a much distended sac, containing a full-term fetus, which had been dead for some time, weighing nearly eleven pounds. The round structure which they had supposed to be a second fetal head, lying in the left iliac fossa, proved to be the uterus.

There being no more specimens to present and no cases, Dr. Preston introduced Dr. Parker Syms, who explained to us, showing some of the instruments used, his very interesting and successful way of removing an enlarged prostate. He stated he had performed the operation twenty times with perfect results, save in three cases, which, for varying lengths of time, were troubled with incontinence. The longest period was three months. An article describing the operation was published in the *American Medical Journal* November 2, 1901.

Dr. C. E. Quimby then gave us a very interesting talk on "Some points in Physics and Physical Diagnosis."

He explained very clearly by the use of tubes why there is such a marked difference in the inspiratory and expiratory sounds in the normal lung, and why, in a consolidated lung, the two sounds more nearly resemble each other. He drew our attention to the necessity of closely analyzing the sounds we hear, of duly considering the chest wall in such analysis, and of all physicians having the same name for the same sound. He also stated that a disease, taking pleurisy with effusion for example, will have certain characteristic physical signs which will be present in every case.

After some discussion on this talk Dr. Burtenshaw was introduced and addressed us on the subject, "Subinvolution of the Uterus and Appendages, with Its Treatment."

He claimed that the chief causes of the condition were a hypertrophic endometritis present

previous to the puerperium and infection during the puerperium.

He strongly urged that all obstetricians should rightly apply the pad and binder, and assure themselves before dismissing their patients that the uteri are well involuted.

Symptoms of the trouble most commonly found, he said, were coated tongue, constipation, increased lochia and a dragging pain in the back.

Treatment recommended: Stroke and knead uterus, using strychnia, quinine and sometimes one-quarter-grain doses of ergotin internally.

If no relief is gained an examination should be made. Any injuries found, especially lacerations of cervix and perineum, should be repaired and the uterus curetted. A pessary, rightly fitted and placed, is often of great service, and douches, correctly taken, almost invaluable. In taking douches for this purpose, not less than two or three gallons of water should be used.

After Dr. Burtenshaw finished his talk, Dr. Van Heevenberg moved that a vote of thanks be extended to the gentlemen from New York who had given us such instructive and pleasant talks. The motion was seconded and unanimously carried.

A short discussion then took place on Dr. Burtenshaw's talk.

Dr. Lambert inquired how Dr. B. would advise the pad and binder to be applied. He said his custom had been to make the binder a little tighter over the uterine fundus. Dr. B. advised a towel placed above the fundus for a pad. His only objection to Dr. L.'s method was that the binder tight around the thorax might make the patient uncomfortable.

The period taken for complete involution was discussed. Dr. B. stated that his experience taught him it took from eight to ten weeks. Dr. Van Heevenberg stated he had found flushing the colon with hot water, in addition to the vaginal douche, very beneficial.

This closed the scientific program of the meeting, and a business session was called. Dr. J. J. Wolf, of Rondout, was admitted to membership. A motion for adjournment was then made, seconded and unanimously carried.

The adjournment was only to the dining-room, where a course dinner was served in honor of the guests of the Association and greatly enjoyed by all.

In the short after-dinner talks a union of the Society and of the Association of the State was warmly advocated by members of both organizations.

Notice.—A number of requests and orders have been received recently for copies of our *JOURNAL* for January, 1902; unfortunately our supply is exhausted. We will be glad to pay 10 cents each for one dozen copies sent to the Association rooms, 64 Madison avenue, New York City.

Ulster County Association held its regular quarterly meeting at the Huntington Hotel, Kingston, on Monday, May 19th, at 7.30 P. M. The Association extended a courteous invitation to the Ulster County Medical Society to be present at this meeting, which was cordially responded to. The scientific program consisted of a paper by Dr. Parker Syms, on "Perineal Prostatectomy by a Special Method," also a paper by Dr. Charles E. Quimby, entitled, "Some Points in Physics and Physical Diagnosis." This was followed by a paper on "Subinvolution and Its Treatment," by Dr. James Hawley Burtenshaw. At the close of the meeting refreshments were served. The spirit of good-fellowship prevailed and a good social time was enjoyed.

* * *

Broome County Association held its annual meeting, Tuesday, April 8th, at 10.30 A. M., at the office of Drs. Orton and Stearns, Binghamton. There were present Drs. Farnham, Farrington, Knapp, Quackenbush, Hough, Stanwix, Stanley, Stearns, Eggleston, Forker, Greene and Higgins.

The following officers were elected for the coming year: President, Dr. L. D. Farnham; vice-president, Dr. W. A. White; secretary, Dr. C. W. Greene; treasurer, Dr. William H. Knapp.

Dr. Farrington was elected delegate, and Dr. Greene alternate to the State Convention, also to the American Medical Association. Dr. Stearns was elected a member of the State Nominating Committee of the Third District Branch.

Dr. Stearns read an excellent paper on the treatment of cancer. He advocated the paste treatment. The paper was discussed by a majority of the members present.

Dr. Higgins, of Cortland, followed with a paper on "Examination of Blood," with demonstrations, illustrated by microscope and lantern slides. Dr. Stanwix was proposed for membership.

The meeting proved to be one of unusual interest.

* * *

Orange County Association held its regular monthly meeting at the office of Dr. M. C. Conner, Middletown, N. Y., on Wednesday, May 21, 1902, at 2 P. M. There was a good attendance of the members and invited guests. The scientific session was opened with reports of cases and presentation of specimens, in which all those present took an active part.

Dr. A. W. Preston, Middletown, then read an excellent paper, entitled, "The Common Diarrheal Diseases of Children." The Doctor gave a complete résumé of the etiology, symptoms, diagnosis and treatment of the various affections so frequent during the summer months, laying great stress on the prophylactic and hygienic features in every case. The importance of proper dietetic care was emphasized. The complete withdrawal of cow's milk for at least twenty-four hours and the substitution of animal broths

and albumen water was advocated. In the way of medical care irrigation of the colon with a warm saline solution, or in very severe cases tannic acid, was considered the most efficacious means of treatment at our command. Internally, bismuth subnitrate or subgallate in large doses was mentioned. Occasionally tannalbin had been found useful in persistent cases. But much more benefit was to be expected from the proper hygienic and dietetic measures than in medication. Cholera infantum requires heroic treatment; hypodermics of minute doses of morphine combined with atrophine, gavage, colonic irrigation, external application of heat stimulants, etc., the same as in any violent poisoning. In all these diseases the Doctor strongly urged that the mother or nurse be provided with either written or printed directions regarding the preparation of the food for the infant and the care of all the discharges during its illness. At the conclusion of the paper the Doctor was given a hearty vote of thanks for his very excellent remarks, which were of especial value just at this time of the year. In the discussion following the reading of the paper all present took part, and many cases were cited illustrating the plainly infectious nature of these affections and the care necessary to avoid reinfection from either the food or the discharges. At the business session letters of regret were read from Dr. Many, of Florida, who was unable to read a paper on account of illness, and Dr. Nugent, of Unionville, who was detained by an urgent case, and who had expected to be present and read a paper on "Infantile Paralysis." Attention was called to the meeting of the American Medical Association at Saratoga, June 10-13, 1902, and several expressed their intention of attending. One application for membership was promised. The meeting then adjourned until Wednesday, June 18, 1902.

* * *

NEW MEMBERS.

The list of applicants for membership in the American Medical Association, not only among our own members of the State Association, but also of new recruits, is swelling rapidly. In Erie County there was such a demand for an opportunity to become members that a special meeting of the Erie County Association was held in Buffalo on May 15th, at which fifteen new members were received, and from the report of the meeting which we have received a spirit of such good-fellowship was apparent that not only was the loyalty to the Association cemented, but a seed was sown from which a rich harvest may be confidently expected.

The following list of applicants for membership in the A. M. A. has been obtained since April 30th through letters sent out by the Committee on New Members:

Dr. C. Newton Thompson, 67 West 90th street, New York City.

Dr. Richard G. Wiener, 48 East 65th street, New York City.

Dr. Max Wolper, 217 East Broadway, New York City.

Dr. Francis W. St. John, Charlton, Saratoga County, N. Y.

Dr. John F. Moore, 156 West 94th street, New York City.

Dr. W. B. Gibson, Huntington, N. Y.

Dr. Forde Morgan, 200 West 106th street, New York City.

Dr. J. L. Watt, College Point, N. Y.

Dr. E. L. Keyes, 109 East 34th street, New York City.

Dr. J. J. McGrath, 105 East 73d street, New York City.

Dr. Emanuel Libman, 180 East 64th street, New York City.

Dr. Patrick Henry Fitzhugh, 36 West 35th street, New York City.

Dr. Rowland Cox, Jr., 547 Madison avenue, New York City.

Dr. Thomas E. Bullard, Schuylerville, N. Y.

Dr. James T. Park, 8 Pearl street, Sandy Hill, N. Y.

Dr. Dudley D. Roberts, 165 Clinton street, Brooklyn, N. Y.

Dr. Charles D. Kline, 39 N. Broadway, Nyack, N. Y.

Dr. William H. Kahrs, 1585 Washington avenue, New York City.

Dr. F. P. Hammond, 129 East 116th street, New York City.

Dr. J. C. Davis, 24 Chestnut street, Rochester, N. Y.

Dr. Robert E. Doran, Craig Colony, Sonyea, N. Y.

Dr. Henry E. Clarke, Glens Falls, N. Y.

Dr. W. Travers Gibb, 55 West 38th street, New York City.

Dr. Alfred B. Tucker, 181 West 75th street, New York City.

Dr. Chauncey Rakestraw, 19 West 35th street, New York City.

Dr. Samuel M. Evans, 115 West 39th street, New York City.

Dr. Domenic Saladino, 387 Broome street, New York City.

Dr. Theodorius Bailey, 100 West 80th street, New York City.

Dr. Newton M. Schaffer, 28 East 38th street, New York City.

Dr. Robert H. Wylie, 36 West 35th street, New York City.

Dr. Henry D. White, Hopewell Junction, N. Y.

Dr. Charles Stedman Bull, 47 West 36th street, New York City.

Dr. William T. Shanahan, Craig Colony, Sonyea, N. Y.

Dr. Henry H. Tyson, 47 West 51st street, New York City.

Dr. John J. Tierney, 182 East 111th street, New York City.

Dr. B. R. Wakeman, 67 Main street, Hornellsville, N. Y.

Dr. Bancroft F. Bishop, Garrattsville, N. Y.

Dr. Morris Manges, 941 Madison avenue, New York City.

Dr. Charles J. Walch, 1221 S. Salina street, Syracuse, N. Y.

Dr. Joseph Collins, 32 West 38th street, New York City.

Dr. Henry P. Jack, 39 Greenwood street, Canisteo, N. Y.

Dr. J. J. Montgomery, Luzerne, N. Y.

Dr. Jane Howell Harris, Beverly Road, Flatbush, Brooklyn.

Dr. G. C. McNett, Bath, N. Y.

Dr. Charles R. Phillips, Hornellsville, N. Y.

Dr. Sherman D. Maynard, Roscoe, N. Y.

NEW MEMBERS IN CONNECTICUT.

Dr. Egbert L. Smith, Hotchkissville, Conn.

Dr. Witter K. Tingley, 35 Main street, Norwich, Conn.

Dr. Henry Wilson Ring, 187 Church street, New Haven, Conn.

NEW JERSEY.

Dr. W. H. Davis, 42 N. Arlington avenue, East Orange, N. J.

LIST OF NEW SUBSCRIBERS TO THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION.

Dr. Clarence S. Elebash, 118 East 19th street, New York City.

Dr. Walter Brooks Brouner, 256 West Twelfth street, New York City.

Dr. W. G. Thompson, 34 East 31st street, New York City.

Dr. C. A. Greenleaf, 53 South Fitzhugh street, Rochester, N. Y.

Dr. Christopher J. Hillis, Griffin Corners, N. Y.

Dr. H. W. Eggleston, State Hospital, Binghamton, N. Y.

Dr. Seymour Basch, 48 East 63d street, New York City.

Dr. Edwin Holmes, 44 West 49th street, New York City.

OBITUARY.

Dr. John K. Leaning died at Cooperstown, N. Y., Friday, April 4, 1902, aged 78 years 5 months. He was taken on Sunday with a severe pleuritic pain in his side, which rapidly developed into pneumonia, from which he died on the fifth day of his sickness.

Dr. Leaning was born at Canajoharie, Montgomery County, N. Y., November 10, 1823.

He graduated from Castleton Medical College in 1848, and for fifty-four years had practiced in Cooperstown and vicinity.

Dr. Leaning was a member of the American Medical Association, one of the founders of the New York State Medical Association, a permanent member of the New York State Medical Society, an active and leading member of Otsego County Medical Society, and at the time of his death was president of the Board of Physicians and Surgeons of Thanksgiving Hospital, Cooperstown, N. Y.

THE REORGANIZATION.¹

BY EMIL MAYER, M.D.,
President.

In accordance with the laws of this Association it becomes my duty to present to you at this meeting a report of the condition of affairs in this district, to render account of the stewardship you honored me with and to make such suggestions as may seem necessary for the future welfare of the district.

There seemed to exist some little confusion among many of our members as to what constituted membership in a district branch of this Association, and this was made clear whenever occasion arose.

The New York State Medical Association divided the sixty-one counties into five branches geographically, and each county association is a member of a branch. In counties where no association exists, the members are elected to the district branch after being indorsed by one of our members in that or an adjoining county, by the executive committee of the branch, composed of the titular officers of the branch and the presidents of county associations in that branch. Every member of the branch is thus a member of the New York State Medical Association, all of whom have but to indicate the desire and they may become members of that large and influential body, the American Medical Association.

The first work before us was the building up of county associations, and with the hearty cooperation of the vice-president of this Association, Dr. Mary Gage Day, and Dr. Henry Van Hovenberg we were enabled in very short order to start an organization where none had previously existed in Ulster County. This young organization has grown and bids fair to be one of the most active organizations in the district.

Through the friendly assistance and cordial help of Dr. S. C. S. Toms and Dr. C. D. Kline, of Nyack, and Dr. N. B. Bailey, of Haverstraw, an organization was formed in Rockland County that is active and full of vigor.

So two new counties have been organized during the year and a total number of seventy-one new members has been added to our list in the district during that time.

The next work of importance was the adoption of by-laws, and where but few of the organizations in the district had by-laws, to-day every single one is so provided, and thus have arranged for the times of their meetings, whether they be monthly, bimonthly, quarterly or semi-annual.

Next, attention was drawn to the meetings themselves and this has by no means been the least of the work that has been done. Every

single meeting that has been held in each county organization has had its scientific aspect, and to this end I have been helped more than a little by the generous, prompt and cheerful response of the members of the Association upon whom I have called. These gentlemen left their busy fields of work and homes to travel, sometimes a whole day, going and returning, to present matters of scientific interest to their colleagues in various portions of the State, and in return they themselves have been benefited, because each and every one of them has returned with the information that the gentlemen before whom they spoke were earnest and sincere and grateful to them for presenting modern thought and modern medicine to them in a clear and intelligible way. To name but a few would be to make invidious distinction. To each and every one, even to those who responded and declared themselves to be ready and upon whom I could not call, I beg to extend my most sincere and cordial thanks for their hearty cooperation.

In former years the district contented itself with the annual meeting which it was compelled to have by law. This year it was believed that benefit would accrue to our Association if a semi-annual meeting was held, so arrangements were perfected and a most enthusiastic meeting was held in the city of Newburg on the 20th of November. This meeting was very well attended and its details are sufficiently known to you through the medium of our JOURNAL; and here I may say that the value of the JOURNAL has shown itself to be very great indeed, in that it has enabled us to announce the forthcoming meetings and the details of the meetings that were held, besides giving us an opportunity to make such announcements as became necessary from time to time.

The Chair has the honor to report to you that during the year past he has visited every single association in the district, thus obeying the by-law of the State Association, and in so doing has been enabled to become personally acquainted and to come in touch with the members of the Association.

This address would be incomplete if it were not mentioned that my associates, the officers of the Fifth District Branch, have been efficient, helpful and prompt in all that was asked of them. The principal work of the vice-president, Dr. Mary Gage Day, in establishing an active organization in Ulster County has already been alluded to. The secretary, Dr. Edmund L. Cocks, has always responded to every demand made upon him; the treasurer, Dr. E. H. Squibb, has attended to his duties, and it seems but fitting that after many years of service as treasurer of this branch that his voluntary retirement should be noted by an indorsement of his exactness and faithfulness.

¹Address read at the Eighteenth Annual Meeting of the Fifth District Branch of the New York State Medical Association at the New York Academy of Medicine, May 6, 1902.

To the various presidents of the county associations, who form the executive committee of the district branch, my thanks are due for their hearty cooperation and prompt attendance at meetings, and especially are they due for the great help they have been in furthering scientific discussions at their respective meeting places. So that, all in all, the report that I make to you of the Fifth District Branch is that of progress—progress not in the sense that is so often presented when a committee has done no work and merely makes a statement, but progress in a striving forward to a higher and better condition of things, to that time which all medical men look forward to when we will have a perfect Association, and of men banded together for the best good of their profession and for the best good of the community in which they are interested.

In yielding up my position to my successor I ask of you to give him that same hearty cooperation that you have given to me, and as for myself, while I willingly and cheerfully return to the ranks from whence I came, my interest in the Association and in this Southern or Fifth District Branch in particular will always be such that will find me ready and willing to give whatever aid may be in my power.

For the honor you have done me in placing me in this important position accept once more my most sincere thanks, and now, with your permission, I will proceed to the scientific business of the day and call upon the first paper to be read.

Interstate Reciprocity is illustrated by the indorsement of other State licenses by the New Jersey Board under the four following conditions: (a) The candidate for indorsement must present with the application a duly attested certificate of academic education; (b) the candidate must have studied medicine at least four years, including three courses of medical lectures in different calendar years in a legally incorporated medical college or colleges prior to receiving the degree of Doctor of Medicine; (c) the candidate must have passed a State examination of substantially the same kind and grade as that required by this board and must have received a State license; (d) the candidate must have obtained a total average marking of at least 75 per cent. prior to receiving a State license. Candidates must designate the State license to be indorsed, and the acceptance of an application for indorsement cannot be determined until the forms provided by this board have been properly filled out and submitted for approval.

Inquiries should be directed to the secretary, Dr. E. L. B. Godfrey, Camden, N. J. Temporary licenses are granted to a legally qualified physician of another State upon application by one of New Jersey, to take charge of his practice

during the resident's absence, and good for from two weeks to four months.

* * *

Dr. Jacobi Resigns.—Dr. Abraham Jacobi, after thirty-two years active service in the College of Physicians and Surgeons as professor of diseases of children, has tendered his resignation to that institution, and will retire at the end of the present term. Dr. Jacobi enjoys an exceptionally high standing in his profession, and the announcement that he would leave their ranks was received with many expressions of regret by his colleagues. He became lecturer on infantile pathology in the College of Physicians and Surgeons in 1857, and in 1860 the first chair upon diseases of children established in America was instituted in the New York Medical College, with Dr. Jacobi as professor. In 1865 he was professor of diseases of children in the University of New York, but resigned to become clinical professor of diseases of children in the College of Physicians and Surgeons. In 1895 he received an offer of the clinical professorship in one of the largest schools in Germany, but he refused to leave the land of his adoption.

* * *

Fevers Upon Application and While You Wait.—The *Journal of Osteopathy* has the following editorial upon a new plan in regard to the treatment or prophylaxis of "fevers":

"The time may come when fevers may be artificially produced. And why? Because fevers are the agencies for the converting of dead substances in the body into gases in order that they may be more easily and more effectually expelled through the excretory system. The plan is not to wait until the fever arrives of its own accord. Why not anticipate it and start it, and thus burn out the obnoxious sewage system before it clogs up the point of actual obstruction? Why not? The time may possibly come when a patient will come to a hospital or sanitarium conducted along intelligent lines and apply for a fever, and be supplied with it just as carefully as though he came to have a mangled limb cut off. Why not? Fevers are a sort of house-cleaning, a brush-burning, an internal cleansing which nature orders when no other expedient will answer. It is a discredit to the profession of healing that the condition is ever allowed to progress so far as to result in fever. The only allowable fevers in future osteopathic practice will be such as are induced, superinduced let us say."

But this osteopathic fever, we suppose, must be inaugurated osteopathically, *i. e.*, by the peculiar kind of massage which is not massage. The foregoing suggestions are printed upon the same page with another editorial on the treatment of spinal curvature, in which it is said that

"Spinal curvature is frequently corrected by working one vertebræ (*sic!*) after another back into its place. Thousands of curved spines have been cured by this simple mechanic and sensible process."—*Am. Med.*, May 10, 1902.

A Summary Dismissal with costs for the defendants was ordered by Justice Leventritt, of the New York Supreme Court, on a mere statement of the counsel's case for the plaintiff in a recent claim for \$100,000 damages against Drs. Austin Flint, Allen Fitch and O. J. Wilsey, on the charge that they had conspired to secure the false imprisonment of a lady who had been committed to a private asylum for the insane at Amityville, L. I., on the examination of the two former and who had been received by the latter, all acting in accordance with regular legal proceedings and with their lawful obligations. The defendants made no effort to avoid a trial, but prepared for a complete and thorough adjudication.

* * *

Nurses' Movement for Registration.—The New York State Nurses' Association completed its organization at the annual meeting held in Albany on April 15th, when Miss Isabel Merritt, of Cherry Valley, was elected president. The society is now ready to consider seriously the question of legislation for registration, which will ultimately place training schools for nurses under the supervision of the Board of Regents, establishing thereby a more uniform basis of nursing education in the State and eventually making trained nursing a recognized profession. The practical result of registration will be the protection of the public against impostors and a gradual raising of the standard of admission to training schools, with a more carefully prepared curriculum of both theoretic and practical instruction.

* * *

Abolition of the Newspaper Publication of Personal Medical Advertisements.—A paper read by Dr. J. W. Kyger before the Kansas City Academy of Medicine on "The Decadence of the American Race" was deemed of sufficient importance to warrant the appointment of a committee to draft resolutions expressing the feeling of the regular medical profession in regard to the abatement of one of the causes of this condition, and also asking for the cooperation of the profession throughout the United States. *Whereas*, It can and has been shown, by ample statistics, that the American race is rapidly decreasing in its birth-rate, thereby threatening ultimate and complete decadence of the race, and *Whereas*, Such decadence has become so apparent that it should claim the serious attention of those of influence and power to in any degree lessen this evil, and *Whereas*, Without a special effort to investigate, it must have been observed by the most indifferent with what flagrant violation of all sense of delicacy the public press gives place to advertisements of nostrums and means intended to prevent or cut short pregnancy, these advertisements appearing in a column of the paper set apart for such purpose under the name of "Personal Medical

Advertisements," and referred to as "Guarantees," "Sure Relief," "Sure Prevention," etc., occupying in some Sunday editions of reputable papers as much as two columns, destined to fall into the hands of all classes, and *Whereas*, We recognize the press as a most potent factor in the education of the masses; be it *Resolved*, By the Academy of Medicine of Kansas City, Mo., that we respectfully recommend that a censorship over the public press should be exercised to the end of correcting such practice of publishing advertisements as those referred to in the foregoing. Be it further *Resolved*, That it should be deemed of sufficient moment for the attention of the Post-Office Department of the United States of America restricting or prohibiting the distribution of such papers, periodicals or magazines through the United States mail, to be called to the matter, if they continue to so prostitute their columns with such matter. And be it further *Resolved*, That a copy of these resolutions be sent to every State medical association in the United States, urging their cooperation in this movement by the adoption of these resolutions. *Resolved*, That we request the secretary of every State medical association adopting these resolutions to forward two copies, one to the American Medical Association and the other to the Postmaster-General, petitioning for relief from this destructive influence.

* * *

Prize Essay on the Dangers from Self-drugging with Proprietary Medicines.—The Colorado State Medical Society offers a prize of \$25 for the best essay, for circulation among the laity, upon the dangers of self-drugging with proprietary medicines. The competition is open to all. Essays must be typewritten, in the English language, must contain not more than 3,000 words, and must be submitted before June 15, 1902. Each essay must be designated by a motto and accompanied by a sealed envelope, bearing the same motto, and enclosing the name and address of the author. The essay receiving the prize will become the property of the Society for publication. Others will be returned to their authors. Essays should be sent to the Literature Committee, Dr. C. A. Graham, secretary, Stedman Block, Denver Col.

Book Reviews.

MOSQUITO BRIGADES, AND HOW TO ORGANIZE THEM.—By Ronald Ross, F.R.C.S., D.P.H., F.R.S., Lecturer in Practical Medicine at the Liverpool School of Tropical Medicine, Major Indian Medical Service, retired. One of the most important discoveries in these progressive times of scientific medicine is the fact that the germs of the several of the most important tropical diseases, such as malarial fever, yellow fever and elephantiasis, are inoculated into human beings by the bites of mosquitoes. This has had no influence upon the germs of the disease, but it has revolutionized tropical hygiene and prophylaxis. It therefore becomes of the greatest importance, not only in the tropics, but in all climates where mosquitoes abound, not only to

protect the houses and the inhabitants from the infection of these pests by means of wire screens, but it has been found practical to "carry the war into Africa," as it were, and organize methods of wholesale destruction of the pests themselves. As Major Ross says in his preface, "Where such measures can be carried on, not only the rich, but the whole population will be protected and individuals will be saved the trouble and expense involved in providing their houses with screens."

The object of the little book in discussion is to show how war against mosquitoes can best be waged. The information given is based upon experience gained during many years' study of mosquitoes in various parts of the world. The author is "preaching a general crusade of a more novel and a more useful character than most crusades and calls for general volunteers under the flag." This is really a most interesting and instructive little book. There is every reason why each member of the medical profession should be a leader, not only in thought, but in practical work in organizing in his locality a vigorous and constant campaign against the mosquito pest. It is not necessary to make use of such expensive methods of deluging wholesale particular districts with petroleum oil, as was done by Dr. Doty upon Staten Island last year. In "Mosquito Brigades" Major Ross points out in detail how inhabitants of any locality can organize for destroying mosquitoes, not only in swamps and ponds, but also in little collections of water in the streets and in back yards of the houses of every village, and demonstrates the fact that we need not go far from our homes to find the source of millions of these pests, for they are frequently generated in some old tomato can half full of rainwater standing under our bedroom window. This book should be in the hands of every member of the profession in the country. If the mosquito is to be stamped out it must be done through a universal crusade in every part of the country.

MANUAL OF TOXICOLOGY. A concise presentation of a number of facts relating to poisoning, with detailed directions for the treatment of poisoning. By Albert H. Brundage, A.M., M.D., Phar.D., Professor of Toxicology, Physiology and Hygiene in the Brooklyn College of Pharmacy, Toxicologist of the Bushwick Central Hospital, etc., Borough of Brooklyn, N. Y., 1901. A generally diffused knowledge of toxicology is a subject of vital importance to the physician, to the pharmacist and the public. It enables a physician to meet emergencies with promptness and the pharmacist to recognize and protect against possible errors in prescriptions. This book asserts ready means of reviewing salient points in toxicology, and is a convenient emergency reference book. It is pocket size, contains 350 pages and has a good index. Price, \$2.

SAUNDERS' AMERICAN YEAR-BOOK. THE AMERICAN YEAR-BOOK OF MEDICINE AND SURGERY FOR 1902. A yearly digest of scientific progress and authoritative opinion in all branches of Medicine and Surgery, drawn from journals, monographs and text-books of the leading American and foreign authors and investigators. Arranged, with critical editorial comments, by eminent American specialists, under the editorial charge of George M. Gould, A.M., M.D. In two volumes—Volume I, including General Medicine, octavo, 700 pages, illustrated; Volume II, General Surgery, octavo, 684 pages, illustrated. Philadelphia and London. W. B. Saunders & Co., 1902. Per volume: Cloth, \$3 net; half morocco, \$3.75 net.

MEDICINE. The Year-Book for 1902 appears in two volumes. In the May number of the JOURNAL a review of the volume on Surgery appeared. The volume on Medicine contains in its respective sphere all the excellencies that we found in the volume on Surgery. The extracts presented are culled from wide reading of the leading medical journals, monographs and text-books of

the world. The articles are not simply paraphrased, but are carefully edited and commented upon by eminent specialists into whose departments they naturally fall. General Medicine, as heretofore, is under the editorial charge of Alfred Stengel; in his section of the work we find a discussion of the very latest suggestions for treatment in those diseases in which the greatest progress has recently been made, such as typhoid fever, dysentery, yellow fever, malaria, tuberculosis, etc. In all these subjects stress is laid upon prophylactic treatment. Public Hygiene and Preventive Disease is presented by Samuel W. Abbott, of Boston, and here we find many valuable and practical suggestions. Pediatrics is in charge of Louis Starr and Alfred Hand and is most ably discussed. In every way the Year-Book for 1902 fully justifies, if it does not strengthen, the reputation won by its predecessor.

THE DIAGNOSIS OF SURGICAL DISEASES—By Dr. E. Albert, late Director and Professor of the First Surgical Clinic at the University of Vienna. Authorized translation from the eighth enlarged and revised edition, by Robert T. Frank, A.M., M.D., with fifty-three illustrations. D. Appleton Company, 1902. New York.

Of works on Physical Diagnosis there have been not a few during the last three years; they have been confined, however, to medicine. A volume devoted exclusively to Surgical Diagnosis is a comparatively new feature in medical literature, and this work of Dr. Albert is a welcome contribution. The book is evidently the result of careful clinical teaching before a class, and therefore presents the subject in a practical way. Diseases are grouped according to similarity of signs and symptoms, and in the evolution of the subject a process of differentiation and elimination is pursued until the final diagnosis is reached. The cases described are in many instances followed to the operating-table, at times to autopsy, where the diagnosis is either confirmed or disproved. In many instances the differential points in diagnosis might have been drawn out to rather finer lines and in that way would have proved of greater value to the clinical teacher. The tendency is to make the book popular, and it appeals to the student and the general practitioner. The book is an attractive volume of about 400 pages and maintains the reputation of the publishers for the excellency of their work.

SAUNDERS' MEDICAL HAND ATLAS. ATLAS OF OTOLGY—By Gustav Brühl, M.D., of Berlin, with the collaboration of Dr. A. Pollitzer, of Vienna; edited by S. MacCuen Smith, M.D., Jefferson Medical College, Philadelphia. London and Philadelphia. Saunders & Co., 1902.

The authoritative weight of the distinguished names connected with this work is enough to insure its favorable consideration. Standing as they do in the front rank of otologists, and with wide experience as teachers in that branch of medical science, they are enabled to present in this atlas an epitome of the essentials of their specialty in a manner best calculated to attract and hold the attention of the student.

The difficult anatomy of the ear is demonstrated, without sacrifice of minutiae, in terse but lucid terms, and fully illustrated by carefully indexed plates, which are the principal feature of the work. While it is not contended that diagnosis can be taught from plates, and it is conceded that the fine points of differentiation must necessarily be obscure, yet they are an excellent means of refreshing the mind with the general landmarks and grosser details learned from clinical observation. For those whose field of such observation is limited, they are an almost indispensable adjunct of study, and as occasional references are invaluable to all. The plates in this work, mostly reproductions of photographs, are distinct and true, both as to drawing and coloration.

In the chapters on Diagnosis and Treatment, the best results of modern thought are expressed with a fulness of idea and a conciseness of language pleasing to both student and general reader, contrasting strongly with the usual voluminosity of otological literature. An appendix of medical formulary contains many useful

therapeutic suggestions and the general indexing is thorough. As a whole, the book is a valuable one to the student or teacher of otology.

TRANSACTIONS OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS. First annual meeting held at Washington, D. C., May 14 and 15, 1901. Edited by William Pryor Letchworth, LL.D. The study of epilepsy and the care and treatment of epileptics have particularly attracted the attention of specialists in nervous and mental diseases during the past few years. Out of this study has issued the idea of the establishment of colonies for the segregation of epileptics, wherein they can lead a rational and healthful existence and be protected from those surroundings and influences that tend to aggravate their disease. New York State has taken a prominent part in this work, and the Craig Colony at Sonyea has become a model institution, whose success demonstrates from year to year the fact that epileptics are at last receiving the attention which contributes most to their happiness and amelioration of their disease. It is hoped that the National Association, recently organized, may be the means of extending the knowledge and benefits of this treatment throughout every State in the Union, and indeed throughout the world. The first volume of transactions is now ready for distribution. The society has no membership fees and makes no assessments, the aim being, if possible, to meet the expenses of the Association by selling the transactions. These volumes are issued in paper at \$1 per volume or in linen, gilt top, \$1.50, postage free in either case. Remittances may be sent to the secretary, Dr. William P. Spratling, Craig Colony, Sonyea, N. Y. The volume is printed on heavy paper, is fully illustrated, and is, take it all and all, an attractive specimen of the bookmaker's art.

SOME THOUGHTS ON THE PRINCIPLES OF LOCAL TREATMENT IN DISEASES OF THE UPPER AIR PASSAGES—Sir Felix Semon. McMillan & Co., New York.

Under this title are published two lectures lately delivered by the distinguished author, and to which he has added an appendix embracing his views on the storm of criticism which the lectures first evoked, together with a summary of the salient points brought out by his arguments. While admiring the complete and facile wielding of his caustic pen, we cannot but believe that the first section of this appendix, dealing as it does with acrimonious personalities, could, with credit to the writer and value to the work, have been entirely expurgated.

The little brochure is worthy not of mere perusal, but of diligent and studious reading, as it contains much material for thought, of which the limited space would not permit full expression. For his strenuous opposition to overzealous intemperance in operative work and his advocacy of skilful technique and thorough completeness in all cases where operation is demanded, he deserves the highest praise and the thanks of all rhinologists. Especially is this true of his remarks on adenoid growths, and his handling of the so-called recurrent cases, the result of incomplete operation by inefficient hands.

The ethical relation of the surgeon toward the patient in regard to operations is brought forth in a manner that all should take closely to heart, especially so those who are surgeons of commerce and those nose and throat physicians who keep their hold on patients by daily slobbering everything with sprays. The whole work is permeated with that modern thought now held by all advanced specialists, that no physician can be a specialist in the highest sense without having devoted time to the acquirement of a thoroughly trained knowledge of general medicine.

The classification of local manifestations is an excellent one, brief but comprehensive. The great and important idea conveyed by Dr. Semon is one taught by

the results of all truly scientific surgeons, that the true rationale of treatment lies in a path between extreme conservatism and extreme radicalism—the pathway of deliberate judgment, but aggressive action.

We are all prone to advance our ideas with arguments that slightly topple over the height of our breastworks, and Sir Felix has not escaped this fault. That so eminent an authority should countenance such a perversion of physiological function as ventilation by mouth-breathing is lamentable, and the idea of so preserving the patency of the Eustachian tubes in considerable or even complete stenosis in the nose (page 87) is patently absurd. We cannot help wishing that the author had laid more stress on unnecessary septum and accessory sinus operations, instead of the mere statement of the fact that pus is often found in these sinuses on post mortem.

On the whole there is much to commend and little to criticize in these few pages, and it is a valuable contribution to the literature of the upper respiratory passages.

BOOKS RECEIVED.

MOSQUITO BRIGADES AND HOW TO ORGANIZE THEM—By Ronald Ross, F.R.C.S., D.P.H., F.R.S., Lecturer in Practical Medicine at the Liverpool School of Tropical Medicine, Major Indian Medical Service, retired. Longman, Green & Co., New York.

MANUAL OF TOXICOLOGY. A concise presentation of a number of facts relating to poisons, with detailed directions for the treatment of poisoning. By Albert H. Brundage, A.M., M.D., Phar.D., Professor of Toxicology, Physiology and Hygiene in the Brooklyn College of Pharmacy, Toxicologist of the Bushwick Central Hospital, etc., Borough of Brooklyn, N. Y., 1901.

TRANSACTIONS OF THE NATIONAL ASSOCIATION FOR THE STUDY OF EPILEPSY AND THE CARE AND TREATMENT OF EPILEPTICS. First annual meeting held at Washington, D. C., May 14 and 15, 1901. Edited by William Pryor Letchworth, LL.D., New York.

INTERNATIONAL CLINICS. A quarterly of illustrated 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 of interest to students and practitioners, by leading members of the profession throughout the world. Edited by Henry W. Cattell, A.M., M.D., of Philadelphia, and others. Volume I, Twelfth Series, 1902. Philadelphia. J. B. Lippincott Company, 1902.

THE PRINCIPLES OF BACTERIOLOGY. A practical Manual for Students and Physicians. By A. C. Abbott, M.D., Professor of Hygiene and Bacteriology and Director of the Laboratory of Hygiene and University of Pennsylvania. Sixth edition, enlarged and thoroughly revised, with 111 illustrations, of which 126 are colored. Lea Bros. & Co., Philadelphia and New York, 1902.

ATLAS AND EPITOME OF OPERATIVE SURGERY—By Dr. Otto Zuckerkandl, Privat Docent in the University of Vienna. Second edition, revised and enlarged. Translated from the German. Edited by Dr. J. Chalmers Da Costa, M.D., with forty colored plates and 278 illustrations. Philadelphia and London. W. B. Saunders & Co., 1902.

Original Articles.

MALIGNANT NEOPLASMS OF THE LARGE INTESTINE.

BY JAMES P. TUTTLE, M.D.,
New York City,

Professor of Rectal Surgery, New York Polyclinic; Visiting
Surgeon New York City Almshouse and Work-
house Hospitals.

Frequency of Cancer.—For the past two decades the vital statistics of all civilized nations have shown a steady increase in the occurrence of cancerous growths. So far as the numerical increase is concerned, the facts are incontrovertible. With regard to the proportionate increase, there have been numerous denials.

The statistics of Williams, of Great Britain; Heimann, Zemann and Hausmann, of Germany; Park, Gaylord and others, of the United States, and Quénu, of France, established beyond question that in the mortality reports of these different countries cancer is steadily gaining a larger and larger percentage. The growth year by year is not so striking, but when taken from one decade to another it marks a steady increase in this most tragic of all diseases. Efforts to show that this increase is more apparent than real have been made by various writers, notably among them Newsholme and Senn. It would be comforting could this position be established, because it is a blot upon preventive medicine that any disease should steadily and irresistibly increase notwithstanding all our efforts at prevention.

The opponents of the parasitic theory of cancer have been unusually active in their efforts to disprove the gradual increase of carcinoma. The very fact that the disease is on the increase and that its increase is more marked in certain districts where cancer has existed uninterruptedly for many decades points clearly to the infectious nature of the disease, and it is, therefore, inconsistent with other theories.

The vital statistics of New York State for 1895 show a total mortality of 121,735, of which 3,554 (5 per cent.) were from cancer. In 1900 the total mortality had reached only 128,468, while that from cancer grew to 4,871, an increase in the total mortality of only 5 per cent., while that from cancer had increased 37 per cent. The per capita increase in population during this period was less than 10 per cent., thus the proportion of cancers to the population was increased fully 30 per cent.

In the city of New York, where the vital statistics are more accurately kept, perhaps, than in any other portion of the State, the figures are as follows: In 1895 the per capita deaths from cancer were 1 in 1,819 of population, and in 1900 they were 1 in 1,394.

In the State of New Jersey the total mortality in 1895 was 30,634, and the deaths from cancer 770. In 1900 the total mortality was 31,474, an increase of only 840; whereas the deaths from

cancer were 921, an increase of 151. Thus it will be seen that the increase in mortality is about $2\frac{1}{2}$ per cent., while that from cancer is 17 per cent.

Massachusetts is the only State in which the mortality from cancer seems not to have increased.

The theory that this increase is only apparent and due to the more accurate modern methods of diagnosis and more frequent autopsies may account for a small amount of this increase; but certainly there have been no such great improvements in the diagnosis of the disease in the upper portions of the intestinal tract, and no such increase in the autopsies as to account for the large proportionate increase of cancer in these parts of the body. Besides, if this were the case there should be a proportionate decrease in other diseases formerly called cancer, but such is not the case. In the rectum and sigmoid the improved methods of diagnosis must be taken into account, for we are now able to see and recognize conditions here which we formerly diagnosed by inference.

The Seat of Cancer.—The frequency with which cancer is found in the different organs in the body has long been an interesting and instructive study. It is the object of this symposium, if possible, to come to some conclusion as to the frequency with which the disease is found in the different organs, the best methods of its diagnosis, and, if possible, an effectual means of treatment.

Zemann found in 21,624 autopsies at the Vienna general hospitals, 2,070 neoplasms, of which 1,744 (84 per cent.) were cancers. Of these 1,744 cancers 912 involved the digestive tract. The stomach was the most frequent site. The small intestine was involved only 9 times (the duodenum 6 and the ileum 3). Beginning at the cecum, the large intestine was involved as follows: The cecum, 12; the vermiform appendix, 1; the colon, 32; the sigmoid flexure, 30, and the rectum, 81. Total, 156.

Heimann, in an exhaustive study of 20,054 patients who died of cancer in the general hospitals of Prussia, found that 10,537 (over 50 per cent.) involved the gastro-intestinal tract. Of these 10,537, 1,706 were in the large intestine, 1,204 of them being confined to the rectum proper. In 258 cases the site of the tumor in the intestine is not mentioned. The small intestine was involved 20 times, the large intestine 224 times. There is no mention made, however, even in these cases, as to the part of the intestine involved. According to Hemmeter, 22.5 per cent. of all carcinomas occur in the intestinal tract, 2.7 per cent. in the small intestine, 2.7 per cent. in the cecum, 10.11 per cent. in the colon, .023 per cent. in the appendix, 6.405 per cent. in the sigmoid and 20.22 per cent. in the rectum. These statistics, while incomplete in many respects, show clearly the preponderance of malignant growths in the large intestine over those in the small.

It is ordinarily assumed that the great pre-

ponderance of carcinomas in the rectum over any other portion of the intestine is largely accounted for by the fact that the disease can be accurately diagnosed in this part, while it cannot be in the upper portions of the intestinal tract. The statistics of Heimann, however, which were made entirely from autopsies, prove that such is not the case, but that the malignant neoplasm is particularly prone to occur at the lower end of the intestinal canal.

The Site in Which the Intestinal Growths Occur.—In an exhaustive study of malignant tumors of the large intestine, exclusive of the rectum, I have been able to collect 459 cases, distributed as follows: In the cecum and ascending colon, 188; in the transverse colon and flexures, 143; in the sigmoid flexure, 128. In a separate collection I have collated 1,528 cases of carcinoma of the rectum. I do not propose at the present time, however, to devote any special attention to the latter, because these statistics have been made up not only from the literature upon the subject, but also from a large number of private communications, and I have practically threshed out this subject elsewhere. We shall, therefore, devote our time to the study of the 459 cases of malignant diseases of the colon, omitting the rectum for the present.

The cecum is, next to the rectum, the most frequent site of the disease in the intestine. The number of cases occurring in the transverse colon and flexures, and in the descending colon, while somewhat larger than in the sigmoid flexure, are distributed over a much more extensive area, and thus, in proportion to the length of intestine involved, appears less frequently. So far as I have been able to get the exact location of the growths, the frequency in site may be set down as follows: First, the cecum; second, the lower loop of the sigmoid flexure; third, the hepatic flexure; fourth, the splenic flexure; fifth, the transverse colon, and sixth, the descending colon.

Sex.—Owing to the frequency of carcinoma in the uterus and mammae, it is generally assumed that women are more prone to the development of cancer than the opposite sex. So far as the large intestine is concerned, however, the statistics which we have gathered do not prove that there is any great difference between the two.

In 459 cases the sex is mentioned in 285; there were 139 males and 146 females. This is not in keeping with the statements of Boas and Hemmeter, who claim that carcinoma of the colon is much more frequent in men than it is in women. The figures seem to prove that sex has no material influence as a predisposing cause in the disease.

Age.—While it is generally admitted that age is a predisposing cause in cancer, we are unquestionably seeing a larger number of cases between the second and third decade of life than formerly. The writer has seen within the last

year 7 cases of carcinoma of the rectum and 3 of the sigmoid flexure under 30 years of age. In all he has observed 15 cases of malignant disease under 30 years of age, and 3 below 20.

All of these cases occurred in individuals of poor general development, and who in their environments were exposed to more or less hardship, deprivation and stress. It appears from the observation of these cases and many others between 20 and 40 years of age that it is not a question so much of age in years as age in tissues. Where there is a tendency to early retrograde processes in the economy, where the patient matures and grows old prematurely, carcinoma is liable to develop early in life. In one case, in a young woman in whom the carcinoma occurred at the age of 22, a history of having menstruated first at the age of 9 was clearly established, and evidences of age occurred in the shape of gray hair, parched skin, and wrinkles about the eyes at the age of 21. Had this individual lived, I have no doubt that she would have passed through the menopause at a very early period.

In all the cases in which carcinoma of the intestine has been seen in early life, a history of dry, hard stools, with obstinate constipation, such as is seen in older individuals more frequently, has always been obtained. It is a question in the writer's mind whether the modern stress of life may not tend to an earlier development of carcinoma than we have been accustomed to expect; certainly the proportion of cancers occurring below the age of 35 has greatly increased in the writer's experience and in that of many surgeons with whom he has conversed.

New York Statistics.—While carcinoma occurs in the later decades, sarcoma is more liable to occur in the earlier ones. The writer has no doubt, however, that carcinoma is occurring more frequently in the earlier years than was formerly the case; especially is this true with regard to the intestinal canal. In 19 cases of carcinoma of the rectum and sigmoid seen in the last eighteen months, 12 of them have been under 40. Numerous instances have been reported as occurring between 12 and 20 years of age. Heretofore they have been looked upon as surgical curiosities, but they are becoming too frequent at the present day to be so considered. In New York City during 1900, 41 individuals under 25 years of age died from cancer. In the 459 cases of cancer in the large intestine, which we are studying, the ages, as far as given, were as follows:

10-20 years	2
20-30 "	7
30-40 "	28
40-50 "	35
50-60 "	28
60-70 "	7
70-80 "	2
80-90 "	1

The fact that the disease may occur thus early in life renders it imperative that local examina-

tion by the protoscope and sigmoidoscope should be made in all intestinal conditions associated with diarrhea, constipation, passages of mucus, blood or pus. It is not enough to simply introduce the finger into the lower three inches of the rectal canal. A careful instrumental exploration of the entire rectal and sigmoidal tract should be made by modern instruments of accuracy; and if these fail, and there is still reason to suspect a neoplasm, exploratory laparotomy is then justifiable.

The Nature of the Neoplasm.—The characters of the growths found in the large intestine are cylindrical epithelioma, adeno-carcinoma, medullary carcinoma, scirrhous and sarcoma. Of these the adeno-carcinoma, or tubular epithelioma, is by far the most frequent. Round, spindle and mixed cell sarcomas occur occasionally. In the cases collected, there were 18 primary sarcomas and 6 secondary. Of these 16 primary occurred in the cecum, the Bauhinian valve or appendix, 1 being found in the ascending and 1 in the transverse colon.

Pure epithelioma is comparatively rare in the upper portions of the colon, notwithstanding the fact that it occurs very frequently in the rectum and at the margin of the anus. The cylindrical epithelioma, or adeno-carcinoma, is probably the most frequent type. The medullary cancer is second and the scirrhous last.

The physical characteristics of these growths are important, in that they have a direct bearing upon the symptoms. The cylindrical epithelioma develops as a gradual growth, at first superficially located beneath the mucous membrane and protruding into the intestinal canal. It shows little tendency to break down or bleed, and only obstructs the fecal passages after it has grown to considerable proportions. As a consequence of this condition, the symptoms which it originates are those of functional disturbances in the intestinal canal. It produces a sort of tenesmus, or teasing diarrhea, associated with an increased discharge of mucus, sometimes slightly tinged with blood, and rarely associated with any purulent discharge until in the later stages the growth ulcerates and breaks down.

In the medullary form, however, there is a diffuse infiltration of the submucous and muscular walls of the gut, a rapid tendency of the growth to break down and ulcerate, and thus we have among the first symptoms from this type pain, diarrhea, hemorrhage and purulent discharges.

In the scirrhous type the carcinomatous development is deep in the intestinal walls, does not involve the mucous membrane until late in its career, and it is characterized by symptoms of true cicatricial stricture rather than of neoplasm. Its chief characteristic is that of gradual but certain diminution in the caliber of the gut, associated with increasing constipation and temporary obstruction of the bowels.

Colloid carcinoma is spoken of as a distinct

type by Boas, but in our opinion this is only a form of transformation which any variety of carcinoma may undergo.

The histological description of these growths is too extensive a subject to be entered into on the present occasion. Quénu and Hartmann, Hauser, Rüpp, Virchow and Hausmann have gone thoroughly into this subject, and the reader is referred to their writings.

Symptoms.—The early symptoms of neoplasms of the large intestine are most obscure and variable. They depend largely upon the character of the tumor and the site at which it occurs. The variations with regard to the different types of carcinoma have been stated above. When situated in the cecum, carcinomas may early simulate attacks of subacute appendicitis. The temperature rises, there is an accumulation of gas and feces in the ascending colon, and marked tenderness over the appendical region. Usually, however, the bowels can be easily moved, the temperature decreases, but the induration and swelling increase instead of diminish after the subsidence of the acute symptoms. The writer has seen two cases of carcinoma of the cecum in which a diagnosis of chronic appendicitis with inflammatory exudation had been made. Both of these were of the scirrhous type, and consequently there was never any hemorrhage or purulent discharge until very late in the disease. The inflammatory symptoms in such cases are said to be due to small abscesses formed in or about the neoplasm, which empty themselves into the gut. At this site these growths also sometimes simulate fecal impactions or concretions. In the hepatic flexure neoplasms sometimes present the symptoms of gall-stones or inflammatory conditions of gall-bladder, while those in the transverse colon may create pains and disturbances of digestion, simulating gastric ulcer.

There are no symptoms peculiar to the development of carcinoma in the splenic flexure of which I am aware. In the sigmoid flexure, however, we find many reflex and deceptive symptoms associated with the development of the neoplasms. The close proximity of this organ to the rectum, bladder, uterus and ovaries often leads to suspicion of these organs when they are not in the least involved. The writer removed a carcinoma of the sigmoid flexure during the month of January, 1901, in which the chief symptom complained of by the patient was pain shooting down into the testicles, accompanied with frequent urination and obstinate constipation. Ovarian neuralgia and bearing-down pains have been noted in several instances in which the carcinoma involved the sigmoid flexure without any extension to the reproductive organs. Aside from these vague and misleading symptoms, however, there are certain general phenomena which occur in the early development of carcinoma in all portions of the large intestine. The most important among these are di-

gestive disturbances, such as flatulence, nausea, regurgitation of food, and even vomiting. Constipation is ordinarily considered one of the earliest symptoms, but this is only true in the scirrhus variety.

In cylindrical epithelioma the earlier symptoms are irritation and a nagging tenesmus, associated with flatulence, the discharge of gases and an increase of mucus in the fecal matter. Constipation occasionally alternates with diarrhea in the latter stages of this type, but it cannot be said to be an early symptom of the disease.

In the medullary type we have constipation alternating with diarrhea early in the disease, together with the presence of blood and pus in the stools.

In the scirrhus variety, however, the characteristic symptoms are reflex disturbances of the digestion, associated with a gradual, persistently increasing constipation. Regurgitation of gas is an early and very constant symptom in all types, but nausea and vomiting are late symptoms, the latter being comparatively rare. The character of the vomited material sometimes indicates the site and state of the disease. Thus, if it is composed of mucus, bile and stomachic contents, one would argue that it was due to reflex irritation, but if composed of intestinal contents with feculent odor, one may then assume that the process has gone on to partial or complete obstruction. The vomiting of blood does not necessarily signify any involvement of the stomach itself. It may occur from ulceration above the growth, from the tumor itself, or from the rupture of small venous capillaries in the stomach. In the former cases it is carried back into the stomach by retroperistaltic action, and is usually of a dark, grumous, coffee-grounds appearance. The vomiting of bile has been a very constant symptom in those cases in which the growth has been situated at the hepatic flexure or in the transverse colon.

Pain is a very variable symptom. That from the tumor itself is not often marked. It may be localized or it may radiate in different directions, even involving the legs, the thorax or the back. The site of the pain is never a reliable guide as to that of the tumor. Gripping, paroxysmal pains may occur in any part of the abdomen or in the stomach, especially when the neoplasm is in the cecum or transverse colon. These pains come and go, and last according to the extent of stenosis in the intestine. In the early stages the remissions are long and entirely painless, while in the late stages they are short, the paroxysm is long and the patient is rarely free from pain. The time at which the pains occur depends largely upon the site of the tumor. In those cases in which the growth is low down, in the sigmoid flexure or in the upper portion of the rectum, it appears immediately before defecation. In those in which it is situated in the cecum and upper portion of the colon, it occurs from one to three hours before defecation.

Gradually increasing frequency in the attacks of pain, and increasing digestive disturbances, constipation or diarrhea, form the cardinal symptoms of malignant disease in the large intestine.

Boas calls particular attention to a fact which the writer has often observed, that during the interval between the paroxysmal attacks the digestion and appetite may be absolutely normal, and the physical condition may improve so much as to make one doubt his diagnosis. He says this does not occur where any marked degree of stenosis has developed. As a matter of fact, however, I have seen cases with large carcinomatous deposits in the intestine gain flesh, strength and color for months under forced feeding, regulation of the fecal discharges and proper intestinal lavage. If the bowels are kept comparatively soft, the purulent discharges washed out periodically, and the diet restricted to to materials with a minimum amount of detritus and a maximum of nourishment, these patients may be maintained in a fair condition for indefinite periods.

The scirrhus variety is the only one in which very marked or absolute occlusion of the gut is liable to occur, and it is very rare in the upper portions of the large intestine. Where it does occur, loss of appetite, improper assimilation, tenesmus, the accumulation of gases in the intestinal tract and insomnia result in a rapid physical and nervous deterioration. Nervous and mental disturbances, melancholia, hallucination, and even absolute mania may result from the auto-intoxication produced by the putrefaction and retention of fecal material in the intestine. They are not peculiar to the carcinomatous disease, however, as they may result from such retention from any other cause.

The physical signs and symptoms obtained by percussion and palpation are very unreliable. In the early stages of the disease absolutely nothing can be felt through the abdominal wall, and percussion reveals nothing more than an increased accumulation of gases in the intestine. Treves (*Intestinal Obstructions*, New York, 1899) states that 40 per cent. of all carcinomas of the large intestine can be made out by palpation. This is undoubtedly true in the stages at which the surgeon sees the large majority of these growths, but in their earlier development it is impossible to feel the tumors. It is a very difficult matter to distinguish neoplasms from fecal concretions or impacted masses above a stricture by palpation. In stout individuals with thick, fat abdominal walls, even large tumors cannot be made out with any degree of certainty. Where a tumor can be felt, its exact site in the intestine is often very doubtful on account of the mobility of the organ; especially is this true in the transverse portion, which allows it so great a latitude that the tumor may be displaced and found in almost any portion of the abdominal cavity. Tubercular or neo-

plastic masses in the omentum, enlarged glands, peritoneal adhesions and enteroliths all simulate malignant growths, both in their objective and subjective symptoms, and cannot be positively distinguished by palpation.

In order to palpate the bowel satisfactorily it should be thoroughly emptied. After a tumor has been outlined, one may sometimes determine its probable site in the large intestine by filling the organ with air or water, especially the former. The pneumatic sigmoidoscope is a very useful instrument in this regard. In the sigmoid, where the tumor drops down into the pelvic cavity below the reach of palpation, the organ may frequently be lifted up in the abdominal cavity by placing the patient in the knee-chest posture and inflating the intestine with air through the sigmoidoscope. Under such circumstances we may sometimes feel the growths distinctly, whereas we had been otherwise unable to do so. Great care is necessary in the use of this method, as too great distention might result in rupture of the organ. Nothnagel lays great stress upon intestinal rigidity above the neoplasm, which occurs just previous to the paroxysm of pain, and Boas calls special attention to localized peristalsis as a symptom of neoplasms of the intestine. These phenomena may be observed in patients with very thin and relaxed abdominal walls, but where there are tympanites and thick, resisting walls they are of little diagnostic importance.

Stools.—The character of the stools, so often relied upon in the diagnosis of carcinoma, is not at all symptomatic in the earlier stages. They may be normal, round and hard, thin or diarrheal. There is absolutely no difference between them in the earlier stages and other constipated or diarrheal discharges. The mucus contained may occur in hypertropic or mucoid colitis, and the little stainings of blood are quite frequently seen in stools from cases of proctitis or anal fissure. Later on, however, after breaking down of the tumor or ulceration takes place, the stools contain more mucus, and blood and pus in varying quantities. Besides this they possess a gangrenous, feculent odor which is characteristic of cancer.

Small papillomatous masses may sometimes be found in them, and Wundelich, Potain and Von Jaschs claim to have diagnosed the neoplasms from these fragments. The writer's experience, however, agrees with that of Boas, who says that he has never been able to make a diagnosis from these specimens. The character of the blood depends largely upon the site of the tumor. If the latter is high up, it will be dark, decomposed and tar-like. If in the sigmoid flexure, it may be either dark or comparatively bright red. In either of these instances it will be mixed with the stool if the latter is soft, or spread over the surfaces of the well-formed masses. The blood discharged from carcinoma of the rectum differs, in that it is bright, arterial

color, and is never mixed with the stools, but comes away either as fresh fluid or clotted. In determining the color of the blood discharged from the stools, it should always be examined immediately after it is passed; exposure to the atmosphere allows the absorption of oxygen and brightening of the color. Too much importance, however, should not be placed upon the passages of blood. Large hemorrhages are comparatively rare from carcinoma of the intestine or rectum. There is a small and continuous drain after fecal movements in perhaps a majority of the cases, but the amount of blood lost is not sufficient to account for the extreme cachexia, loss of flesh and anemia which are observed. These conditions are more likely the results of malassimilation and auto-intoxication from putrefaction of the intestinal contents than from the hemorrhages. In over a hundred cases of carcinoma of the large intestine and rectum observed by the writer there was not a single case in which an alarming hemorrhage ever occurred; and in none of the 459 cases upon which this study is based was there a single death recorded from hemorrhage.

The statement of Nothnagel that pus and blood in the stools are indicative of only two conditions, viz., carcinoma and chronic dysentery, cannot be considered seriously. They may be present from various inflammatory conditions, such as tuberculosis, syphilis, ulcerative colitis, sigmoiditis, typhoid fever and many other conditions. The examination of the feces is, therefore, a very unsatisfactory and uncertain method in the diagnosis of carcinoma of the colon.

The Size of the Tumor.—The size of the tumor is often very misleading. Fecal masses or impactions may simulate these growths, both in subjective and objective symptoms, and mislead one in palpating to suppose he has to deal with large and extensively disseminated growths, whereas they are only fecal masses arrested above constrictions. Under these circumstances they may cause a tumor to appear very much larger than it really is, and therefore they should always be borne in mind in the differential diagnosis.

Consistence of Tumor.—Much stress has been laid upon the impressibility or doughy feeling of the fecal masses by the German writers. I must confess, however, that I have never been able to distinguish this sensation through the ordinary abdominal wall. Gersuny's "adhesive sign," which consists in a sticking of the mucous membrane of the gut to the fecal mass when pressed upon, and which he claims can be appreciated by palpation through the abdominal wall, is chimerical, and requires a more vivid imagination than the writer's to appreciate it. This might possibly be done if the abdomen were open and the gut taken in the fingers, but through the abdominal wall no such sensations are reliable.

The presence of indican in the urine was for a

time thought to be diagnostic of carcinoma. The fact that it was found in so many other conditions renders it no longer a diagnostic sign of any great importance.

Hyperchloridia is a very frequent symptom in carcinoma of the intestine; in fact, it is almost always present in neoplasms of the small intestine and upper portions of the colon. It is a corroborative symptom, but by no means pathognomonic.

Salzer (*Archiv. f. klin. Chirur.*, Bd. XLIII, p. 149) claims to have performed the wonderful feat of introducing a finger through the vagina and invaginating the ileum through the Bauhinian valve, thus differentiating a tumor of the cecum from fecal impaction. Such tactile skill is beyond my comprehension, though I appreciate thoroughly the advantages of examination through the vagina, and know that we are often able to outline intestinal neoplasms by this route.

Deep palpation in the left iliac fossa, with the finger of the left hand in the rectum, also enables us to diagnose neoplasms in the pelvis or sigmoid flexure. In the latter organ, however, all of these methods pale into insignificance when compared with examination by the pneumatic sigmoidoscope. By this instrument the neoplasm can be absolutely seen and diagnosed. If there is constriction of the gut which prevents the introduction of the instrument, this constriction can be observed and the evidences of malignancy clearly seen. No force is necessary, and there is no danger of rupture, as the slightest distention by the air opens the gut in advance of the instrument, and thus prevents it coming forcibly into contact with the walls. There is, therefore, no excuse at the present day for failure to diagnose neoplasms of the sigmoid flexure, but those in the upper portions of the colon are more obscure, and can only be determined by a wise and careful assemblage and balancing of the many symptoms which have been detailed.

Treatment.—The treatment of carcinoma of the large intestine depends altogether upon the time at which the diagnosis is made. It is only in the early stages that one can confidently hope for any radical results. After the disease has involved the adjacent organs, such as the liver, pancreas and vertebral glands, radical operation is no longer justifiable except as a means of relief to suffering. All methods short of absolute resection may be called palliative. While carcinoma of the cutaneous surfaces of the body may in many instances be cured by a local cauterization, such treatment is impossible, and has never been advocated, in the internal organs.

Medications by the mouth or by injection are of no specific benefit. Antiferments and intestinal antiseptics by the mouth and by intestinal lavage will do much to alleviate the sufferings of these individuals, but are in nowise curative.

The same may be said of enterostomies and entero-anastomosis. The latter methods are employed entirely for the relief of suffering and the prolongation of life. It is not claimed by any one of intelligence that they ever result in a cure.

There is, unfortunately, no means of determining how long a patient will live through non-operative treatment of carcinoma. Some surgeons, without any personal experience in the matter, except one or two unfortunate results, state that individuals live longer without operations than they do with them. There is absolutely no foundation and no statistics for any such statements. Many of the cases which have been diagnosed carcinoma during life have been found upon autopsies to have been entirely different conditions. The author himself has seen three tumors diagnosed malignant tumors of the intestine, of which two were tubercular masses and the third a syphilitic stricture of the intestine. We must assume, therefore, that there are no statistics with regard to the average length of life in intestinal carcinoma without operation that can be compared with that following it. Of the operative methods only three must be considered: First, the radical removal of the neoplasm; second, enterostomy or artificial anus; third, entero-anastomosis, or the side-tracking of the fecal current from the affected area. By the first we attempt a radical cure, and thus are justified in taking larger chances with regard to the immediate mortality. As will be seen, however, in the total run of cases the mortality within the first month following resection is lower than that of enterostomy. The following table, which gives the results of the three different methods, is somewhat misleading, inasmuch as it has been impossible to tell exactly at what period the cases of enterostomy and entero-anastomosis died:

SUMMARY OF 459 CASES.

Site of Neoplasms.

Cecum and ascending colon.....	188
Transverse colon	98
Splenic and hepatic flexures and descending colon	45
Sigmoid	128
—	
Total cases	459

Operative Results.

		Per	
		Deaths.	Cent.
<i>Resection.</i>			
Cecum and ascending colon	106	31	29
Transverse colon	85	30	35
Sigmoid	84	31	37
—		—	—
Total	275	92	33

Enterostomy.

Cecum and ascending colon	51	16	31
Transverse colon and flexure	27	18	66
Sigmoid	42	29	69
	—	—	—
Total	120	63	52

Entero-Anastomosis.

Cecum	31	3	9
Transverse colon and flexure	21	7	42
Sigmoid	2	1	50
	—	—	—
Total	54	11	20

It is not reasonable to suppose that 52 per cent. of the cases of enterostomy died immediately after operation, and yet in the statistics this number of cases are shown to have succumbed within the first month, which may practically be considered immediate death. In the 275 cases in which resections were done, there were 92 deaths within the first thirty days after the operation, an immediate mortality of 33 per cent. Of the 183 cases remaining, the average length of life, up to the time at which the patients were last seen, was nearly two years. As a large number of the cases were believed to be entirely free from recurrence at the time of last observation, it is reasonable to suppose that this average would be materially increased as time goes on.

Of the enterostomies there were 120 cases, with 63 deaths, either immediate or within the first thirty days. Of the 57 cases remaining, the average length of life was between eight and nine months.

In the cases of entero-anastomosis there were 54 operations, with 11 deaths within the first month, giving an immediate mortality of 20 per cent. Of the 43 which remained and could be traced, the average length of life was seven to eight months. Thus we have for the radical operation two years, for the artificial anus eight to ten months, and for the entero-anastomosis seven to eight months.

As to the mortality, it is higher in enterostomy during the first thirty days than from either of the other methods. This can only be explained by the fact that the operation is not one of choice but of necessity, and has been done in the majority of cases after obstruction has taken place or when the patient was *in extremis*. No one will concede for a moment that simple enterostomy, done under favorable circumstances, is comparable in its dangers to resection or entero-anastomosis, but these figures show how the unscrupulous can prove what they will from statistics, for here is an operation which, when done by election, would have a mortality of less than 2 per cent., and when done from necessity shows

one of 52 per cent. We cannot, therefore, depend upon statistics drawn from published cases; we must know the circumstances under which the operation was done before we can judge of the actual results. On the other hand, those cases in which resection has been attempted may be supposed to have been cases in comparatively good physical condition and in the early stages of the disease. Notwithstanding this fact, the immediate mortality from these operations is 33 per cent. These figures would show to the thoughtful surgeon the greater danger of this operation over the others, and yet he must consider at the same time how much more it accomplishes.

In the cases in which the fecal current has been side-tracked and the affected area eliminated from the intestinal canal, the immediate mortality is lower than that from resection or enterostomy. The final result is, of course, the same in this method and in enterostomy, as no attempt is made to remove the malignant growth; nevertheless, the length of life following this operation is almost as great as that obtained by enterostomy, and, under favorable conditions for performing it, no one can deny that the after condition of the patient is much more comfortable than that obtained from enterostomy. An artificial anus is never an adornment, and under the best circumstances is inconvenient. By entero-anastomosis this is avoided, and the patient is not constantly brought in mind of the existence of his malady by the presence of an abnormal aperture. It must not be assumed, however, that this operation can be performed in all cases in which enterostomy is possible. The large majority of the latter operations are done in cases of emergency, with great distention and obstruction in the intestinal canal. Under such circumstances entero-anastomosis would be practically impossible at first. The obstruction must be relieved and the distention of the gut reduced before any attempt at such an operation can be made. The artificial anus or enterostomy would, therefore, be a preliminary step to the side-tracking of the fecal current, and in the large majority of cases the patient in whom such a step is necessary will be found in too weak a condition to undergo an operation for entero-anastomosis. There is no question, however, that as a matter of choice between entero-anastomosis and an artificial anus, the former is far preferable if it can be safely performed. When we come, therefore, to choose between operations, they should be rated as follows: Resection, entero-anastomosis and enterostomy.

Indications for Operation.—The indications for these different operations may be succinctly stated as follows:

Resection.—Wherever the diagnosis of a tumor in the intestinal wall is clearly made: when constriction of the intestinal caliber is determined. If, after resection, this constriction should prove

to be due to simple inflammatory processes or benign growths, it will be all the better for the patient, and the risk incurred will be perfectly justifiable, because strictures from these conditions just as inevitably result in death as do those from carcinoma.

The operation is contraindicated in involvement of the liver and other abdominal organs, in general dissemination of the growth in the omentum or peritoneum, and in cases in which extensive adhesions involve too great a risk to the patient's life through tearing and traumatism of the other organs rendered necessary in eradicating the tumor.

Entero-Anastomosis. — Entero-anastomosis is indicated in those cases in which metastasis or constitutional involvement has taken place, and yet the local conditions cause the patient much suffering or jeopardize his life through possible occlusion. Under these circumstances, where there is sufficient healthy intestine below the growth to establish a satisfactory entero-anastomosis, the operation is preferable to an artificial anus. Especially is this method applicable to carcinoma in those portions of the colon above the sigmoid flexure. There is no question that the elimination of the entire colon from the fecal current is detrimental to the nutrition of the body. Therefore, the making of an artificial anus near the head of the cecum or in the small intestine will always have a deleterious effect upon the economy. If by entero-anastomosis, therefore, we can keep a certain amount of the colon in the fecal tract, it is most desirable to do so.

The number of entero-anastomoses thus far performed is not large, but the results, if we consider the greater comfort, both mental and physical, obtained for the patient, are certainly encouraging.

Enterostomy.—The indications for this operation are obstruction, with the necessity of immediate relief, or the existence of neoplasms so far down in the tract that entero-anastomosis is impossible. Where the growth is above the sigmoid flexure and the condition of the patient justifies it, entero-anastomosis should always be given the preference over an artificial anus. While an ardent believer in colostomy under many circumstances, I do not believe that its largest field of usefulness is in malignant growths. As stated before, absolute or really dangerous obstructions are very rare from carcinoma. Patients die from sepsis or auto-intoxication, and not from obstruction or rupture of the gut. All that an artificial anus can accomplish, therefore, is to turn the fecal current away from the ulceration and the neoplasm. This can be just as well accomplished by anastomosis if the tumor is above the sigmoid flexure, and all the inconvenience and constantly depressing effect of the artificial anus will be avoided.

42 West 50th street.

RADIOTHERAPY IN CANCER AND SKIN DISEASES *

BY CHARLES WARRENNE ALLEN, M.D.,

Professor of Dermatology in the New York Post-Graduate Medical School; Consulting Dermatologist to the Randall's Island Hospitals.

THE allotted time precludes the possibility of prefatory remarks. This is perhaps fortunate, because otherwise I would be expected to tell what the X-rays are. That which undoubtedly interests an audience like this in a subject such as announced is the practical side rather than the theoretical. The latter can be obtained from literature much better than from what may be included in a twenty-minute paper.

My work in radiotherapy has not been of the experimental kind. Since adopting it I have been treating cancer and skin diseases by its aid, but for twenty years or more I have been treating the same affections with more or less success without the X-rays. Therefore, I do not feel called upon to lay aside these older tried methods, but employ them to a greater or less extent in every case, almost without exception. This does not take away from the value of whatever observations I have made, because, being familiar with the treatment of these conditions without the rays, I am in a position to note what added benefit I get from this added therapeutic measure. I may say briefly that the results, so far, have shown me the wisdom of adopting this procedure.

I have to report to you to-night a series of twenty-eight cases in which I have employed radiotherapy. Two of these cases should be left out, for the reason that one was, in all probability, not at all of cancerous nature, though suspected to be such by the patient, and was cured by electrolysis, X-rays being coincidentally given. The second case which should be omitted was one in which I had removed, about six years ago, the right breast for scirrhus cancer. The results had been all that could be desired; to my eye or mind there has never been any evidence of recurrence. The patient however, knowing that I was working with the X-rays, and having pains in the right side of her chest, was given six radiations, with the result of relieving her of her pains, of whatever nature they may have been, and relieving her mind of the suspicion of possible recurrence.

Omitting, then, these two cases we have twenty-six upon which to report. Eight of these, including the one just mentioned, have been discharged well. I do not call them cured, and shall not report them as cured, until a sufficient time has elapsed to make this warrantable.

One patient disappeared before anything definite could be stated regarding his case. One patient has died. This was a recurrent cancer, involving the glands and tissues of the neck, following cancer of the tongue. The case was

*Read at the New York County Medical Association, May, 1902.



FIG. 1.



FIG. 2.



FIG. 3.



FIG. 4.

mentioned last week by Dr. Delatour at a meeting in this building, and it is with his permission that I included it in this report, having seen the patient many times in consultation. For a time there was decided improvement, and, in my opinion, his life was prolonged and made decidedly more comfortable, physically and mentally.

Of the twenty-four remaining cases, four I have looked upon as practically well. Three were epithelioma of the nose and one is a recurrent cancer *encuirasse*, involving a large area of the skin of the chest adjacent to the line of incision, and probably the opposite breast as well. (See Figs. I. and II.) There was a firm, indurated mass in the skin over the opposite breast, which has wholly disappeared.

The remaining thirteen are under treatment, and I can safely claim that they are all improving, with possibly one exception. This lady, with recurrent cancer of the breast, had the misfortune to fall down stairs and injured her head, so that treatment was interrupted for about two weeks. Five of the whole number were cancers of the breast, all recurrent; one of the rectum; one of the pelvis, secondary to removal of the uterus; one of the lip, secondary to operation; one of the jaw, which was suspected to be a sarcoma; two of the nose; one, multiple epitheliomata of the face, nose and eyes in a lad of 15, one globe being so widely involved that sight had been destroyed; the opposite eye was involved in a growth which has been pronounced non-malignant, but which is clinically very suspicious. This case probably belongs to the class of xeroderma pigmentosum, which was the diagnosis I made when the patient's condition was described to me by Dr. Seabrook, who had made an examination of the eyes. This was confirmed by the appearances I found when Dr. Briganti sent me the patient, as well as by an examination made by Dr. Lustgarten.

One of the breast cases, which I will show upon the screen, was of such a severe nature that the lady was told by a competent man that there was no hope for her in any way from operative procedures. This case was sent to me by the kindness of Dr. Arlitz and Dr. Kudlich, of Hoboken. I am pleased to report that the growth has decreased, in my estimation, one-half, and the patient's general condition has improved very materially. I had hoped she might be here.

I shall refrain from reporting these cases in detail, having given the histories in a paper recently read before the Onondaga County Medical Society. There is no question about their nature: they were all cases of cancer, which had been all in the hands of competent men at different times, who have carried out well-known procedures for the relief of cancer, and who have expressed their opinions as to the severe and almost hopeless nature of most of them.

Now, in regard to the question of focus-tube dermatitis and burns, I do not designate them as X-ray burns, because I am not thoroughly convinced that it is the X-ray *per se* which produces the effect, though the probabilities are that such is the case. In a previous communication I have stated my belief that the popular dread of those so-called burns and the importance attached to them in radiotherapy by physicians have been overestimated. I do not retreat from this opinion. For a long time I was fortunate enough to have no dermatitis produced in carrying out this treatment, and I attributed this largely to a very careful use of grounded screens and protection of the surrounding parts, as well as to the use of methylene-blue solution, which was painted over the exposed areas. Six patients have shown more or less dermatitis, which corresponded to an ordinary sunburn, and going from this to burns of a second degree. None, however, has lasted over three weeks, some a much shorter time, and none has caused any very great amount of discomfort, or ever necessitated a long interruption of the treatment. In fact, in some instances, I continued treating other portions of the growth, screening those which had already shown too much surface effect. I have previously stated my belief that this surface dermatitis was in nowise necessary to produce in order to secure therapeutic results. I have no reason to retract this statement. My conviction is that, if possible, the dermatitis should be avoided; that, if it occurs, it is not to be looked upon as a serious matter, and may, in some instances, be of decided benefit in hastening the cure. The treatment I should employ is much that which would be applied to sunburns, or burns from hot water; painting with methylene-blue solution, with the addition of bicarbonate of sodium, or applications of ichthyol, zinc oxid ointment, carron-oil, 1 per cent. picric acid solution, etc.

In regard to the method of securing the proper electric excitation, my experience has been limited to the static machine and the induction-coil. My preference till now has been for the static machine as giving less trouble in producing the requisite excitation of the vacuum-tube. Both have produced good results, both have produced dermatitis in my hands. The advantage of the static machine is the steady discharge secured and the facility with which it is put in operation, provided it is so situated that the street main can be tapped to supply the motor power. The advantage of the coil is its portability, enabling one to set it up in the patient's house, employing the electricity from the street main, or where this is not available, from a storage battery.

In the matter of tubes, I have used a variety, and it has seemed to me that the large German vacuum-tube, having an extra anode (binodal), presents some advantages. The less compli-

cated the tube in the way of cooling apparatus and regulators the better. But all tubes seem to possess the same tendency to increase in resistance up to a point at which they become too high for the purpose for which they were originally devised, or having been used to a certain point they perforate, and so the matter of tubes becomes a very important matter of expense in carrying out this method of treatment. A simple regulating attachment for lowering the vacuum is often desirable.

As to the protecting shields, I have devised a number which work well and are preferable to the masks tightly fitting over the face or applied directly to the body. One of the simplest and best is an ordinary hat box or muff box, covered with sheet-lead of sufficient thickness. Into this the bulb of the focus tube can be inserted, notches being cut out in the sides to hold the extension side pieces, the open end applied to the body being padded for protection if desirable. I have suspended from my chandelier, under which the rays are given, a shield made from the cover of a hat box, with an opening cut to admit the rays to the part treated. This does away with the necessity for the metallic stand to hold the screen, which has a tendency at times to attract the electricity from the conducting cords and cause a leakage, which is undesirable, at least in static-machine work. The shield which I have devised and which has been perfected and manufactured by Messrs. Waite and Bartlett, consists in a flat metallic plate, usually zinc, with a short perpendicular tube inserted in its center. The tube can be made of any length and caliber, and is especially applicable to mouth, eye, throat, nose, uterine and rectal work. I will mention here, in passing, a rubber, or vulcanite, screen which I have just begun to use. This I was led to do from an experience in producing a focus-tube dermatitis in a lady who wore a rather thick rubber band to support a pad. Where this band protected the skin there was absolutely no deleterious effect produced, while alongside of it there were produced blebs and a marked dermatitis. This rubber disk, one foot and a half in diameter, can be suspended from the chandelier, or applied directly to the body, and has the advantage of not attracting the electricity and sparking, as is the case when metallic shields are used.

Before closing I would like to speak of my experience in some dermatological cases. This includes chronic eczemas, seborrheal eczemas, psoriasis (several cases), lichen planus, folliculitis, favus (three cases, one of the scalp and two of the nails), leprosy (one case), sycosis (six cases), lupus (two cases), lupus erythematosus (five cases), hypertropic acne, hirsuties, syphilis, pityriasis rosea, etc.

Here, as in my treatment of cancer, I have not neglected other adjuvant treatment, and am, therefore, not in a position to state anything very positive regarding it. I can say, however,

that in some dermatological conditions it has a decided effect and can be used to advantage. I shall show upon the screen a picture of a man in which the diagnosis was lupus, an intractable ulcer existing at the side of the nose, involving the labio-nasal fold, which had existed for two years, in spite of continued attempts by many competent men to cause healing. This had included the long trial of antisyphilitic remedies on the suspicion that lues might be present, with only negative results. Other treatment that was tried, before the rays, produced no decided effect. After twelve radiations the ulcer healed completely, leaving a firm, healthy scar. Favus of the scalp has been decidedly benefited, and I look upon the case as almost cured. The leper claims to be improving. A lupus of the nose is about well.

In conclusion, then, I would say (1) that the method is one of decided value; (2) it is not without its disadvantages, and the injudicious, or careless, use of it may lead to its being brought into disrepute. It is not a method likely to supersede, or do away with, all previous methods, but it has its decided place of utility.

In the treatment of cancer the focus-tube dermatitis should enter but little into the question, as its importance is far outweighed by the gravity of the disease to be eradicated. The method appears to me to be of utility in *recurrent* cancers. If it proves as valuable as present indications promise, there is no reason why it should not be applied to *primary* cancer. It offers a method of treatment which will probably be widely adopted by that class of patients whose fear of the knife leads them to nurse their affections in secrecy until the period has passed at which the knife could still offer them hope. In the present state of our knowledge it seems at least expedient to give all patients who have been operated upon by cutting or the application of caustic pastes the benefit of whatever the rays may possess in a prophylactic way, after the operation.

Rules for the radiotherapist, so that he may obey the great rule *non nocere*, would seem to include *festina lente*. Stop ray exposures at the first statement of the patient that he feels a burning or pricking in the skin. If you ignore this premonitory sign and continue the sittings until redness occurs, it may be too late to prevent serious or, at least, discomfiting damage.

During the enforced interruption of radiotherapy because of "burning," other means may at times be employed, including the application of caustic pastes.

Do not pave the way to disappointment by promising yourself or your patient too much for this new method. I know of no contraindication to the employment of other forms of treatment coincidentally. The most favorable time to treat cancer, by the ray or otherwise, is early. At this stage the majority of cancers can probably be cured. When it has passed beyond a certain stage cancer does not differ from tuberculosis in its probable fatal issue.

TECHNIQUE OF FIXATION OF PROLAPSED KIDNEY.

BY AUGUSTIN H. GOELET, M.D.,
New York.

THE purpose of this paper is to describe a technique and method of inserting the fixation sutures, which, after an extended trial, has been found entirely satisfactory, and not to discuss the merits of the technique of operations for the same condition adopted by other operators.

The object of the operation is to fix the prolapsed kidney in a normal position against the muscles of the back, in such manner that there will be freedom from motion, until it becomes firmly adherent. This seems best accomplished by sutures, and temporary sutures of non-absorbable material, like silk-worm gut, are to be preferred. If the gut is prepared by boiling in a solution of lysol* it is rendered pliable and is as easily manipulated as catgut.

Such fixation of the kidney may not be a normal condition, since the kidneys are normally movable to a limited degree, but it is much to be preferred to prolapse of the organ, with its attending symptoms and evil consequences, and it certainly restores the patient to a condition of health and comfort which she could not enjoy before.

Prolapse of the kidney is a surgical condition because it does not admit of cure by other than surgical means. That it is but one element in a general enteroptosis is no argument against operation for this which is to be regarded as by far the most serious condition, since prolapse of the kidney and interference with its function engenders more serious consequences than prolapse of the other abdominal organs. If the nephroptosis is overcome the ptosis of the other organs is materially lessened. This may be the result of the prolonged recumbent position which the operation for fixing the kidney necessitates, or it may be due to relief of the chronic digestive disturbances and consequent overdistention of the stomach and intestines. It is certainly true that abdominal support for enteroptosis, which was of little or no material benefit before, affords greater satisfaction after this operation.

The operation is not one that involves any risk, *per se*, therefore should not be dreaded by one obliged to undergo it, and it should not be opposed by those who do not choose to indorse it because they do not operate, and hence cannot observe its results.

A prolapsed kidney which gives rise to symptoms that produce positive discomfort or ill-health demands operation, because, *first*, there is no other certain means of cure; *second*, there is a tendency to progressive exaggeration of the degree of prolapse; *third*, prolonged prolapse produces congestion and softening of the

kidney structure and its fibrous capsule; *fourth*, the prolapse may at any time cause interference with the function of the kidney and endanger serious consequences.

If those who oppose operation for this condition, or defer it until dangerous symptoms arise and it becomes an urgent necessity, or until the kidney becomes seriously diseased, could observe, as the operator does, the condition of the two kidneys in the same subject when one is much prolapsed and the other less so, they would be convinced of the advisability of early operation before the kidney structure becomes involved. I have observed in every case of double nephropexy that the kidney most prolapsed is greatly congested and its structure is so softened that the sutures tear out readily when they are being inserted, and it is extremely difficult to make them hold, whereas, on the other side, where the degree of prolapse is less, the kidney is not congested and its structure is firm. This should be sufficient argument for early operation.

The preparation of the patient for operation should be as careful and thorough as for an abdominal section, so as to obviate the strain from retching and vomiting following anesthesia, which would tend to lessen the freshly attached kidney. To this end it is most important to establish a normal activity of the liver. This is not always possible, however, because of the condition, without confining the patient to the recumbent position for several days or a week, to obviate the effect of dragging of the kidney on the duodenum. This is not always necessary, of course, but in some cases it is best.

Technique of the Operation.—The field of operation must be prepared and cleansed with as much care as is observed in preparing the surface of the abdomen for abdominal section. The patient is placed on the table on the side opposite the kidney to be fixed, with the under arm drawn out behind and the thighs flexed. A deep wedge-shaped pad is placed under the lower loin on the table to increase the costiliac space of the upper side. This must be so adjusted as to push the abdomen up and replace the kidney. If this is properly placed the kidney will be within easy reach when the fatty capsule is opened. If both kidneys are to be fixed the patient may be placed prone on the abdomen with the pad under its lower part.

An incision is made along the outer border of the erector spinæ muscle, beginning just below the twelfth rib and extending downward, parallel with the spine for about three inches. The distance of this incision from the spine will vary with the width of the back from $3\frac{1}{2}$ to 4 inches. This incision is made with the knife through the skin and fat down to the superficial fascia covering the muscles. Some superficial vessels will be divided and should be caught with pressure forceps and ligated later if required. The su-

*See Technique of Surgical Gynecology by the Author, International Journal of Surgery Co., New York, 1901.

perforal fascia is divided with scissors to the extent of the wound above and below.

The underlying muscles down to the erector spinæ are then separated in the direction of their fibers with blunt, round-pointed scissors, aided with blunt hooks, inserted in the center of the incision and drawn toward the extremities of the wound. Broad, strong retractors are now inserted, and an assistant forcibly retracts the margins of the wound, including all of the separated muscles. The erector spinæ can usually be retracted toward the spine by including its outer border in the retractor on that side. If its attached fascia does not yield readily it is carefully divided with scissors, exposing beneath the quadratus lumborum. The fibers of this muscle, which is broader than the erector spinæ, will frequently overlap the line of incision, and they must be carefully separated with blunt hooks down to the deep fascia, so that the ilio-hypogastric nerve, with its accompanying vessel, will be drawn aside and not wounded. The retractors are made to include this structure also, taking care to hold the nerve and vessel aside, and expose the deep fascia beneath. This may then be divided with scissors, and immediately the fatty capsule of the kidney bulges up into the wound. The retractors are made to include the margins of this fascia also, and they are forcibly separated so as to stretch the wound to its extreme limit.

The fatty capsule is drawn down and opened with scissors well over toward the spine and from the center of the wound to its upper extremity. This will avoid the risk of opening into the peritoneum at the lower pole of the kidney. The margins of the fatty capsule are caught with T forceps and drawn out, bringing the kidney up with it into the wound. If the kidney is found to be adherent to the fatty capsule, as is frequently the case, it is carefully separated along its free border, around and under its lower pole and well back on its posterior face nearly to the hilum. Thus a considerable area of surface is exposed for approximation with the muscles of the back for adhesion.

I cannot believe it necessary to strip off the fibrous capsule to secure adhesion. The firm adhesion of the kidney to its fatty capsule within, when both capsule and kidney are prolapsed together, which is frequently observed, should do away with the apprehension that the kidney, with its fibrous capsule intact, will not adhere to the muscles of the back. It is only necessary to hold it immovably in position for a sufficient length of time for adhesion to take place. The results that I have obtained convince me of the correctness of the position I hold on this point.

The fixation sutures, of which there are two, are inserted upon the lower half of the kidney, so that the upper part may be drawn up into

place under the ribs. A small, short, full-curved needle, threaded with silk-worm gut (rendered pliable by boiling in lysol) is first inserted upon the outer part of the exposed kidney surface from above downward, somewhat obliquely to the long axis of the kidney, and the suture is drawn through; then it is inserted transversely, and again from below upward in the same manner as the first insertion, but on the opposite side of the exposed surface, as shown in the diagram (Fig. 1). The lateral insertions of this suture are rather superficial, penetrating only beneath the fibrous capsule, but they are about one-half inch in length. The transverse insertion, however, is deeper, and its length is about the same, or a little more, according to the size of the kidney. The free ends of this suture are caught with pressure forceps to prevent the suture from being pulled out while the second suture is being inserted.



Fig. 1.—Showing the method of inserting the fixation sutures. A. Kidney. B. Fatty capsule. C. C. Retractors holding edges of wound apart. D. D. T forceps attached to margins of the fatty capsule. E. E. First suspension suture. F. F. Second suspension suture. G. Needle carrying end of upper suture out through structures of the back.

The second suture is inserted above the first, but in a somewhat different manner, there being no transverse insertion, but an exposed loop of suture on the outside of the fibrous capsule (see Fig. 1). The advantage of this suture, which is a modification of the first, is that it takes up less space and inflicts less injury to the kidney structure.

This form of suture will resist a great deal more strain without tearing than the usual transverse suture. When the sutures are tied the traction upon them is in an upward direction in the long axis of the kidney; hence the transverse loop must tear completely through the fibrous capsule and kidney structure before the lateral insertions give way. There is very much more resistance of the fibrous capsule to strain of the suture upon it from without inward than from within outward. The kidney structure affords no hold for the suture, which cuts through it almost as easily as it would through firm butter; hence there is no reason for inserting the sutures deeply. It is only nec-

essary to include enough of the fibrous capsule to resist strain on the sutures.

After both sutures have been inserted through the kidney the free ends of the upper suture are threaded successively into a long-curved perineal needle, which is then inserted from within the fatty capsule at the upper angle of the wound and brought out on the skin surface on a level with the extreme limit of the upper angle of the wound about a quarter of an inch from the margin, penetrating all the structures of the back (see Fig. 1, *F*). The suture end is then detached from the needle, and it is withdrawn, leaving the suture in place. The other end of the suture is carried through the structures of the back on the opposite side in a similar manner. The free ends of this upper suture are caught with pressure forceps, and the ends of the second suture are carried through the structures of the back from within the fatty capsule in the same manner, and are brought out a short distance below the other. The ends of this suture are also caught with pressure forceps.

The redundant fatty capsule is trimmed off on a level with the bottom of the wound on both sides, but that below the recent location of the lower pole of the kidney is not disturbed. The wound, including the pouch within the fatty capsule below the kidney, is now flushed with warm salt solution and carefully wiped dry and the retractors are removed.

The sustaining sutures are tightened, bringing the upper pole of the kidney up under the last rib, and they are tied, the upper one first, over a fold of several layers of gauze placed lengthwise at the upper angle of the incision. There is no intention whatever to have these sutures aid in coaptating the wound, but the margins of the skin are carefully brought together under the gauze, taking care not to have any part of the gauze caught between the margins.

The object of tying the sustaining sutures over this fold of gauze is to prevent them from cutting into the skin and consequent loosening of the loop.

Before closing the wound a long strip of gauze is carefully packed under and around the lower pole of the kidney, completely filling the space previously occupied by the kidney before it was drawn up into position, and the end is brought out at the lower angle of the wound. The object of this is threefold—to bolster up the kidney and lessen the strain on the fixation sutures, to excite plastic inflammation, which aids in supporting the kidney, and to afford drainage. For this suggestion I am indebted to Dr. Howard Lilienthal. I have employed it in my last seventeen cases with much satisfaction. I formerly used a strip of gauze, carried down to the kidney surface for drainage, and to excite plastic inflammation, but did not pack in sufficient under the kidney to furnish any support.

Sutures are not required for approximating the muscles of the back, because, not being cut, they fall together when the retractors are removed, but I usually insert two or three interrupted catgut sutures to approximate the superficial fascia.

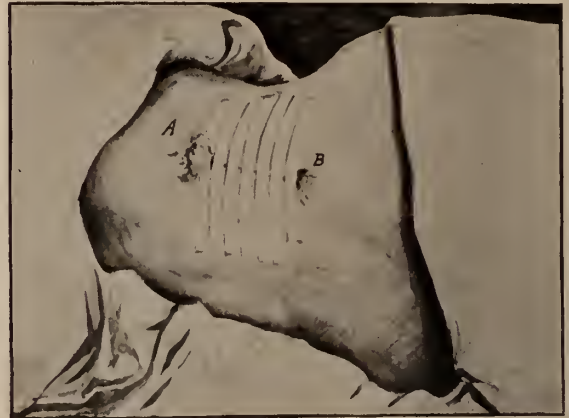


Fig. 2.—Illustrating the method of applying the adhesive strips for closing the wound. *A*. Fold of gauze at upper angle of wound over which the suspension sutures are tied. *B*. End of gauze drain projecting at lower angle of wound.

The margins of the skin are approximated with narrow interrupted strips of aseptic Z. O. adhesive plaster, for which suggestion I am also indebted to Dr. Lilienthal (see Fig. 2). The approximation thus secured is perfect and remains permanent, the result being a narrow line cicatrix that does not disfigure. The adjustment of these strips is shown in the illustration made from a photograph taken one week after operation. It will be observed that the adhesive strips have held firmly in place, though they have been saturated with discharge from the wound. To secure perfect approximation, the first strip above should be placed well up under the edge of the fold of gauze, over which the sustaining sutures are tied, and the last or lower strip is placed well down near the gauze drain as it emerges at the lower angle of the wound.

The wound is finally covered plentifully with loose absorbent gauze, over which is placed a thick layer of absorbent cotton, held in place by broad strips of adhesive plaster and a bandage encircling the body.

There is generally considerable drainage from the wound, and the dressings are saturated after twenty-four hours. At this time, or at the end of forty-eight hours, it is well to renew the dressings, since it adds much to the comfort of the patient.

The gauze drain is removed on the second or third day and an additional adhesive strip is adjusted to approximate the margins of the lower angle, kept apart by the drain. It is well, however, not to cover the lower angle completely, though its margins may be approximated by the adhesive strip placed above it,

since there will be some little oozing after the gauze drain is removed. Primary union throughout the entire length of the wound is the rule.



Fig. 3.—The resulting scar. From a photograph taken three weeks after operation.

The sustaining sutures are removed at the end of the third week, two days before the patient gets up, and the adhesive strips are removed at the same time. The patient is kept in bed three weeks.

During the period of confinement in bed the patient must be kept on her back or she may be permitted to turn on the side of the attached kidney. To turn on the opposite side would put undesirable strain on the attached kidney.

When the patient gets up she should wear a belt for a time, at first, to support the abdomen, and she should be cautioned to avoid any exertion that would put unusual strain on the kidney.

2030 Broadway.

The Ward Damage Suit Against St. Vincent's Hospital.—This now notorious suit of Miss Helen D. Ward against St. Vincent's Hospital, for damages because of burns received by the careless use of hot-water bottles, has now passed its fourth trial. The plaintiff was awarded \$18,000 damages. On the first trial the complaint was dismissed; on the second the jury disagreed, and on the third \$10,000 damages were awarded.

THE LEUCOCYTE COUNT IN FRACTURES.

BY WILLIAM G. LE BOUTILLIER, M.D.,
New York.

Visiting Surgeon J. Hood Wright Memorial Hospital.

THE importance of the bone marrow as a blood-forming organ would suggest that in cases of fractures there might be found changes in the number of leucocytes in the blood, or in the proportion of the various forms of leucocytes. It might be questioned also whether a differential count of the leucocytes might not perhaps serve clinically to differentiate the fever occurring in infected compound fractures from the aseptic fever of simple fractures.

In simple fractures the temperature rises higher and remains elevated longer than we are in the habit of recognizing. In a series of fifty consecutive simple fractures recently observed at the J. Hood Wright Memorial Hospital it was found that the temperature was often as much as 3° above normal. On the day the injury was received the lowest temperature recorded was 98.4° F., the highest 102.4° F. In thirteen cases the lowest temperature was 100° F., or more; in thirty-five it reached or exceeded 100° F., and in nine rose to over 101° F. On the second day as low a temperature as 99° F. was observed in only thirteen cases; twelve did not go below 100°; forty-one had maximum temperatures of 100° F., or more; thirteen exceeded 101° F., and two reached 102° F. On the third day the minimum temperature was over 100° F. in seven cases; the maximum was between 101° and 101.8° F. in eight cases. The temperature did not become normal in any case before the third day, but was normal by the tenth day in one-half the cases that remained under observation. In 25 per cent. of all the cases the temperature was still above normal at the end of two weeks, although no cause could be assigned for it other than the fracture.

We cannot depend on the temperature as an index to the occurrence of infection in compound fractures, for it is often no higher than that in closed fractures on the second or third day.

Little information as to the condition of the blood in cases of fractures can be obtained from current literature. While the blood had been studied in osteomyelitis and found to exhibit an increase in the number of leucocytes, no reports on its condition in fractures appeared until very recently. Schulz¹ found an increased leucocytosis in animals the subjects of experimental fractures. In the *Annals of Surgery* for September, 1901, Cabot, Blake and Hubbard report the blood counts in thirty-five cases of fractures. Among twenty-three cases of simple fractures the highest leucocyte counts were 14,800 in a fracture of the leg, and 15,400 in a fracture of the pelvis, on the third

¹Deutsch. archiv. f. Klin. Med. 1893.

day. The lowest counts were 5,000 in a fracture of the tibia and fibula on the second day, and 5,400 in a compound fracture of the leg two hours after the injury. Ten cases gave a higher figure than 10,500, but only six more than 12,000.

It is also stated that the reaction known as iodophilia occurs in some cases of fractures.²

This report comprises sixty-five differential counts in twenty-three simple fractures, and thirty-nine counts in ten compound fractures. They were made at intervals of time after the injury, varying from a few hours to several weeks.

I have had made only a few ordinary blood counts, and the results correspond to those already alluded to. In simple fractures three counts on the first day gave 7,400, 9,400 and 10,200 leucocytes. Three counts made on the second day gave 6,000, 9,200 and 10,600. The counts made on the fourth day are 7,800, 8,000 and 14,000; on the fifth day 6,000 and 9,600; on the sixth 8,000, 9,200 and 11,900. A fracture of the nose (with hemorrhage) gave 14,850 on the second day, and on the same day there were 15,600 in a fracture of the skull that was aseptic. A fracture of the ulna and nasal bones, with an infected scalp wound, gave 23,700 on the second day, and an aseptic compound fracture of the tibia and fibula gave 12,100. On the same day in two severely infected compound fractures there were 10,100 and 15,000 leucocytes. In a compound fracture, where the infection was only slight, there were 21,300 leucocytes on the third day.

The ordinary leucocyte count thus appears to be a better test of infection than the temperature, though not quite reliable, as the count may be as high in simple fractures as in some infected ones, and may be high in aseptic compound fractures, especially after the occurrence of hemorrhage.

Kraft³ investigated the periosteal callus in the repair of fractures, and found that immediately after the infliction of a fracture there are locally present the elements of an inflammatory exudate, serum, fibrin, red blood cells and leucocytes. But processes leading to regeneration of bone begin in from twenty to thirty hours, and the inflammatory exudate gradually diminishes and disappears after a few days. The results obtained by the differential counts appear to reflect such a process.

On the first day the percentage of polynuclear neutrophiles is high, averaging for four cases counted on this day about 85 per cent., while that of lymphocytes is less than 15 per cent. The approximate normal figures, as usually stated, are 23 per cent. for lymphocytes and 75 per cent. for neutrophiles. The counts made on the second day show the same deviation, but to

a less extent. After these days there is an increase in the proportion of lymphocytes and a reciprocal decrease in the percentage of polynuclear neutrophiles. This is true in the majority of the counts in both simple and compound fractures. This relative lymphocytosis is greatest after the sixth or seventh day, as a rule, but sometimes reaches its height only after several weeks. When repeated counts in the same case could be made this normal type was followed in all but three cases. Two of these cases were alcoholics, who developed delirium and sepsis and died (cases 32 and 33); in the other nothing to account for the deviation was noted (case 22). In eleven cases the lymphocyte percentage at some time exceeded 35 per cent. In two cases the number of lymphocytes exceeded that of polynuclear neutrophiles in the third and sixth weeks, respectively. As one of these cases (case 11) was a vigorous athlete who spent much of his time out of doors, anemia could not be assigned as the cause of the relative lymphocytosis.

The percentage of eosinophiles was within normal limits (0.5 to 4 per cent.) in more than half the counts. It was over 4 per cent. only six times. The highest count was 6.6 per cent. In forty-one counts in twenty-one cases there were fewer than 0.5 per cent. Eosinophiles were absent at all counts in only two cases—those that deviated from the normal type of proportions of lymphocytes and neutrophiles. In the first case (32) counts were made on the first and second days. The patient had a simple fracture of the femur and a compound fracture of the humerus. He died on the seventh day. The percentage of polynuclears was high—85.4 per cent. and 91 per cent., that of the lymphocytes, 14 per cent. and 9 per cent. on the respective days. The second case (33) was similar. A chronic alcoholic received a compound fracture of the femur and radius. Blood counts were made on seven successive days. Polynuclears rose from 81.8 per cent. to 94.6 per cent., and lymphocytes fell from 17.6 per cent. to 5 per cent., the latter being the lowest figure obtained in the series. The delirium and sepsis that developed were followed by death on the tenth day.

An interesting result of the counts is the frequency with which myelocytes were seen. They were noted in thirteen of the thirty-three cases, or in twenty-five of the 104 counts, and in six cases of the eight of fracture of the femur. The highest percentages were 5, 5.8 and 8.4 per cent. on the eleventh, second and eighteenth days of fractures of the femur, 6.2 per cent. after a suture of the olecranon process of the ulna and 8.2 per cent. after a refracture of the femur. The works of Cabot and Ewing on the blood state that myelocytes may be found in considerable numbers in other conditions than leucemia, and instance rachitis, osteomyelitis and osteomalacia. Their appearance in the blood

²Cabot. *Clinical Examination of the Blood*, fourth edition.

³Ziegler's *Beiträge*, Vol. I, p. 85.

is attributed to hyperplasia of the red marrow, or mechanical dislodgment of marrow cells, resulting from structural changes in the marrow, or hydremic states of the blood plasma.

The results of the differential blood counts are not in any appreciable relation to the temperature. They are practically the same in simple and compound fractures. They appear to reflect the presence and absorption of the blood effused at the time the injury is received and the stimulation of the bone marrow during the process of repair.

As cases progress the occurrence of a relative lymphocytosis is almost constant. In normal cases the eosinophiles are in normal proportions.

Myelocytes are often present in the circulating blood.

The differential blood count does not appear to be of practical clinical value in these cases.

In conclusion, I wish to acknowledge my indebtedness to Dr. George H. Fox, Jr., of the resident staff of the hospital, and to Dr. F. M. Jeffries, of the New York Polyclinic Laboratory, for their valuable assistance.

THE TREATMENT OF CANCER.¹

BY B. W. STEARNS, M.D.,

Binghamton.

I HAVE a strong personal reason for interesting myself in the treatment of cancer. With the advent of antiseptic surgery the medical profession generally turned all cases of cancer over to the surgeon for treatment. The warning note of the surgeon was an early diagnosis. This was the teaching I received in 1892 and 1893, and I placed my confidence in it up to 1900. In June, 1900, I attended the meeting of the American Medical Association at Atlantic City, a meeting of over 2,000 physicians. There I listened to a spirited discussion on the treatment of cancer by Drs. Marsden, of Boston; Stelwaggon, of Philadelphia; Gotthiel and Bulkley, of New York, and others. The majority of opinion in this discussion was in favor of the paste treatment. Within the last three years there has been a great relaxing of confidence in the surgical treatment of cancer.

Several men have tried the X-ray treatment of epithelioma and report some favorable results. But true carcinoma is a dread to any conscientious physician to-day. I have hopes, though, that if we all fight with good, sober judgment every case we meet, not necessarily all with the same agents, some one will, in time, come out victorious. If the victory is secured by one of the regular profession, we know that we shall all be benefited by it. And the victor shall bear the laurels.

There is no need to enumerate all the agents

that have been employed in the treatment of cancer. Arsenious acid is no doubt the oldest remedy for local application and manifests the most decided influence on cancerous tissue. It, nevertheless, is not a safe agent to apply alone in highly vascular regions or in the neighborhood of large blood vessels on account of the danger of hemorrhage. But, on the other hand, it is not to be left out of any cancer paste, for it has a selective action on cancerous tissue, the most so of any agent at present known, and does not destroy healthy normal tissue when combined with other agents. This action of arsenic was observed and mentioned by Sir Robert Christison some sixty years ago, and is corroborated by Drs. H. G. Brooke and Leslie Roberts, in the *British Journal of Dermatology*, April, 1901. Sir John Erichsen, "Science and Art of Surgery," says that "Arsenic exercises a powerful influence upon cancerous growths and constitutes the chief ingredient in many of the secret preparations used by empirics." It is this last reference that causes many regular physicians to hesitate in the use of pastes in the treatment of cancer; and here I wish to say that there is no quack or proprietary monopoly on any medicinal agent of natural origin. The fact that quacks use a remedy should not deter the regular profession from taking advantage of any virtue a remedy possesses.

By personal observation I am convinced that arsenic is the most effective agent that can be used on external cancerous growths, according to our present knowledge of the treatment of cancer. The question may come up, Can arsenic be used on a cancer of the tongue? I answer, Yes, by combining it with other agents. I have been unable to find any case on record where arsenic was applied to a cancer on the tongue, but I will cite the following case of my own:

Mr. H. L. came to me July 9, 1901, saying he had a sore tongue that had been troubling him nearly a year, due to irritation from a jagged, decayed tooth. On careful examination my suspicion was at once aroused that the man had a cancer. A few days later I was fully convinced, and so informed the patient. I then told him I would apply a cancer paste and so remove it; that I thought this better than to attempt to remove it with a knife, and it would likely prolong his life for a time. I then extracted what was left of the tooth. Within a week he came to me to have the paste applied, but in the meantime he had consulted Drs. Miller and Tuttle, who concurred in the diagnosis.

He was told that I could not remove it with a paste; that the paste would poison him. The growth was on the right side. There was quite an enlargement of the right side of the tongue, with considerable induration of the underlying tissue and enlargement of the submaxillary glands and part of the cervical glands. The portion of the tongue was just ready to break down; very light pressure would produce a welling out

¹ Read at the annual meeting of the Broome County Medical Association, held at Binghamton, April 8, 1902.

of white, creamy pus from a dozen points at once.

I prepared the following paste:

Arsenious acid,	gr. xx
Zinc chloride,	gr. xxx
Po. gum acacia,	gr. xx
Inspissated extract of common sorrel,	gr. xxx
Cocaine mur.,	gr. x

rubbed up without any moisture, making a paste a little stiffer than butter.

I injected a few drops of cocaine solution into the growth, and with a curved, pointed bistoury cut out a depression in the center of the growth about the size and half the depth of a lady's sewing thimble. After stopping all hemorrhage, I applied enough of the paste to fill the depression, using about one-fifth of the amount I had prepared. I then dried the tongue thoroughly with absorbent cotton and covered the paste with a small piece of muslin and sealed with collodion. This was left five hours, when the pain became so intense the paste was removed. The next day the same was applied, and each succeeding day for twelve days. On the third day a line of inflamed reaction was apparent around the growth, and the growth gradually turned an ash color and shrunk in size. On the twelfth day it became separated, and came out about the size of a large chestnut, with no hemorrhage whatever. As it came out there was a tendril the size of a thread of knitting yarn still held; this I took to be a branch of the lingual artery. It was mummified and I severed it with the scissors. I again applied the paste near the tip of the tongue for two days, but on the third day a thin layer of mummified tissue separated and came off, indicating to me that the paste would not destroy healthy tissue. At this time there was a decided depression where the growth came out. I then gave the patient ten drops of Fowler's Solution in a teaspoonful of syrup of hypophosphites compound three times a day, and saw the case again in two weeks. At that time the base from which the growth had been taken was nearly healed over. I then wanted to remove the enlarged glands with knife, but this was declined. In six weeks I saw the case again, and was surprised to find that the depression was nearly filled by what appeared to be normal lingual tissue. There was no sign of any activity in the glands, and the case went on till the middle of November, 1901, when a nodule began to appear on the opposite side of the tongue and the glands began to enlarge. On careful examination December 5, 1901, by Dr. Moore and myself, all the cervical lymphatics were involved and both axillæ. There seemed hardly any ground for further local warfare, so the case was put on Fowler's Solution and hypophosphites. While I have to give up vanquished in this case, I believe I added two months to the patient's life, which is highly ap-

preciated by him, and I doubt if the knife could have done any better for him.

I had an opportunity about a year ago to examine eight cases of cancer of the breast that were then under treatment by the application of cancer paste. In these cases the paste had been on from one to three weeks. I was unable to get the exact formula of the paste, but in all the tissues showed the mummifying action of zinc chloride. In two cases a marginal separation had taken place; there was a band of healthy granulations and new integument from half an inch to an inch in width surrounding the base of the growth. The cases showed the fact that as the growth separated the granulations and healthy integument gradually closed in, so, by the time the growth came off, the open sore was not over one-third the size of the original base of the growth. In one case the paste had been applied for only one week. There was an inflammatory zone one inch wide surrounding the base of the growth before separation began. I attribute the inflammatory action to arsenious acid in the paste. In another case, showing a base six inches across, I observed marked enlargement of the axillary glands; these were in an inflamed state, and one being discharged through the skin in mass, leaving apparently a healthy granulating sore. This had taken place without any application of the paste in the axillary region, the paste being applied and confined to an area two and one-half inches in diameter over the nipple. I attribute the effect on the axillary glands to the arsenic acting through the lymphatics. The general condition and physical appearance of the patients improved under the treatment. Only one of the eight received any medicine internally. The after history of these cases following the treatment is wanting; no record whatever is kept of these by the institution. I since learned through a friend that the worst one of the cases, a woman 60 years old, with a growth the size of a dinner-plate, extending down to the margin of the ribs, died eight months after leaving the institution. The treatment extended from four to ten weeks.

I have tried to give a minute account of these cases and of my own case, so that members of the profession may have a distinct idea of what to expect and how to proceed in the paste treatment of cancer, for my observation has led me to believe that many of the profession have a very indefinite idea of the paste treatment, and I believe it a laudable measure for the profession to make use of.

New Home for the Ophthalmic Institute.—The New York Ophthalmic and Aural Institute, under the charge of Dr. Herman Knapp, is to move from its old quarters in East Twelfth street to a new edifice on Central Park West and 64th street.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. No. 7.

JULY, 1902.

\$1.00 PER ANNUM.

THE SARATOGA MEETING.

The meeting of The American Medical Association at Saratoga, for the success of which The New York State Medical Association was primarily responsible, has been universally pronounced a memorable one in the history of the Association.

The address of the President, Dr. Wyeth, showed that the author had a firm, comprehensive grasp not only of the dignity and scientific eminence of the profession, but also of the position it should occupy in the nation as a class of scientific and accomplished men and citizens. He also emphasized the powerful and beneficial influence of a well organized profession in the body politic. This evidently struck the right note and met with hearty response from the audience, as indicated by the frequent applause.

The addresses on surgery, on medicine and on medical jurisprudence were deliberate and well-thought expositions of the subjects chosen for discussion. The surgery of the heart is a comparatively new subject, and was presented by Dr. Sherman in so concise and yet so comprehensive a manner, and the technic of the suture of heart wounds was so thoroughly discussed, that the oration proved a complete exposition of the subject. The oration of Dr. Billings on "The Relation of Medical Science to Commerce" was an eloquent and convincing a gument upon the value of medical science and practice to the community from a commercial standpoint. Dr. Emmert reviewed in a most interesting and instructive manner "The Evolution of State Medicine," and discussed in detail the governmental regulation of tuberculosis, and of marriage and restriction of the venereal diseases.

The attendance upon the section meetings was all that could be desired. Certainly no one could hope for a better audience before which to present a scientific subject than greeted the members of the various sections as they read their papers. Indeed the meeting was noteworthy for the scientific character and practical value of the papers

submitted. In every section some important practical subject was presented for discussion in which the general practitioner must have found invaluable help for his future work.

The changes inaugurated by the revised constitution and by-laws commended themselves to all. The rank and file of the members were glad to be relieved of the business meeting, and the House of Delegates proved to be a most efficient and capable legislative body. President Wyeth presided with his accustomed tact and discretion. The machinery of the new organization was gotten into shape and efficient work was done.

It was confidently predicted that this year's meeting would be an epoch making one in respect to attendance. In this regard it was somewhat of a disappointment. The number of ladies in the company, however, compensated fully for the diminished number of members. Saratoga took on holiday appearance for a few days. The streets were gay with driving parties, and the verandas and corridors of the hotels thronged with vivacious and attractive women.

The place of meeting was simply ideal. The hotel accommodations were ample and comfortable, and the halls for the meetings of the sections were commodious and conveniently located.

The business committee, under its able Chairman, Dr. Comstock, is to be congratulated on the success of the arrangements and the efficiency of its various members in seeing to the details of their individual responsibilities. Something must be said also in favor of the weather. Had there been storms or excessive heat undoubtedly the committee would have been held responsible. Justice compels us, therefore, to ascribe to them their due share of credit for the glorious weather that so favored us.

The next meeting of the Association will be held in New Orleans, and if the Committee on Arrangements is to be held responsible for the weather at that time it will be well for them to anticipate the season and place the date of meeting rather early on the calendar.

THE NEW PRESIDENT OF THE AMERICAN MEDICAL ASSOCIATION.

The efficient work of Dr. Frank Billings in the House of Delegates, and his masterful oration before the Association this year upon "The Relation of Medical Science to Commerce," combined with his well-known reputation as a leader in the field of general medicine, commended him exceptionally to the House of Delegates as a candidate for the Presidency of the Association, and he was unanimously elected.

Dr. Billings was born on a farm in Iowa County, Wisconsin, April 2, 1854. His parents were of English descent, his paternal ancestor settling in New England in 1654, his maternal ancestors coming from the Virginia Colony and migrating with Boone to Kentucky and the wild West. Dr. Billings was educated in the common schools of Wisconsin, the State Normal School at Platteville, and the Northwestern University. After graduating at the Chicago Medical College in '81 he became successively interne at Cook County Hospital, Demonstrator of Anatomy at The Chicago Medical College, advancing to lecturer on Physical Diagnosis, Professor of Principles and Practice of Medicine, and finally Professor of Medicine and Dean of the Faculty at Rush Medical College. The latter position he has held since 1898. He also fills the position of attending physician to several of the leading public hospitals of Chicago. In his professional work Dr. Billings is a careful, painstaking investigator. In his institutional work he is known as an interesting and impressive teacher, and among his fellow citizens as a sympathetic, broad-minded man. He is possessed of exceptional administrative ability, and in his hands the interest of the American Medical Association, there is every reason to believe, will be carefully conserved and advanced during the coming year.

THE SURGEON-GENERAL OF THE ARMY.

After 41 years of service in the army Dr. George M. Sternberg retired June 8 with the rank of Brigadier-General, having reached the age limit. To show the high esteem in which General Sternberg is held by his fellow practitioners in the medical profession, especially for his scientific attainments and his influence in advancing the attainments of the medical corps of the army, a dinner was tendered him at Delmonico's in New York on the evening of June 13. A highly representative body of physicians from all the prominent cities of the country were present, and the occasion was a most enjoyable one. Dr. E. G. Janeway presided, and speeches were made by the presiding officer, by Dr. Alexander H. Smith, Dr. William Osler, Dr. Gorgas, recently chief health officer of Havana; Dr. John A. Wyeth, Dr. Frank Billings, Dr. W. H. Welch, and the guest of the evening. Colonel William H. Forwood, Assistant Surgeon-General United

States Army, has succeeded Dr. Sternberg as Surgeon-General. Dr. Forwood is approaching his 64th birthday and will be retired for age in September next.

THE PARASITIC ORIGIN OF CANCER.

It is with eager expectancy that medical science is now turning its attention to the study of cancer. Investigators in every quarter of the globe are busy in the search for the cause of this fatal malady. The work of the State laboratories at Buffalo is doubtless familiar to all. The idea of the parasitic origin of cancer is still maintained there, and sufficient evidence is constantly being evolved to incite to further investigation on that hypothesis. On the contrary, the laboratories of Harvard University find no ground for hope in this direction, and are searching for some inciting cause in the field of physiological chemistry.

One of the most important papers read at the German Medical Congress, recently held at Weisbaden, was on the "Parasitic Origin of Cancer," by Professor Von Leyden. He summed up the present attitude of investigators, based upon the result of recent collective investigations, by asserting that the present knowledge as to the infection of malignant diseases could only be considered rudimentary. Of the many theories advanced only two were considered of serious consideration; namely, the histogenetic or cellular, the representatives of which are Hansemann and Ribbert, and the parasitic or biological; Von Leyden is distinctly in favor of the latter. In order to make this theory intelligible it must be supposed that the germ is situated in a cell. There cannot be constant increase of a cell unaccompanied by a constant irritation. This could only be experienced by the existence of a parasite. He pointed to the analogy from the vegetable kingdom of a disease of plants recognized by Russian botanists which represents many resemblances to cancer. For instance, an enlargement had been found on the roots of a cabbage which had been proved to have at least a connection with an intracellular parasite. From this plasmodium groups of spores resulted; these changing into amebæ had been observed outside the plants. The influence of cancer on metabolism he considers an argument in favor of parasitic origin. This influence is shown in the increase of urea excreted, cachexia, etc. As regards the infectivities, he admits that this has not been directly proved as far as the human species is concerned, but in animals of the same species it had been demonstrated several times. He thinks that accidental infection of cancer from one person to another has been demonstrated. As an illustration of this he cited the case of a hospital attendant who developed cancer two years after accidentally swallowing a cancerous fluid.

THE FUTURE OF OBSTETRICS AS A SPECIALTY IN AMERICA.

Under this title Dr. Barton Cooke Hirst, of Philadelphia (*American Medicine*, May 17, 1902), in a signed editorial, endeavors to prove that the obstetrician is gradually depriving the gynecologist of most of his labor, and in connection with the general surgeon, who is invading the field of gynecology from the opposite side, the specialty of gynecology is destined to be rapidly forced to the wall. It becomes apparent, however, as one reads the article, that this remarkable development of the obstetrician's work is simply a matter of sleight of hand, and the obstetrician, instead of remaining an obstetrician and doing obstetrical work, is to abandon that field to specially trained nurses, while he himself becomes a gynecologist and repairs the damage done under the supervision of the special nurse.

In this connection he says: "It is the function of the professed expert in obstetrics, in my judgment, to confine his private practice so far as possible to cases promising to be unusually difficult or complicated, to reserve his time for hospital work and a consulting practice, and to make his daily work the diagnosis and treatment of diseases of women, almost all of which must be studied in relation with parturition and for the successful treatment of which a thorough training in obstetrics as well as surgery best fits him. It would be a most desirable development of the near future if the average labor case could be intrusted to a highly trained, well informed, skillful and experienced nurse, the physician being called in to repair the injuries of childbirth, to deal with any complication or abnormality that might arise, to make, perhaps, the daily routine visits, and above all to make the final careful examination at the end of the puerperal convalescence. By this plan the specialist and the general physician, too, could undertake the supervision of an almost unlimited number of cases."

This vision of the future, effulgent with hope of increased practice and enlarged bank account, may afford sweet consolation to the consulting obstetrician as he sits comfortably ensconced in his luxurious office; but to one practically engaged in the gynecologic field the number of neglected obstetrical cases that are passing daily from the hands of the obstetrician and general practitioner, and will continue to pass for many years to come, give promise of sufficient occupation for the gynecologist to save the specialty at least from imminent wreck. When the ideal work of the obstetrician, which Dr. Hirst so graphically pictures, shall be in practical swing, when the obstetrician shall allow no women to leave his charge with any of the injuries of childbirth unrepaired, with no uterus allowed to remain out of place, with every inflammatory disease of the uterus, ovaries, tubes, peritoneum and pelvic connective tissue repaired, with every tumor of the

genital canal or its neighborhood which requires removal removed, then may the gynecologist begin to gird up his loins for the invasion of other fields.

If the gynecologist is awake to the expansion of the energetic obstetrician it will only be necessary, in order to still retain his position, to extend his field into the obstetrician's country and so keep his finger upon patients that are sooner or later to require services in his legitimate field. The gynecologist while retaining his name becomes the obstetrician, and the obstetrician while holding his name becomes the gynecologist.

OUR NEW SURGEON-GENERAL OF THE NAVY.

The May number of the "Journal" of the Association of Military Surgeons presents a portrait of Rear-Admiral Presley Marion Rixey, recently appointed Surgeon-General to succeed Admiral Van Riper, retired. We present the following interesting points in his history. Admiral Rixey was born in Culpepper County, Va., July 14, 1852, and received his early education at the schools of Culpepper and Warrenton. His family identified itself with the Confederate cause during the Civil War, which brought financial ruin upon its members. At the close of the war young Rixey entered upon the study of medicine and received the degree of M.D. from the University of Virginia in 1873. His medical studies were supplemented by attendance upon clinics and hospitals at Philadelphia, and in 1874 he was commissioned Assistant Surgeon in the navy. Entering thus early upon his professional career, he has had a long and varied experience both at sea and on the shore, and now, at the early age of 52, his period of service has been crowned with the highest honors attainable in his corps.

It is pointed out that Admiral Rixey's thorough understanding of the needs of the service is evinced by his prompt application to Congress for a material increase in the number of his corps. His request is accompanied by evidence of the necessity for the desired action so convincing that there seems to be no doubt of favorable action upon it. The "Journal" remarks that the ascension of Admiral Rixey augurs good fortune for the naval service, and particularly in the medical department, which is sure to be developed and advanced by the sagacity, tact and ability which have characterized all the official acts of his successful career.

INTERNATIONAL SANITARY CONGRESS.

Dr. R. L. Miranda, who was appointed as the delegate of the New York State Medical Association to the International Sanitary Congress, held in Havana, February 15-20, 1902, presents the following as embodying the conclusions of the Congress:

1. Approve the resolutions of the second

American Conference which took place in Mexico.

2. The mosquito, *stegomia fasciata*, is accepted as the only means well proven to now, as transmitter of yellow fever. In conformity with the above resolution, the profilaxis should be that the mosquito of the said specie must be destroyed as much as possible, and to use the best means to avoid the access of said mosquito to the yellow fever patients.

3. The International Sanitary Congress proposes the formation of Sanitary Anti-leprosy Leagues under the control of the governments that are represented, with the object of employing all possible means to enlighten the countries about the progress made by this disease and the means to prevent it.

a. The entrance from abroad, of persons suffering from leprosy, should be avoided, and such persons should be sent back at the expense of the companies that have transported them.

b. The confirmed cases should be isolated, and the suspected cases should be also isolated and make the best observations of them.

c. To inform the public by all means that leprosy is a contagious disease, and to show the best means to avoid it.

4. To recommend all countries in which paludism is suffered that it is necessary to fight against and disseminate the knowledge acquired lately about the means of transmission of the said disease; to have illustration of the mosquitoes that transmit the paludism; to print circulars to be distributed among navigators that visit the malarial districts; to extend the said knowledge to the elementary schools, and probably all those preventions will be the extinction of the paludism.

5. To recommend all the American Republics establishing leagues against the tuberculosis, already adopted in some republics, and also in Cuba, with the object of diminishing the propagation of said disease.

6. To recommend the general convenience of a classification of the contagious diseases, from the point of maritime sanitation, taking into account the period of invasion of every one of them.

7. To recommend to all the governments to make previous inspections in the places in which the cattle are exported and imported, and also of the vessel in which they are transported; to perform the vaccination every time that will be necessary; in the vaccination, *maleine* could be employed as a means of diagnostic for horses and mules, the vaccine anti-carbuncle for the bovine and woolen ones, the vaccine Schweinte of Washington for the herd of swine.

The International Sanitary Congress considers convenient that the governments of different countries order in their legislations these last principles recommended against the epizootic.

AMERICAN MEDICAL ASSOCIATION.

The House was called to order by President Wyeth. He spoke of the critical period through which the Association is now passing because of the *change of organization*, and of the fact that after 53 years of trial the original plan had not secured that concert of action in the entire profession which had been hoped. As a result there had been one year ago accepted the plan of the Committee on Organization, and the testing of it by experience at the present meeting. Forbearance and charity are therefore required of all toward those who differ, in order to bring about the union desired by all.

Dr. Wyeth also advised the appointment of a committee on sections and section work, composed of members of the House who have had experience as chairmen of sections, the chief duty of such committeemen being to advise or aid the inexperienced chairmen-elect of each section in the organization of that section, the arrangement of the material program, etc.

The need of *interstate comity*, or *reciprocity*, requires the attention of the delegates, and the plan of Rodman is worthy of careful consideration.

As to the *management of the annual meetings* and the payment of expenses, it was recommended that the House of Delegates, with the secretary acting as its agent, hereafter assume the entire responsibility and management of the annual meetings.

The *retention of the national committee of three on medical legislation* was advised as a part of the Committee on Medical Legislation.

The establishing of a *Department of Public Health* at Washington was held to be one of the duties incumbent upon the Association, and the necessity of the continuance of the Committee on National Legislation was emphasized, as well as our common duty to impress on the community in which we reside the necessity for and the safety of the immunizing process of vaccination.

The appointment of an officer who shall act as a *national organizer of the profession* was earnestly recommended—one who, specially fitted for such work, would add largely to the membership of the Association by visiting those States or Territories where, as yet, medical organization and society work are practically neglected.

The *report of the Secretary* contained the following points of interest:

Almost without exception, the State and Territorial societies, through their officers, have shown not only a willingness but an earnest desire to cooperate with the American Medical Association in this work of reorganization, but it is evident that the various State societies, or the committees representing them, while anxious to conform to the recommendations of the American Medical Association, were at a loss to know how to arrange their constitutions and by-laws so as to incorporate the principles recommended, and many

of the members of these committees wrote me asking if the American Medical Association could not suggest a form that could be adopted by all State societies that desired to do so. Dr. Wyeth appointed as the committee to formulate a constitution and by-laws for State societies the original Committee on Reorganization, viz., J. N. McCormack, P. Maxwell Foshay and George H. Simmons. Several of the State societies have adopted this constitution and by-laws, some with slight modification and others exactly as submitted by the committee, except verbal changes. But few of the State societies appointed committees last year, so they were not able to take final action in changing their constitution and by-laws. All of the States thus far heard from have appointed committees on organization, so that we may expect next year to see most of the State societies falling in line.

On March 8 the secretary of the New York State Medical Association forwarded a list of 161 names of members of the American Medical Association residing in New York who were not members of the New York State Medical Association or any of its branches, and asked that these be dropped from the roll of members of the American Medical Association. I declined to take this action, because I could find nothing in the constitution and by-laws authorizing me to do so. While it is plain that such membership as that referred to is not possible if the by-laws are enforced, there is nothing to indicate who shall take action, and I so informed the officers of the New York State Medical Association. There are many men holding membership in the American Medical Association, in practically every State and Territory who are not entitled to membership even under the old constitution and by-laws. These became members while eligible, but have lost their membership in the society through which they obtained their membership, either by change of location, by expulsion or suspension, by the society becoming defunct or in other ways. Whatever the cause, there has been no way of keeping in touch with such matters in the past, since there has been no close relationship between this Association and its subordinate branches and no attempt to report to the higher body on the part of the lower. In the future, when we become organized according to the proposed plan, it is presumed that a systematic method of reporting by the county society to the State society, and by the State society to this Association, will be adopted and carried out. The present conditions are certainly not satisfactory. We have had on our books as members until quite recently, and probably have yet, men who are the veriest quacks and the most notorious advertisers in the country. This has occurred from the fact that it is impossible to keep in touch with each individual member unless it is done systematically by such reporting as it is hoped will soon be adopted.

The President, last February, authorized me to proceed to verify the membership list by sending to each member a blank on which he should give all necessary information in regard to his membership and other biographic information. The form was put in the form of questions to elicit the following points: When the member joined the Association; through what society; if there is a county society in his own county, and if so, if he belongs to it; and also if he belongs to his State society. The biographic information asked for, while it has no relation to membership, we thought would be advisable to obtain at this time as a basis for a biographic list of members in the future. For various reasons it has been impossible to make much more than a beginning in this work. We have covered only seven States, viz., Alabama, Arkansas, Arizona, California, Colorado, Connecticut and New York (the blanks received from New York show only 104 not eligible), showing a total from the seven States of 158 not eligible to membership. The total number of those not responding, even after a second request, is 330, and it is fair to presume that these have not responded, in many instances at least, because such response would show them to be ineligible to membership. The total number of members in these States, January 1, 1902, was 1,726, showing that over 9% are not eligible to membership. The same percentage covering the whole country would show that there are over 1,000 members in the American Medical Association who are not eligible to membership, if the constitution and by-laws are strictly enforced, but this will probably be below rather than above the real number.

There should be a rigid enforcement of the constitution and by-laws in every instance, for only in this way can we have an organized profession. By dropping certain ones under the rules, we may lose temporarily, but I believe that we will gain many more than we will lose. This assertion is based on individual cases that have come to my knowledge. Nevertheless, I cannot but believe that we should act in a conservative manner toward those who are now in the Association and who are not eligible to this membership.

The new constitution wisely provides for "representative teachers, and students of all allied sciences, not physicians" as associate members, the idea being to have such men as physiologists, pharmacists, etc., take part in some of the Sections. According to the constitution, however, these must be elected by the House of Delegates. Would it not be better to have them become associate members in the same manner as members by invitation? Under the present circumstances, the names of these men appear on the program before they are elected.

The Report of the Board of Trustees of the American Medical Association for the fiscal year beginning January 1, 1901, and ended December

31, 1901, was as follows: Instead of the usual debit and credit exhibits showing the cash receipts and disbursements for the year, we present you the report of the auditors employed to examine the books and accounts, vouchers, etc., of both THE JOURNAL and the Treasurer's offices. The auditor's report states that the circulation of the publication has increased from 17,446 to 22,049, and that the cost of publishing has decreased from \$5.18 to \$4.81 per year, which is certainly very gratifying. A schedule of members of your Association who are delinquent for the years 1899 and 1900 shows that 167 have not paid for the year 1899, and 459 for the year 1900.

STATEMENT OF RECEIPTS AND DISBURSEMENTS BY
H. P. NEWMAN, TREASURER.

1901.		RECEIPTS.	
Jan. 1—Balance on hand.....	\$15,512.23		
June—Registration fees at St. Paul meeting	5,050.00		
Dec. 31—Interest on government and city bonds.....	860.00		
Dec. 31—Membership fees for the year, not including registration fees at St. Paul	46,505.00		
			\$67,927.23
Disbursements			37,166.75
			<hr/>
Balance on hand.....			\$30,760.48

STATEMENT OF CONDITION DEC. 31, 1901.
ASSETS.

Treasurer, cash.....	\$30,760.48	
U. S. bonds, par value, \$10,000.00..	10,812.50	
Chicago city school bonds, par value, \$14,000.00.....	15,168.13	
		\$56,741.11
<i>Journal</i> assets.....		34,324.54
		<hr/>
		\$91,065.65
LIABILITIES.		
Accounts payable.....		\$3,225.74
		<hr/>
Net worth.....		\$87,839.91
Net worth, 1900.....		61,821.80
		<hr/>
Increase during year 1901.....		\$26,018.11

ANALYSIS FOR 1901.

Income from all sources.....	\$157,645.86	
Less membership commission.....	197.20	
		<hr/>
	\$157,448.66	
Less transfers.....	7,463.00	
		<hr/>
	\$149,985.66	
EXPENSES.		
<i>Journal</i>	\$113,740.06	
		<hr/>
<i>Journal</i> gain.....	\$36,245.60	
Treasurer and Association expenses, \$9,230.12		
Treasurer and <i>Journal</i> account....	997.37	
		<hr/>
	10,227.49	
		<hr/>
Net gain for year.....	\$26,018.11	

The investment referred to in the last annual report of a sufficient amount of money which, when added to the \$10,000 in government bonds already owned by the Association, would make about \$25,000, which was approved by the Association, was made by the purchase of fourteen (14) Chicago City school bonds of a par value of \$1,000 each, which cost, including premium and interest, \$15,168.13. This gave us an interest-bearing investment of \$24,000, which yielded us an income of 3½ per cent., bringing in \$860 in 1901.

Advertising Department.—To the ordinary JOURNAL reader it would appear to be an easy matter to lay down an inflexible rule by which the advertising department of any publication should be governed—that this should be like the laws of the Medes and Persians—but when brought face to face with many propositions, it is found to be a very difficult matter to decide what to do in each individual case. The Trustees are endeavoring to eliminate from the pages of THE JOURNAL all advertising that could be considered objectionable from an ethical standpoint. Some money has been lost to THE JOURNAL by the enforcement of the rule given above, but advertisements of a better class take the place of every one that drops out. We feel that we are making steady improvement along these lines.

The Board of Trustees had instructed the Editor to comply with the letter of the law in getting out programs for the Saratoga meeting, but it has been impossible for him to do this inasmuch as no explicit rules had been adopted by the Association. We refer to this matter to ask the House of Delegates to rule definitely in regard to all matters connected with the number of papers in each section; the parties who may or may not be invited to read papers before the sections; the question of abstracts of papers; the publication of papers read, and the date at which all titles of papers must be in the hands of the Editor, from and after which time no changes are to be made in the program. Too many papers are entered on our programs, many of them not to be read, but to advertise the parties who have entered their names. Not more than thirty papers, if all are read, can be discussed and disposed of in each section at our annual meetings; hence your secretaries of sections should be notified not to exceed that number in the program of their sections. All papers not read will be treated as volunteer papers, and no papers from members of the medical profession in the United States who are not members of the American Medical Association will be allowed on the program. All papers read in the sections, to be entitled to publication in THE JOURNAL, must have the approval of the three members of the Executive Committee of the section in which they were read, this approval to be evidenced by the signatures of the members to such papers.

Accounts and Expenses.—The Board has had

before it several accounts for postage and other expenses presented by the secretaries of some of the sections. We have been forced to decline to pay these bills, as we could find no authority for so doing. If such accounts are to be paid, a definite amount of money, not to exceed \$10, should be appropriated to the secretary of each section to cover postage and the incidental expenses of his office.

The Board, at the Chicago meeting, was confronted with two questions of much magnitude and importance to the Association: (1) The status of the Association in view of the amendments to our constitution and by-laws; and (2) the best plan by which relief could be gotten for the overcrowded floor space in our rented quarters.

To determine the first question and thus to enable us understandingly to discuss and solve the second the Trustees deemed it best to secure the advice of able legal counsel, and to be guided by the opinion thus had. This was done as a result of the last meeting of the Board at St. Paul. The Resident Trustee, Dr. E. Fletcher Ingals, at some future meeting of the House of Delegates will report upon this matter. The opinion given by the attorney justified the Board in taking up and acting on the second question.

The Secretary and Editor reported an early expiration of the lease upon the floor space in the building occupied by THE JOURNAL office, and that at the end of the present lease we would be expected to pay double the amount of rent for the same floor, and that we could not secure room enough for THE JOURNAL work in the building, and besides that some new machinery needed would be too heavy to be placed anywhere in a building except in the basement, the Resident Trustee had been requested to inspect and report upon any desirable lots that might be put upon the market.

When the Trustees met in February, Dr. Ingals was able to price to the Board 8 or 10 plots of ground, some with and some without buildings. We inspected several of these pieces of property, and finally instructed the Resident Trustee to purchase a piece of property.

This property is on the corner of Dearborn avenue and Indiana street, and had on it five houses. This purchase was made and the title passed to the Association through a guarantee company on March 3 for the sum of \$42,646.96. This includes all fees connected with the purchase. Two of the houses have been torn down, and on the site occupied by them we have in process of erection a "Home for THE JOURNAL and a Headquarters for the American Medical Association." The other three houses are rented out, and we will get a good interest on our money for that part of the property, and as soon as the new building is ready we will be in fine shape. When the building is completed the property will

have cost us about \$70,000. Of this amount we had on hand, April 1, after paying out the \$42,646.96 for the building, nearly \$12,000. This does not include the money invested in the United States Government or Chicago City bonds, which amounts to \$24,000 face value.

Respectfully submitted,

T. J. HAPPEL, *Pres.*,
E. E. MONTGOMERY, *Vice-Pres.*,
JOSEPH M. MATHEWS,
MILES F. PORTER,
E. FLETCHER INGALS,
W. L. RODMAN,
W. W. GRANT,
JOHN F. FULTON,
H. L. E. JOHNSON, *Sec.*

According to a resolution offered McCormack (Kentucky) the president appointed a business committee of five, naming McCormack, Murray, Moyer, Ferguson, and Foshay. A communication was received from the Council of the New York State Medical Association asking the House of Delegates to appoint a committee of five to revise the Code of Ethics, and with the same they submitted such a proposed revision. The committee was instructed to report next year upon the revision of the Code. E. Elliott Harris (New York) offered a resolution that a committee be appointed for the *revision of the code of medical ethics*. Upon its adoption the following committee was named by the president: E. Elliott Harris, of New York; Wm. H. Welch, of Baltimore; Nicholas Senn, of Chicago; T. J. Happel, of Tennessee; Joseph D. Bryant, of New York, and J. N. McCormack, of Kentucky. The motion to appoint the committee was eloquently seconded by Reed (Cincinnati).

A resolution was passed placing the control of the exhibit hall in the hands of the Secretary of the Association; the resolution also provided that no exhibit shall be allowed of an article not acceptable as an advertisement in THE JOURNAL.

Professor O. Haab, of Zurich, Switzerland, who had been elected to honorary membership in the Association at the request of the delegates from the Section of Ophthalmology, was introduced to the House of Delegates by the president, and thanked the members for the honor conferred upon him.

J. N. McCormack (Kentucky), the chairman of the Business Committee, which had been appointed at the previous session of the House of Delegates, recommended that this committee be discharged and the following committees named to take its place: A Committee on Sections and Section Work, a Committee on Revision of the List of Members, a Committee on Finance, a Committee on the Relation of Dentists and Pharmacists, a Committee on Organization, and a Committee on Place of Meeting.

The report of the Committee on National Legislation was read by its chairman, H. L. E. John-

son (Washington, D. C.). The report noticed the gratifying fact of increased respect on the part of National and State legislators for the newly organized Association, and the growing power of the Association to influence legislation in the interest of the profession and the public. The conduct of the Congressmen responsible for the failure of passage of the bill as to the retirement of Surgeon-General Sternberg, with increased rank, etc., was severely criticised.

The report of the Committee on Organization was presented by P. Maxwell Foshay (Ohio). The committee reported its suggested form of constitution and by-laws for State societies in affiliation with the Association, stating that four States had already adopted the same, and others would soon do so. Its report was adopted, and the committee was asked to continue its work in bringing forward a form of constitution and by-laws for County Medical Societies. The appointment of a National Organization Officer was recommended. The committee was thanked for its work.

Dr. Foshay presented a memorial from the Cleveland Academy of Medicine, calling attention to the dangers of impure or inert vaccine virus, and requesting the House of Delegates to petition the Congress of the United States to pass such laws as will place the production of vaccine virus directly under the control of the United States Government, under the jurisdiction of either the Department of Agriculture or the Marine Hospital Service. This memorial was referred to the Business Committee.

A resolution was presented by Dr. Vaughan, calling attention to the long and distinguished public services rendered by Surgeon-General Sternberg, of the U. S. Army, who has just been retired, and asking the Association to petition Congress to take appropriate action that his work may receive the official recognition which it deserves.

A vote of thanks was tendered to Drs. Reed, Agramonte, Carroll, and their associates in Cuba, whose brilliant work, with the able co-operation of the late Governor, Dr. Leonard Wood, has resulted in ridding that island of yellow fever.

The following officers were chosen for the ensuing year: President, Frank Billings, of Chicago; first vice-president, J. A. Witherspoon, of Nashville; second vice-president, G. F. Comstock, of Saratoga; third vice-president, C. R. Holmes, of Cincinnati; fourth vice-president, James H. Dunn, of Minneapolis. Board of trustees, E. E. Montgomery, Philadelphia; H. L. E. Johnson, Washington (re-elections); and A. L. Wright, Carroll, Iowa. Henry P. Newman was re-elected treasurer and George H. Simmons secretary. The next place of meeting will be New Orleans. The orations have been assigned as follows: "Surgery," A. F. Jonas, of Omaha, Neb.; "Practice of Medicine," J. M. Anders, of Philadelphia; "State Medicine," William H. Welch, of Baltimore.

The Association.

The Orange County Association held its regular monthly meeting at the office of Dr. M. C. Conner, Middletown, N. Y., on Wednesday, June 18, 1902, at 2 p. m. There was a good attendance of the members.

On account of the funeral of the late Dr. S. H. Talcott, Superintendent of the Middletown State Homeopathic Hospital, a motion to adjourn and attend the services then in progress was made and unanimously carried. The members then proceeded in a body to the First Presbyterian Church of Middletown, where the services were held. This action on the part of the Association was deemed advisable considering the high official position that the deceased doctor held during life and on account of the esteem in which he was held as a public man and a citizen.

At 4 p. m. the Association reconvened and engaged in a scientific session, at which Dr. F. W. Dennis, of Unionville, N. Y., presented a paper on "Ptomaines and Leucomaines." The doctor treated his subject in a very accurate manner indeed. Physiological chemistry was largely drawn upon in elucidating the important facts in connection with the various pathological processes dependent on leucomaine poisons for their origin. A leucomaine was defined as a substance, possibly an animal alkaloid, formed in the living cell protoplasm, capable of so disturbing the usual vital processes of the organ involved, and thereby the whole body, as to produce symptoms which taken collectively constitute certain diseased conditions or deviations from the normal vital mechanism. A ptomaine on the contrary was defined as a substance originating outside the animal organism in various articles of food or drink, which on being introduced into the stomach of a living body were capable of producing symptoms of a very violent type and also a long list of diseases. Prominent among these poisons was the tyro-toxicon ptomaine, so long known to exist in cheese, ice cream and in milk which has undergone change.

The whole subject, which has only recently been given prominence through the aid of chemistry applied to physiology in studying healthy and diseased processes in the living organism, was carefully reviewed. At the conclusion of the paper Dr. Dennis was highly complimented on the effort he had made to present such a difficult subject, and a vote of thanks extended to him by the members of the Association present.

No business meeting was held owing to the lateness of the hour, and the discussion of Dr. Dennis's paper was necessarily very brief. It was requested that the subject be brought up again at the next meeting for a more extended discussion. Adjournment was then made until Wednesday, July 16, 1902.

The Antivivisectionists.—The London correspondent of the *Medical News* gives the following interesting account:

The antivivisectionist hounds are again in full cry. A few weeks ago the National Antivivisection Society got hold of a catalogue of apparatus and appliances for experiments on animals issued by the firm of F. & M. Lautenschlager, Berlin. The illustrations are, of course, of a kind likely to make sensitive people shudder, but after all they are not so harrowing as an ordinary surgical instrument maker's catalogue could be made by the addition of illustrations showing patients under operation. Some 20,000 copies of the catalogue have been sent out by the Society, largely to women. As usual, no hint is given by those responsible for this outrage on public sentiment that the animals who form the subjects of the experiments are made unconscious by anesthetics; nor is it explained that in this country the performance of such experiments, except under anesthetics, is forbidden by law. Victor Horsley has hurled himself into the fray, particularly in defense of Dr. Crile, some of whose experiments on surgical shock were performed in his laboratory. It appears that three years ago Crile was denounced to the Home Office, which has the supervision of vivisection here, by Stephen Coleridge, the moving spirit of the National Antivivisection Society; the matter was fully inquired into and the charge declared to be unfounded. Nevertheless, Coleridge has again been holding up Crile to public execration, and when reminded that the accusation was pronounced to be false, impudently insinuates that the Home Office was deliberately misled by the experiments. There can be no doubt, however, that Coleridge, though his disingenuous methods of controversy are recognized by intelligent people, is doing harm by shocking sentimental old ladies and making them unwilling to subscribe to hospitals where, it is suggested to them, vivisection is practiced. Scientific research is already considerably hampered in this country by legislative restrictions, and it is not surprising that, as Arthur Balfour publicly stated not long ago, we are falling behind other civilized nations—even such as Italy and Switzerland—in the advance of scientific knowledge.

* * *

Changes in Medical Law.—The medical law of the State has been so amended that the Regents of the University of the State may, in their discretion, admit conditionally to the medical examinations in the preliminary subjects—anatomy, physiology and hygiene and chemistry—applicants 19 years old who meet the other requirements. Under this amendment the Regents have power to grant an allowance of one of the four years of study in a medical school to graduates of college courses, registered by them as entitled to this privilege.

The Legal Status of Osteopathy.—Osteopathy in Ohio has been given official recognition by the passage of a bill in the House which provides for a committee to examine osteopathy and to regulate practice by that system. The osteopaths will not be permitted to administer drugs or to practice surgery.

The Iowa Senate has passed a bill adjusting the difficulty that has long existed between the osteopathic and the regular doctors of the State, requiring the State Board of Medical Examiners to issue certificates to those osteopathic physicians who pass an examination in designated sciences. The bill is a compromise of the long-standing controversy and results in the recognition of the osteopathic school.

A bill to grant a separate examining board to osteopaths, which was recently introduced in the Virginia Legislature, has been killed by the General Laws Committee of the Senate, to which it was referred.

* * *

Instruction in Anesthetics.—For many years in Great Britain it has been urged by authorities on the subject of anesthetics that no one should be allowed to qualify in medicine and surgery until he or she has shown a certain amount of proficiency in this very important branch of medical work. The Conjoint Board of the two London Colleges of Physicians and Surgeons have now adopted the following regulation: "That every candidate who passes the second examination of the Board or an examination at a university recognized in lieu of it, on or after the 1st of May next, will be required to produce before entering for the final examination a certificate of having received at a recognized medical school and hospital instruction in the administration of anesthetics, to the satisfaction of his teachers." It is certainly satisfactory to find that the large number of students who in the future pass into the profession through the Conjoint Board must possess at least the minimum of experience in the administration of anesthetics which is necessitated by the above resolution.—*British Medical Journal*.

* * *

A Case of Fatal Surgical Infection.—William D. Middleton, M. D., Bellevue Hospital Medical College, New York, 1868, one of the most eminent surgeons of the West, Professor of Surgery and dean of the medical faculty of the State University of Iowa, and Surgeon-in-Chief of the Chicago, Rock Island & Pacific Railway, died at his home in Davenport, Ia., April 5th, from acute septicemia following a wound received while he was performing an operation. It appears that March 30th Dr. Middleton, assisted by Dr. H. W. Braunlich, operated on a woman suffering from peritonitis, possibly of a streptococcic origin. It is supposed that while tying an artery Dr. Middleton abraded the

thumb of his left hand. The next day he was seized with a chill, which was immediately followed by intense oppression over the chest and high fever. There was no local affection until the fifth day, when the arm became edematous and was lanced. Dr. Braunlich is suffering in the same way, and at this time, April 8th, is not expected to recover.

* * *

Attempts to Disinfect the Small Intestine in Man.—Mieczowski utilized the opportunity afforded by several intestinal fistulas at Mikulicz's clinic to study the action of various disinfectants. He found that the pure juice of the small intestine had no bactericidal action. Of various disinfectants ingested per os, menthol displayed a weak disinfecting power when it reached the intestine. Ictrol and bismuth proved entirely negative. The one test with tannopin showed that the bacteria were reduced from 160,000 to 21,000 in twenty-four hours and to 16,000 in forty-eight.

OBITUARY.

JOSEPH EASTMAN, M.D.

The death of Dr. Joseph Eastman at Indianapolis, Ind., June 5, has robbed the meetings of The American Medical Association of one of its most pronounced and impressive characters. He was an accomplished operating surgeon. He had a clear and incisive conception of what was to be done in surgical conditions, and his opinions as expressed in the discussions before the sections in surgery and gynecology were punctuated with practical points indicative of hard, common sense. Dr. Eastman was a native of New York State, having been born in Fulton County, January 29, 1842. At the outbreak of the Civil War he went to the front with the 77th New York Volunteer Infantry. He fell an early victim to typhoid fever, but upon his recovery was put on night duty at Mount Pleasant Hospital, Washington, D. C. Here his ability as a nurse became conspicuous, and he was appointed hospital steward in the army. During the succeeding three years he attended medical lectures at the University of Georgetown. He was graduated in 1865, and upon passing the army examination was commissioned the Assistant Surgeon of Volunteers. He served in this capacity until mustered out in May, 1866. Later he took the degree of M.D. at Bellevue Hospital Medical College in New York in 1871, and four years later was made Demonstrator of Anatomy in the College of Physicians and Surgeons at Indianapolis, Indiana. Here he became associated with Dr. Theophilus Parvin, as an assistant. He was one of the organizers of The Central College of Physicians and Surgeons at Indianapolis, and became Professor of Diseases of Women and Abdominal Surgery, a

position which he held up to the time of his death. Dr. Eastman has been a member of The American Medical Association since 1872, and from 1894 to 1900 was a member of its board of trustees. In 1893 he was Chairman of the section of Diseases of Women. His fatal illness was due to malignant disease of the liver.

At a meeting of the faculty and alumni of The Central College of Physicians and Surgeons, Indianapolis, the following resolutions were adopted:

Resolved, That the faculty and alumni of The Central College of Physicians and Surgeons have met with an inexpressible loss in the death of Dr. Joseph Eastman, who was not only the father of the institution, but the most beloved and respected teacher and friend of all its students. His unequaled skill as a surgeon, his able lectures, his world-wide reputation, his lofty character, his wonderful success achieved by his own efforts and indomitable courage in spite of great obstacles, have been a large part of the glory of this college in the past, and will be an inspiration in the future."

RESOLUTIONS ON THE DEATH OF DR. TOWNSEND.

The committee appointed by the Genesee County Medical Association, at a meeting held March 12, 1902, to take action on the death of Dr. M. W. Townsend, who departed this life on the 26th day of February, 1902, after a brief illness, at the age of 74 years, do unanimously

Resolve, That in the death of our late President, Dr. M. W. Townsend, we have to deplore the loss of a valued officer of the Association, and a colleague whose zealous devotion to the promotion of medical science and whose sterling personal qualities have secured the lasting admiration and regard of all his fellow-members; and be it further

Resolved, That we feel that in the death of Dr. Townsend the profession at large has lost a brilliant, sagacious and reliable member, and that this Association has met with a great loss in the death of one who, by his scientific zeal, clearness of judgment, gentleness of manner and high moral character, commanded the entire confidence of all his professional brethren. While recognizing the loss our profession has sustained, we desire to extend our deepest sympathy to the widow and children of our late colleague in their bereavement.

Resolved, That a copy of these resolutions be sent to the family of Dr. Townsend, and that it be printed in the NEW YORK STATE JOURNAL OF MEDICINE, also entered upon the minutes of the Genesee County Medical Association.

WARD B. WHITCOMB,
A. P. JACKSON,
C. F. McCARTHY,
Committee.

THE A. M. A. EXCURSION.

BY DR. JOHANNA B. LEO,
New York.

What more appropriate pleasure, after listening for four days to scientific papers and their discussion, could a party of physicians, members of the American Medical Association, their wives and families, have indulged in than a tour such as was arranged by the Boston and Maine Railroad in connection with the Committee consisting of Dr. E. R. Campbell, of Bellows Falls, and Dr. W. R. Townsend, of New York City. On Friday, June 13, a genial party of 85 started from Saratoga on a ten days' trip. Friday brought with it a tour through Lakes George and Champlain, a jolly trolley-ride through Burlington, Vermont, when the motorman stopped at a cemetery, not as a monition, but to show us the monument to Ethan Allen, the hero of Fort Ticonderoga.

After supper at the Van Ness House, we made the rest of this day's journey by rail to Montreal, arriving at the Windsor Hotel at 10.50 p. m. Many of us, like true American citizens, had donned our national tri-color when we entered Canada. After a much needed night's rest the party divided into smaller parties and started off in all directions to view Montreal. Trolleys and carriages took the eager sight-seers to many of the interesting places of the city, while in the afternoon the entire party went through the Lachine Rapids of the St. Lawrence River, returning to Montreal in time for supper. The Rapids though interesting were not as rapid as our imaginations had pictured them. We were prepared for something hazardous and startling, but our good old captain guided the vessel through them as if he had done it many a time before and gave us no occasion for alarm. A Sunday in Montreal means a Sunday in the many churches, and the pilgrims without exception turned into the various places of worship in the morning. The afternoon brought a trolley-ride which gave us all a fair idea of the size of the city, its residences, and impressed on us indelibly the hosts of its churches.

Sunday 6.30 p. m. saw us all on board the boat bound for Quebec. Unfortunately the night was raw, cold and rainy, and the decks were soon deserted. In the morning some of us were surprised to see a regiment of Zouaves on board who entertained us with their French songs. One of the party asked their leader to sing the Marseillaise; quickly the response came. "We can do it, but we wouldn't be let." In spite of the raw wind that was blowing the deck was crowded with our party as we made for Quebec. No sight could be more impressive. For some, whose knowledge of history was fresh, the approach to the Citadel brought back the daring deeds of General Wolfe; for all the view was most inspiring, and we all longed to get ashore to investigate for ourselves the beauties of the city. Alas, only

one day was allotted for this delightful task, and that day the sun hid itself all day long. The time was all too short in Quebec, and with its many beauties unexplored, with its interesting churches unvisited, the party moved on to journey by rail to Fabyan's through the White Mountains. As we crossed the boundary from Canada into our native land the sun suddenly burst through the clouds, assuring us of fine weather. It was cold, but bright, and the distant mountains, as the train wound its way through them, stood out boldly. Several showed tongues of ice and snow near their summits, among them Mt. Washington. At Fabyan's the enormous parlors not yet patronized by the summer boarders gave us the first opportunity of a meeting, and what a jolly meeting it was. Dr. W. R. Townsend, of New York City, was made chairman of the meeting, and most ably conducted a very interesting session. Witty speeches were made. Dr. Campbell, to whom the party felt under deep obligations for the many comforts of the trip, was presented with a fine oil painting of an Indian head on a deer skin. A musician dispensed music and some of the party tripped the light fantastic and even indulged in an old Virginia reel. The morning brought carriage rides through the glorious mountains and the afternoon saw us again en route for Poland Springs. Messrs. Ricker of the Poland Springs House had extended this invitation to us. No finer host could be found in the country, the best the land supplies was ours. The hotel with its perfect equipments, its excellent service and unsurpassed cuisine in itself is an attraction: its location, commanding a view of the White Mountains, is delightful; while the natural spring with crystal water and the plant for bottling and shipping in its place form the greatest attractions of the place. Space alone prevents me from dilating further on this the most enjoyable part of our trip. With a cheer for the Ricker Bros., and a vote of thanks to them for our royal entertainment, we again started on our journey on Friday, June 20. In Portland we dined and then proceeded on our way to Boston. When about to enter the tunnel near Salem we almost collided with a train. A horrible disaster was averted by the timely action of the flagman, whose red flag caused the engineers of both trains to reverse steam. The brakes of our train for some unknown reason failed to fulfill their service, and the train came to a stop within two car lengths of the Rockport train. The only inconvenience caused us was a delay of an hour and the detention of our baggage, as the baggage cars had been derailed. When we reached Boston Dr. Henry O. Marcy asked us not to wait for our delayed baggage, but to come to his reception as we were. A few more fortunate ones of the party had the necessary apparel for such a social function in their dress-suit cases and donned it, but most of us went in traveling garb. The reception, with such hosts as Dr. and Mrs.

Marcy, was an enjoyable function, and we looked forward to the morrow for an equally pleasant carriage ride. But the morrow was dark and dismal and the rain came down in torrents and the ride had to be abandoned. Hurried farewells were said in the corridors of the hotel, regrets at parting, promises of meeting again at New Orleans or at St. Louis, and the party of 85 pilgrims who had spent nine of the happiest, jolliest days in sight-seeing scattered to the north, south, east and west, the better, the brighter, for the many new introductions to friends and places.

Naval School Goes to Washington.—The medical school at the Brooklyn Navy Yard has been ordered transferred to Washington, D. C., in accord with the plan of the government to make the latter city the home of Federal education. Rear Admiral Rixey, surgeon-general of the navy, said that the Navy Department proposed to assign to this school immediately after appointment every young medical officer who enters the service. He will there be grounded in the rudiments of his work as a naval officer and will also be given an opportunity to complete his professional education. Older medical officers will eventually be assigned to the school, but this can only be done when an increase of the corps is granted by Congress. One of the great advantages to follow the establishment of the school in Washington is that it will enable officers to attend the lectures given by army officers at the Army Medical College and those given by experts of the Department of Agriculture.

Correspondence.

THE STATE ASSOCIATION.

To the Editor of the JOURNAL OF MEDICINE:

Dear Sir: Another year has brought the State Medical Association again together, this time within its own borders at a meeting of the national body.

In the State of New York the work of organization is progressing, and the meeting in October of the State Association should find at least 75 per cent. of the counties thoroughly and carefully organized under the leadership of your present Board of Officers.

The plan of reorganization has necessitated a long campaign of education, and those who have given study and time to it should be ever ready to give sound counsel and advice to those upon whose shoulders shall fall the burden of carrying on this educational process. There are men in the State Association who have given years of individual effort and money besides; there are others who have given money; there are still others who have given much time; but unfortunately there are a few others whose assistance goes no further than to help their own selfish ends. But the evidence of their work is growing weaker and weaker.

The work undertaken by the New York County Medical Association in defending its members, and in the prosecution of illegal practitioners, has shown how completely can be wrapped around the careful practitioner the protection of a great association, and what a perfect protection it affords; it is ideal. Unfortunately the law with reference to illegal practitioners is beyond question inadequate. The reconviction from time to time of these characters shows that the punishment is not a sufficient deterrent.

It is especially that your counsel desires to call your attention to the need of complete harmonious organization throughout the whole State, which now calls for the best efforts of the leaders of the profession, not only in the eastern part, but throughout the whole State. Hard, thoughtful, constructive work is demanded.

With the hope that the result of your future counsel will be as gratifying as those of the past, and that the enthusiasm of this coming meeting may be continued throughout the year toward even greater efforts and success, I remain,

Faithfully yours,

JAMES TAYLOR LEWIS,
New York, June 20, 1902. Counsel.

BOOKS RECEIVED.

PRACTICAL DIETETICS, WITH SPECIAL REFERENCE TO DIET IN DISEASE—By W. Gilman Thompson, M.D., Professor of Medicine in the Cornell University Medical College in New York City, visiting physician to the Presbyterian and Bellevue Hospitals. Second edition, enlarged and thoroughly revised. New York. D. Appleton & Co., 1902.

MINOR SURGERY AND BANDAGING, including the treatment of fractures and dislocations, the ligation of arteries, amputations, excisions and resections, intestinal anastomosis, operations upon nerves and tendons, tracheotomy, intubation of the larynx, etc. By Henry R. Wharton M.D., Professor of Clinical Surgery in the Women's Medical College of Pennsylvania; Surgeon to the Presbyterian Hospital and the Children's Hospital; Consulting Surgeon to St. Christopher's Hospital and the Bryn Mawr Hospital; Fellow of the American Surgical Association. Fifth edition, enlarged and thoroughly revised, with 509 illustrations. Lea Brothers & Co., Philadelphia and New York, 1902.

DISEASES OF THE NOSE, PHARYNX AND EAR—By Henry Gradle, M.D., Professor of Ophthalmology and Otology in the Northwestern University Medical School, Chicago. Illustrated. Philadelphia and London. W. B. Saunders & Co., 1902.

NOTHINAGEL'S ENCYCLOPEDIA OF PRACTICAL MEDICINE: DIPHTHERIA—By William P. Northrup, M.D. Measles, Scarlatina. German Measles, by Theodor von Jurgensen, M.D., Professor of Medicine at the University of Tubingen. Edited, with additions, by William P. Northrup, M.D., Professor of Pediatrics in the University and Bellevue Hospital Medical College, New York; Attending Physician to the Foundling, Willard Parker, and Presbyterian Hospitals, New York. Authorized Translation from the German, under the Editorial Supervision of Alfred Stengel, M.D., Professor of Clinical Medicine in the University of Pennsylvania. Philadelphia and London. W. B. Saunders & Co., 1902.

CLINICAL PSYCHIATRY. A text-book for students and physicians, abstracted and adapted from the Sixth German Edition of Kraepelin's "Lehrbuch der Psychiatrie," by A. Ross Defendorf, M.D., Lecturer in Psychiatry in Yale University. The Macmillan Company, New York, 1902.

Original Articles.

THE THERAPEUTIC USES OF THE SUPRARENAL EXTRACT.*

BY W. H. BATES, M.D.

New York.

SO many have asked me how I came to discover the therapeutic properties of the suprarenal extract that the members of this society may be interested to hear a brief account. About eight years ago I was induced to try a number of organic extracts in diseases of the eye. A patient with atrophy of the optic nerve was given in turn extracts of the brain, spinal cord, testicle and thyroid without apparent benefit. Having begun in this case with organo-therapy, I determined to continue until extracts from all the glands and tissues of the body had been tried. Not being able to obtain any suprarenal substance from the drug houses, I was obliged to make my own extract from fresh suprarenals. Few can understand what a trouble this was. The extract had to be prepared at once, and it soon spoiled in a few hours. I remember the first time I used the aqueous extract. After instilling one drop in the eye of a patient I drew back and waited for the effect. My surprise was great when I saw the conjunctiva become blanched almost immediately without causing any pain or discomfort whatever. And although I have used the extract continuously ever since, I am still impressed by its powerful astringent effect. In the beginning I was cautious in the use of the extract. Later, when I found that it had no objectionable properties, I used it with increasing confidence. While the powerful effect of the extract is striking, to me it is more remarkable that its wonderful action is produced without any injurious after effects.

After two years' experience with this valuable substance my first paper on the therapeutic uses of the suprarenal extract was published. My claims for its value were soon confirmed by L. Dor, and later in the same year by Howe. The extract was used at first only in diseases of the eye. Its action was so prompt and certain and so valuable as an astringent and hemostatic that it was later employed to relieve inflammatory conditions in other organs of the body. Velich (*Wiener Medizinische Blätter*, November 11, 1897) published a paper in which he described its astringent property in the treatment of some diseases of the skin. Cohen reported its successful use in hay fever, asthma and exophthalmic goiter. Mullen called attention to its value in preventing hemorrhage after nasal operations.

Swain published an excellent paper on the use of the extract in diseases of the nose and throat. Curtis called attention to its value in laryngitis. Other papers on its use in diseases of the nose and throat rapidly followed. Floersheim published a paper on its use in heart disease. He was the first to describe its value in most diseases of the lower air passages, and reported sixteen cases of hemoptysis relieved by the suprarenal substance. Kenworthy afterwards published the beneficial effect of the suprarenal substance in fourteen cases of hemoptysis, but neglected to give Floersheim the credit of priority.

In this short paper I can only refer in a general way to the fact that the use of the extract is increasing, and increasing more rapidly during the last few years than during the first years after its discovery.

PREPARATIONS.

The preparation I use in preference is made from the fresh suprarenals as follows:

1. Fresh suprarenals are minced and are mixed with distilled water which has been boiling one hour to drive off the air in solution. Sixteen parts of the glands are mixed with twenty parts of the boiling water.
2. Boil the mixture fifteen minutes.
3. Filter immediately.
4. Let the filtrate stand in a temperature of 60° F. for two hours.
5. Decant the supernatant fluid and filter it into 5ij bottles.
6. The bottles are loosely corked and heated in a sterilizer at 212° F. for one hour.
7. The bottles are removed from the sterilizer and kept at a temperature of 70° F. for twenty-four hours.
8. They are again placed in the sterilizer at 212° F. for one hour, after which they are tightly corked and the process is finished.

This sterilized solution keeps for many months, but after six months or a year its properties may become impaired. When the cork is removed the solution soon spoils. Sometimes a putrid odor is manifest after three hours. Of course one should not use a putrid solution. Infection usually follows its application to the mucous membrane of the eye or nose, although the parts may be temporarily whitened.

Solutions of the extract containing preservatives, chloretone, carbolic acid, boracic acid or resorcin have been recommended. The preservatives do not prevent the growth of bacteria, and I have seen infection of the eye follow their use. Furthermore, the active principle of the suprarenal is impaired by preservatives. One is encouraged to use them because, although bacteria may be present in large numbers, the solution even after several months has not usually a putrid odor.

The alkaloid of the suprarenal extract is a very active substance. One part in thirty thousand of

* Read before the New York County Association.

water will whiten the conjunctiva of a normal eye in less than one minute. It was first obtained by J. J. Abel, who named it epinephrin. The iron compound of Von Furth, suprarenin, and the adrenalin of Takamine are also very active. Solutions of the alkaloid can be sterilized and will retain their properties for some time. They do not keep indefinitely, but gradually lose their strength. When exposed to the air bacteria appear in the solution, and, although a putrid odor is not usually evident, infection of the eye and nose has occurred after their use.

The dried and pulverized gland can be obtained. It is convenient, as the properties of the gland are retained for a long time. The objection to the powder, as first pointed out by R. H. Cunningham, is that it contains substances which act as poisons. These substances are formed during the process of drying, a process which requires several days. However, in most cases these poisons are not injurious. It is only when one has a patient very ill with a sensitive stomach that care is necessary. Dr. S. Floersheim told me of the following: A woman with pyemia, having a pulse of 180 and a temperature of 107° F., vomited after the administration of three grains of the powder and became worse; later, after the administration of five drops of a sterilized solution obtained from the fresh gland, the pulse in a few minutes became stronger, more regular and 80 to the minute, with great relief to the patient.

The dried suprarenal extract is hygroscopic. So also is the alkaloid. The moisture absorbed from the air is injurious; a chemical and putrefactive change occurs, with destruction of the properties of the suprarenal preparation. This fact should be remembered in using the dried and powdered gland, as well as the alkaloid.

Tablets of the dried gland in my hands are disappointing. They do contain the active principle, but the amount is so small that the results after their administration are uncertain. The preparation of the tablets requires the use of some water, and the moistened extract during the process of drying is partially destroyed by oxidation or by the action of bacteria.

Administration.—When the extract is properly administered the maximum effect follows almost immediately. Locally, in less than one minute, and after the internal administration in less than five minutes. As the effect is temporary, it may be necessary in some cases to use it at frequent intervals, as for example to perform a bloodless operation on one of the eye muscles or to remove an hypertrophy of one of the turbinated bodies in the nose, which requires some time.

Its local use as a hemostatic may be unsuccessful unless one remembers to apply the extract directly to the bleeding point. In severe epistaxis, with the blood flowing from the nose in a stream, I have always stopped the bleeding completely by syringing into the nose the suprarenal solution, which washed away the blood clots and allowed

the extract to reach the source of the hemorrhage.

For the prevention and control of hemorrhage after operations on the eye muscles it is usually necessary to apply the solution of the extract beneath the conjunctiva with the aid of a hypodermic syringe.

For *internal* use the best results are obtained with a freshly prepared solution of the extract from the fresh gland. Five to ten drops are placed on the tongue, and the patient is directed to swallow them at once without water. Much of the solution is absorbed at once, and does not reach the stomach. I have never observed any disagreeable effects from this solution, even in patients with a very sensitive stomach. The sterilized solution is almost as good. The alkaloid in solution, when freshly prepared, is efficient. But the alkaloid in a sterile solution which has been prepared a number of weeks or months may lose its strength and may produce disagreeable symptoms from the fact that the alkaloid has been changed into an injurious substance by a chemical change.

The dried and pulverized gland is administered best in three or five grain gelatin capsules. The patient chews the filled capsule and swallows the moistened material without water. In this way an absorption of the extract into the blood occurs through the mucous membrane of the mouth, and an effect is produced, if at all, almost immediately. When it is desired to obtain a local effect of the extract on the mucous membrane of the stomach, as in hemorrhage, it is advisable to have the capsule swallowed whole with a little water.

Dosage for Internal Administration.—Of the sterilized solution five minims is usually sufficient to produce an effect. The dried and pulverized gland produces nearly the same result with five grains and the alkaloid with 1-20 grain.

The hypodermic use of the extract is *not* necessary. Even with patients unconscious during general anesthesia the heart is stimulated at once, usually in less than one minute, by placing the solution on the patient's tongue. I have used for this purpose the well-known glass eye pipette, syringing the solution into the mouth.

Therapeutic Properties.—The extract has three important therapeutic properties: (1) Astringent; (2) Hemostatic; (3) Heart stimulant. I do not exaggerate when I say that the suprarenal extract is the most powerful astringent, hemostatic and heart stimulant known. Its action is usually temporary.

(1) When used locally in congestion of mucous membranes, no discomfort follows, and it may be used frequently for long periods of time without injury. It has no cumulative effect, and the normal mucous membrane has been temporarily whitened to the same degree six months after its daily use. No secondary dilation of the blood vessels follows. It acts on the muscle tissue of the arteries and has no direct effect on the nervous system. When pain is lessened after its use

the benefit is due to the relief of congestion. The extract is not an anesthetic. Its astringent property makes it useful as an adjuvant to other remedies. The anesthesia produced by cocain is obtained quicker, it is deeper and continues longer; the extract also promotes the action of atropin, eserine, nitrate of silver and of antiseptics. The astringent property of the extract is useful in the diagnosis and treatment of strictures of the nasal duct, eustachian tube, esophagus and urethra. I know of no other remedy which can compare with it to dilate and assist in the cure of some lachrymal strictures.

The suprarenal extract is not an antiseptic. On the contrary many bacteria grow in solutions of the extract, and infected solutions have caused inflammation. The use of sterile solutions of the extract has been followed by a cure of some acute diseases of mucous membranes caused by infection. In my experience no remedy used alone has rendered so much service in acute purulent inflammations of the lachrymal sac; and, although many of these cases have been completely and permanently relieved, the benefit from the use of the extract was not due to any antiseptic property.

(2) The extract is so powerful a hemostatic that hemorrhage which occurs from mucous membranes, even in cases of hemophilia, can usually be controlled at once. Bloodless operations on the eye, ear, nose, throat and urethra have been performed with its aid, operations which without it were usually very annoying from severe hemorrhage. One should expect hemorrhage after the effect of the extract has disappeared, and if severe reaction or pain follows the bleeding may be considerable. I believe most operators have less secondary hemorrhage since they used the extract. Operations on the skin have been done without oozing of blood as long as the effect of the extract was continued. The internal administration has controlled hemorrhage from the lungs, stomach, bowels, uterus and bladder after some other remedies had failed. I know of no other substance which is so efficient.

(3) The extract is so rapidly absorbed into the circulation and so powerful that in less than one minute after the administration of one drop of a 1 per cent. solution many patients with organic heart disease have received marked temporary benefit. I find that nervous patients who are to be operated upon under cocain are very much improved. When the heart fails during chloroform anesthesia, it is strengthened at once by the extract.

In conclusion we may say that the suprarenal extract is a safe, certain and powerful astringent, hemostatic and heart stimulant, that its action is always temporary, and while it does not usually cure any form of disease it is of great service as an adjuvant to other remedies. It is one of the necessary secretions of the body, and this fact may explain why so little disturbance has followed the use of so active a substance.

THE USE OF SUPRARENAL EXTRACT IN DISEASES OF THE HEART AND LUNGS.*

BY SAMUEL FLOERSHEIM, M.D.,
New York.

THE therapeutic effects of the suprarenal extract have been observed by me in more than five hundred cases of affections of the heart and lungs. My first paper was published in the *New York Medical Journal*, October 6, 1900. Since then the extract has been used by an increasing number of physicians, who have confirmed my results.

The preparation of the suprarenal extract mostly used by me has been the dried gland pulverized in three-grain gelatin capsules. The tablets were usually unsatisfactory. The patients were directed to thoroughly chew the capsule for a few moments and then to swallow it *without* water. In children, the powder was mixed with a little water in a teaspoon and the emulsion administered.

A freshly prepared filtered solution was dropped into the mouth when the patients were unable to swallow. Rarely the powder caused nausea. A solution of the fresh gland was readily taken. It is usually unnecessary to administer the extract hypodermically, as its action is as rapid when it is administered by mouth. The dose was administered from one and one-half to four hours or oftener when necessary. I never saw any ill effects from larger doses. Of particular and of utmost importance is, that in making capsules the suprarenal powder should be filled dry in the capsule, for if moist, it being animal matter, may decompose in two hours, rendering its action inert and the decomposed material may then do harm.

My clinical experience supports the conclusions of Oliver and Schäfer and Cleghorn, from their physiological experiments, that the extract is a tonic to the muscles of the heart and that it does not act directly upon the nervous system. In no other way can it be explained why the extract is beneficial in all forms of organic heart disease. No cumulative effect was ever observed after prolonged use of the extract.

The suprarenal extract is indicated in all forms of organic heart disease when the action of the heart is weak and irregular and the pulse either small, irregular, slow or rapid and of low tension. It is also indicated in failing action of the heart in chloroform anesthesia, in overwork, sometimes in functional disturbances and a weakened condition generally of the heart. In a weakened heart with a high tension pulse the extract strengthens the heart and the pulse becomes softer.

After the internal administration of the suprarenal extract the general results were as follows: In *all* cases of organic heart disease with a weak, irregular or intermittent pulse, and a dilated or overworked heart, the administration of the suprarenal extract was usually followed by a marked beneficial action in less than five min-

* Read before the New York County Medical Association.

utes. This beneficial effect of the remedy continued in many cases a number of hours. In other patients the duration was less. Even in moribund cases the beneficial action of the suprarenal extract on the diseased or failing heart was marked. In weakened action of the heart during chloroform anesthesia the administration of the suprarenal extract was also of benefit. After the initial toning of the heart had passed off, the heart was repeatedly observed to do its work much better than before the administration of the extract, and the pulse remained fuller, stronger and more regular. In those cases of organic heart disease in which the pulse was full, strong and regular, with a normal acting heart, in other words, a heart which did not require any assistance, the administration of the suprarenal extract was not followed by any appreciable tonic effect. The administration of the remedy did no harm.

In functional disturbances of the heart the administration of the suprarenal extract was sometimes followed by beneficial effects—a strengthening and regulating of the pulse and a diminution of the pulse rate.

When the extract was administered to patients having apparently normal hearts with a normal pulse and pulse rate, no effect was observed. When other heart stimulants, such as strychnin, nitro-glycerin, strophanthus, digitalis, spartein and alcohol had failed to relieve, the administration of the suprarenal extract was followed by marked beneficial results. A number of patients who came under my personal observation could not take the ordinary heart remedies, as they would either cause nausea, vomiting, dizziness or headaches. They also were benefited by the suprarenal extract.

The chief factors in favor of the suprarenal extract are its certain, rapid and powerful action; it can be administered in all forms of cardiac affections without any deleterious effects. It is a safe remedy. The maximum effect is produced almost at once. It is the most powerful heart stimulant known to me.

THE RESULTS OBTAINED IN THE DIFFERENT LESIONS.

The most marked beneficial effect of the extract was observed in mitral regurgitation, especially those cases in which predominant dilatation was present. The murmur became diminished in volume, intensity and duration, and was localized. In some cases the murmur completely disappeared and remained absent when the patient was under observation, while in other cases the murmur returned after a longer or shorter period. In mitral stenosis the remedy had no effect on the murmur, although the beneficial effects on the heart were observed. The heart's action always became stronger and less labored in those cases which required stimulation. In aortic regurgitation the murmur was sometimes diminished in duration and in intensity, and became more localized.

The roughness often almost disappeared entirely, and the murmur became more clearly defined. These beneficial effects of the extract were more pronounced when the aortic lesion was complicated by predominant dilatation. In aortic stenosis, with failing action of the heart, the extract had given valuable service. The murmur was sometimes diminished in intensity. A failing heart was stimulated.

When there was more than one murmur, with a weak, irregular and predominant dilating heart it was often difficult to distinguish between the normal heart sounds and the murmurs. This confusion of murmurs and sounds became less after administering the suprarenal extract; the murmurs became clearly localized and were easily, rapidly and positively diagnosed. The normal heart sounds became distinct, clearly defined and separated from the intermingling of the murmurs. A dilated heart was also observed to become decreased in size.

In the beginning or advanced stages of predominant dilatation, alone or with valvular lesions, the extract exerted a powerful tonic influence. The enlarged heart became smaller. Besides contracting the heart an irregular and very weak pulse became much more regular, fuller and stronger. In predominant hypertrophy, with a full, regular and strong pulse, the suprarenal extract had apparently no effect. The suprarenal extract is also of value as a cardiac tonic in cases of myocarditis, fatty degeneration or infiltration of the heart, and in endocarditis. A rapid pulse rate is sometimes lessened in frequency after the administration of the remedy.

I will not burden you this evening with a report of a long list of cases, but wish to read two:

Case I. A woman aged 35 years has a systolic murmur which I attribute solely to anemia. She had a severe attack of myocarditis, from which she nearly succumbed. The administration of strychnin or alcohol produced intense headaches, digitalis and strophanthus caused vomiting, and nitro-glycerin was followed by dizziness and tinnitus. She was then given suprarenal extract and all other remedies were discontinued. None of the above symptoms were observed when the usual dose of the extract was administered. The condition of the patient soon began to improve, and she is now convalescing.

Case II is a man aged 37, who had a mitral regurgitant murmur. The pulse was 120, irregular and weak. Five minutes after the administration of the extract his pulse was 102, fuller, nearly regular and stronger. The patient had experienced the sensation of his heart beating forcibly against his chest both day and night for fifteen years, which was very annoying. Other remedies gave no relief; when the suprarenal extract was administered the sensation of his heart beating against his chest entirely disappeared within two minutes and remained absent for more than fifteen minutes, when the beating returned again,

but very much diminished in force, "a light tapping," as the patient called it. This was the first time in fifteen years that the patient had been entirely relieved of this symptom.

Affections of the Lungs.—In acute catarrhal bronchitis, chronic bronchitis, capillary bronchitis, bronchial asthma, congestion and edema of the lungs, hemoptysis and in pulmonary tuberculosis the suprarenal extract has often given valuable service. The remedy has also been administered in acute lobar pneumonia and in broncho-pneumonia, but its beneficial action was chiefly to check the hemorrhage and to stimulate the heart. S. Solis Cohen was the first to publish the use of the extract in asthma other than the purely spasmodic form (*Jour. Amer. Med. Assoc.*, May 12, 1900). Dr. T. D. Lister (*Lancet*, April 19, 1902) stated that in a case of asthma with a low pulse tension he has derived great benefit from its use.

In the *New York Medical Record* for November 17, 1900, I published my first paper, entitled "The Use of the Suprarenal Capsule in Diseases of the Lower Air Passages," reporting the results obtained in thirty-one cases of acute bronchitis, twelve cases of chronic bronchitis, six cases of bronchial asthma, five cases of congestion and edema of the lungs, sixteen cases of hemoptysis and eight cases of pulmonary tuberculosis. These were the first cases reported except the asthma cases. Six months later Kenworthy (*New York Med. Rec.*, March 16, 1901) reported fourteen additional cases of hemoptysis successfully treated with the suprarenal extract. I reported twenty-one cases of hemoptysis from various causes in the *New York Medical News* for January 4, 1902, successfully treated by the internal administration of the suprarenal extract. James B. Moore also successfully treated a case of hemoptysis with the extract. Ethan Allen Grey (*New York Med. Rec.*, April 5, 1902) reports the use of the suprarenal extract for hemoptysis in beginning pneumonia with success. A. T. Davies (*Lancet*, April 19, 1900) has also used the suprarenal extract in hemoptysis with good effects in some. Many other physicians have used the suprarenal extract in hemoptysis with success, but time and space do not at present permit of their mention.

Acute Catarrhal Bronchitis, 137 Cases.—In some the cough in a few minutes became much lessened in frequency and severity. In others it temporarily disappeared for from one-half to nine hours, according to the severity of the attack. The administration of the suprarenal extract at the outset of an attack of acute bronchitis was often followed by a cure in less than twelve hours. The expectoration, when thin and watery, was usually considerably diminished in amount. The sensations of tightness, rawness, pulsation and dryness in the throat, upper portion and down the center of the chest were temporarily lessened. In some cases complete relief was obtained in two hours. The breathing usually became at once much easier after the administra-

tion of the extract. When other remedies failed to benefit, the internal administration of the suprarenal extract gave prompt relief in most cases.

The beneficial effects of the extract on the disturbed heart was also observed. In five cases the suprarenal extract failed to benefit.

Chronic Bronchitis, 42 Cases.—The beneficial effects of the extract were more or less temporary. In some cases the suprarenal extract was the only remedy employed by me which was followed by benefit; as a rule the extract gave only temporary relief. Used alone it did not cure chronic bronchitis.

Bronchial Asthma, 24 Cases.—In cases with hyperemia of the bronchial mucous membrane, with more or less profuse expectoration, the administration of the suprarenal extract nearly always gave decided relief, even when other remedies failed to benefit. In two cases the beneficial effects of the extract were very slight. Spasmodic asthma and those due to nervous causes were not benefited.

Congestion and Edema of the Lungs, 9 Cases.—All were temporarily relieved. The cough became less severe and the expectoration was diminished in amount. The heart, when weak, was also benefited in every case.

Hemoptysis, 48 Cases.—All the cases which came under my observation were benefited. It was very gratifying to observe the prompt relief following the use of this wonderful remedy. Hemoptysis from pulmonary tuberculosis, heart disease, traumatism, violent coughing, vomiting and from unknown causes ceased as a rule within ten minutes after the internal administration of ten grains of the dried gland. The extract was successful in controlling hemorrhage from the lungs after most other remedies had failed.

Acute Lobar and Lobular Pneumonia, 7 Cases.—The drug had been chiefly administered for its beneficial effects in controlling hemorrhage, to lessen the congestive stage as much as possible and as a cardiac tonic. It had no effect on the progress of the pneumonia.

Pulmonary Tuberculosis, 26 Cases.—The remedy had no effect on the tubercular process and was administered for its temporary beneficial effects in hemoptysis, profuse expectoration and weakened heart.

I wish to report an interesting case which is the prototype of nine cases in which the suprarenal extract gave abundant evidence of its powerful and rapid beneficial effects: The patient, a woman, aged 54 years, had a severe attack of acute bronchitis supervening a chronic bronchitis and bronchial asthma. She expectorated about two pints of mucus daily for over a year. When I saw her she was cyanotic, the heart was weak and the cough extremely harassing. She seemed to be suffocating, and showed signs of impending heart failure. Ten grains of the suprarenal extract in solution were administered with difficulty on account of the constant coughing. She was

directed to thoroughly mix it with the saliva before swallowing it. In three minutes the cough became perceptibly lessened and a change came over the patient which indicated that marked relief was afforded. The respirations became fuller and easier, and the heart was stimulated. In fifteen minutes the profuse expectoration and very severe cough had almost entirely disappeared, to the great surprise of the patient and myself. The patient remarked that she had not felt so well for a year. The beneficial action of the extract continued for thirty minutes, when her previous symptoms began to return. A second dose gave as prompt relief.

In conclusion I believe that the suprarenal extract is a very valuable addition to our *materia medica*. It is a most powerful stimulant of the heart. Its action is rapid, safe and certain. The maximum effect is produced almost at once. It is not cumulative. Many cases of acute disease of the lungs are promptly cured by it, and while it does not cure chronic disease of the heart and lungs it is of great service in giving temporary relief.

218 East Forty-sixth street.

THE USE OF ADRENALIN IN OPHTHALMOLOGY.*

BY WILBUR B. MARPLE, M.D.,
New York.

THE use of adrenalin has been advised, first, in inflammatory conditions of the eye, accompanied by redness, and second, to lessen the bleeding in operations. Let us consider its use separately for these two purposes. There is nothing more striking than the rapidity with which the tissues of the eye are whitened by instilling a drop of a solution of adrenalin chlorid into the eye, and the effect is produced within a minute. A patient comes into our office with reddened conjunctiva, looking as though he had been off on a spree, and he is invariably delighted with the almost magical change in the appearance of his eyes following the use of the remedy. But so is a patient delighted who is harassed by some constant pain when we give him a dose of morphine or opium. But the physician who would prescribe the latter without making any investigation as to what was the underlying cause of the pain, and endeavoring to cure this, would not be a very creditable representative of our profession. In the one case the opium relieves one symptom—pain; but has no curative effect on the cause. Does adrenalin do any more than relieve another symptom—redness; and do we show any more intelligence in prescribing it promiscuously than does our colleague who doses with morphine all his patients who have a pain or ache anywhere?

The answer to this question will depend altogether upon the answer to the question, "Does adrenalin cure any of these conditions in which

it is so promiscuously prescribed?" My own experience with the preparation would lead me to answer this last question decidedly in the negative, and I shall refer very briefly to my experience with it in two cases only, for the result in others was just the same. Some months ago I had under my care a gentleman of this city who had been annoyed for several years with a mild form of chronic conjunctivitis; oftentimes his eyes looked quite well, but in cold windy weather they would look quite red, and there would form a slight fissure at each external commissure. The disease seemed to be dependent upon his marked gouty condition, and various astringent lotions, aided by suitable treatment for his gout, greatly benefited him, but did not absolutely cure him. In a rash moment I gave him a solution of adrenalin to use, cautioning him, however, very particularly to use it only once a day, and report in a week. The effect of the drug seemed to the patient such a happy one, its use was attended by so little discomfort, and on such short notice he could make his eyes look as clear and bright as any one's, that he forgot all about my injunction to use it only for a few days, and then report to me, so that it was three months before I saw him again. I now found his eyes looking worse than I had ever before seen them, the conjunctival mucous membrane was very much relaxed and red, the ocular conjunctiva was much injected, and there was considerable secretion. I found that he had gradually increased the frequency of the instillations, as he found that its effect lasted a shorter and shorter time. The adrenalin was now stopped at once, and in a week's time, under astringent applications, his eyes looked comparatively well. Last winter I had an exactly similar case. The patient was a fashionable lady, who was much annoyed by the appearance of her eyes, as she had had a mild conjunctivitis for a long time. I started her on a regular course of astringent treatment, but gave her in the meanwhile a weak solution of adrenalin to use on special occasions while the treatment was carried on. She found the adrenalin so much pleasanter and prompter in its action that she soon discontinued her visits to my office, and I did not see her again for several weeks, when she called one day and asked for a stronger solution of the adrenalin, because the effect of what I had given her did not last as long as it did at first. That is the last time that I have ever prescribed this drug in these cases except with the distinct understanding on the part of the patient that it has absolutely no curative effect whatever on the disease, but that on the contrary, if used often, it will aggravate the conditions. Furthermore, that the oftener it is used the oftener will it have to be used. After explaining these points carefully, I sometimes give my patient a weak solution (1-10,000) to use on special and infrequent occasions when it is very desirable that their eyes should look like other people's, during the period when I am endeavor-

* Read before the New York County Association.

ing to bring about a cure by other means. I always tell them that the less frequently they use the adrenalin the sooner will my cure by other methods be achieved.

Oftentimes after making an application of nitrate of silver solution to the lids, the eyes look very red. In these cases I not infrequently instill a drop of a weak solution of adrenalin (1-10,000) into the eyes just before the patient leaves my office, and as a result they present a very much better appearance to their friends.

I know it is a very common custom to prescribe collyria of various kinds containing cocain for prolonged use. I have never done this or believed in it, and have only given cocain when there was some painful but acute condition where it would be necessary to continue the use of the cocain for a very short time. I feel the same way about adrenalin, only more so, for it possesses to a much less degree than cocain the power of relieving pain. Personally I know of no inflammatory ocular condition in which adrenalin is of any therapeutic value. If patients, while some other form of treatment is being carried out, wish to instill occasionally a drop of adrenalin into the eye, I can see no objections to it, though I think the less frequently it is employed the better. There can be no question that the longer its use is continued the shorter time does its effect last, and the more frequently will it have to be used. In subconjunctival ecchymosis, a condition which oftentimes annoys our patients very much, the use of adrenalin only renders the appearance of the patient more conspicuous. It has no effect whatever on the extravasated blood, which is, of course, extra-vascular, but only whitens the rest of the eye so that the contrast between the red ecchymotic spot and the rest of the eye becomes greater and more conspicuous.

Lemair, in *American Medicine* (October 5, 1901, p. 523), referred to the possibility of setting up iritis or other serious intra-ocular inflammation if adrenalin was used in acute external inflammation of the eye, and the point is well worth remembering. I had under my care last summer a prominent surgeon of this city who had a croupous conjunctivitis of one eye, apparently acquired from infection during an operation for empyema. After his daily treatment in my office, I would instill a drop of adrenalin solution into his eye, as it gave him a much more presentable appearance afterwards. Four or five days subsequent to the commencement of these instillations he got up quite a sharp attack of iritis. Of course it is impossible to say that the iritis was caused by the use of adrenalin, but there has always been the suspicion in my mind that these instillations were largely responsible for this complication.

Now a word or two as to its use to control hemorrhage in operations on the eye. Hemorrhage is rarely a dangerous, not often even an embarrassing, feature of operations on the eye. While I have used it a few times in operations, I

very much question the wisdom of its use here. It may be a nice thing to have an operation bloodless, but it is vastly more important that it should be aseptic, and that repair should be prompt. Every additional solution dropped into the eye during an operation increases the possibility of infection. When we have used our cocain, or holocain, to produce local anesthesia, and our sterile salt or boric acid solution to irrigate, it seems to me that we must have a better reason in most cases than that of controlling hemorrhage before we are warranted in using still a third solution, viz., adrenalin. For this reason, viz., the increased possibility of infection, I would never think of using it in an operation where the globe was opened, and I never yet found the slight hemorrhage attending a muscle operation in any sense an embarrassment. In addition to the greater possibility of infection which its use entails, there is still another question, viz., Is the reparative power of the tissues as great or do they resist the invasion of microbes as satisfactorily when adrenalin is used? Dr. Knapp has expressed the opinion that even after the comparatively slight blanching of the tissues following the instillation of cocain during an operation, the tissues have less reparative power and resist infection less than when holocain is used as the local anesthetic, with which latter, as is well known, there is much more bleeding. (He used to say that he liked to see the tissues bleed.) This opinion of Dr. Knapp as to cocain and holocain is at variance with the clinical experiences of many observers (the writer included). But if such an objection can be urged against cocain, with how much greater force can it be urged against adrenalin, where the tissues are far more bloodless than after the use of cocain? The objection may be theoretical, but to a certain extent it is perfectly rational to suppose that where bloodlessness is so extreme as it is after the use of adrenalin, infection would be more easy and repair less so. Until it has been experimentally or clinically demonstrated, therefore, that this theoretical objection is not based on fact, I shall continue to dispense with the use of adrenalin solutions in most operations on the eye. For slight operations on the lids in my office I have used it not infrequently after I am through, and with apparently no ill effects, as it enables me to dismiss my patients more promptly.

USES OF THE SUPRARENAL EXTRACT IN GYNECOLOGY AND OBSTETRICS.*

BY GEO. T. HARRISON, A.M., M.D.,
New York.

I T was at the suggestion of Dr. W. H. Bates, who has conferred upon medical science an unpayable debt in calling our attention in repeated publications to this remedy, that I was induced to try the virtues of the suprarenal extract as a hemostatic in uterine hemorrhage. The first

* Read before the New York County Association.

case in which I employed it was that of a woman who suffered from chronic hyperplastic endometritis, attended with a most persistent and obdurate form of menorrhagia. I had recourse in the first instance to a thorough curettage of the endometrium, followed by packing the uterine cavity with iodoform gauze. The symptoms were much ameliorated, but, notwithstanding, each recurrence of menstruation was attended by too much loss of blood, and the uterus remained too large. Diminution in size did not take place in the uterus to the extent that I fondly imagined would be the case. I then put her on the use of the suprarenal extract—five grains three times daily. To my great gratification in a comparatively short time the uterus became smaller in size and the menorrhagia ceased. I examined the patient carefully from time to time during the administration of the suprarenal extract, making use of bimanual palpation, and in every possible way endeavored to eliminate all sources of error in my clinical observation. In the case of uterine myomata, attended with hemorrhage, the suprarenal extract unfolds great power. My clinical observations have forced upon me the conviction that this potent remedy has the property of not only exciting to contraction the smooth muscular fibers of the blood vessels, but also those of the uterus. That this view is correct is proven by the observation, which we may repeatedly make, that under the administration of this remedy painful uterine contractions are evoked. As to how the suprarenal extract exerts an influence on the myoma we may suppose the mechanism to be as follows: The intact muscular tissue of the uterus undergoes contraction, the contractions produce as well a diminution in the caliber of the blood vessels, already affected by the remedy, as a defective nutrition of the myoma, and in addition a direct pressure upon it. Just as an increased vascular supply causes an increased nutritive activity of the myoma, with corresponding enlargement, so will a diminished supply of blood, with its defective nutrition, cause a diminution in size. In other words retrogressive changes are caused.

A case which I now have under treatment well illustrates the therapeutical value of the suprarenal extract and presents a number of interesting features worthy of more than a passing notice. Mrs. G—, aged 32, a widow, consulted me about two weeks ago, complaining of menorrhagia. This woman is well developed, but presents an exsanguinated hue of countenance. A bimanual palpation reveals the fact of the existence of an interstitial or submucous myoma occupying the body and fundus of the uterus. On the right of the uterus is another tumor, which may be a subserous myoma or an enlarged ovary. I put this patient upon the use of the suprarenal extract, and when I last saw her, a day or two ago, I was struck by the marked improvement in her general health, especially as shown by the better coloring of the face. Bimanual palpation showed

that the uterus was somewhat diminished in size, as well as the tumor adjacent to the uterus on the right side, which I am inclined to the belief is the enlarged ovary, and which is probably the seat of a neoplasm. In this case it will be observed that the suprarenal extract not only acted upon the muscular tissue of the uterus, but also produced a decided effect as a heart tonic, and to this latter property I largely attribute the manifest improvement in the patient's general condition. This property, I may say in passing, we owe to the researches of Dr. Bates.

A gynecologist may here propound the query, "Why do you not operate in this case, as a radical intervention would seem indicated from the symptoms?" In reply I would say that in private practice we are not at liberty always to do as we please and as we think best. The patient has something to say in the matter, and this patient informed me that under no circumstances would she submit to an operation. Her husband had died from the effects of an operation and she did not propose to place her life in jeopardy by submitting herself to the surgeon's knife. As we are, therefore, often forced to make use of the symptomatic treatment in the case of uterine myomata, to the exclusion of radical measures, it is well to have such a potent aid at our command as the suprarenal extract. A great advantage in the administration of this remedy is the fact that it produces no injurious effects. In this regard it contrasts most favorably with ergot. Fretsch warns us of the bad effects of the ergot in a certain class of cases. He has seen, as he tells us, an entire series of cases in which the exhibition of ergotin has led to necrosis of the myomata. In delayed involution after parturition, a priori considerations, based upon its physiological properties, would lead us to expect that the suprarenal extract would unfold its wonderful powers. My experience in this particular field of inquiry is limited, but I hope in the near future to prosecute some studies on this point in puerperal women. In all these cases the form of administration was internal, by the stomach. Dr. Bates informs me that it has been used locally in *post-partum* hemorrhage with happy effects. It need hardly be urged that if the same effect can be accomplished by the internal administration, it is better to so employ the remedy, as we thus run no risks whatever of septic infection, which may attend the local application.

THE SUPRARENAL EXTRACT IN GENITO-URINARY SURGERY.*

BY EDWARD L. KEYES, JR., M.D.,
New York.

YOU have heard this evening so many valuable contributions to the therapy of the suprarenal extract, so many striking evidences of the great value of this drug, that perhaps you will forgive me for being quite brief, and, on some points, absolutely negative. For what experience

* Read before the New York County Association.

I have had during the past two or three years with the suprarenal extract has convinced me that its field of usefulness in genito-urinary surgery is very restricted. Perhaps a wider experience will discover new possibilities; perhaps I have overlooked some work done by others new in this line. But I shall not delay you to-night with any hearsay evidence. I shall restrict my remarks to personal experience with the suprarenal extract in meatotomy, urethrotomy, cystoscopy and bladder hemorrhage.

Meatotomy.—As you all know, the operation of cutting the meatus of the male urethra is so insignificant a one that we do not commonly attribute any great importance to perfections in its technic. It has no mortality; almost no complications. Yet, to the patient, it is often fraught with great inconvenience, owing to the profuse and continued hemorrhage to which it so commonly gives rise. By the use of the suprarenal extract the greater part of this hemorrhage may be entirely prevented. Having washed the glans penis and flushed out the navicular urethra with a 1:5000 solution of bichlorid of mercury, I insert into the pocket within the meatus one-half of a quarter of a grain cocain tablet. The remains of the bichlorid solution quickly dissolve this, and, as soon as it is in solution, I place upon it and within the same pocket about a grain of the powdered suprarenal extract. In a minute or two an area of blanching appears upon the outside of the glans, spreading from the inferior commissure of the meatus until it extends over the lower third of the glans. By this time cocainization is complete, and the meatus may be freely cut without pain and without hemorrhage.

In order to prevent secondary hemorrhage, it is my custom to introduce between the lips of the cut a small piece of cotton covered with glutol, which is a combination of formaldehyd and gelatin in the form of a powder, and possesses antiseptic and slight escharotic properties from the formaldehyd, and hemostatic properties possibly due to the gelatin. This is left in place until the patient's first urination, after which there is not likely to be any profuse bleeding.

You will observe here, as you have noticed in the remarks of the preceding gentlemen, that one of the inconveniences of the local application of the suprarenal extract as a hemostatic is the ephemeral character of the anemia produced. In this case it stops the bleeding for the time; but if there is any protracted tendency to hemorrhage some other drug, such as glutol, must be called upon to check it.

Internal Urethrotomy.—The occurrence of profuse hemorrhage after internal urethrotomy is due to over-cutting. I do not mean that the hemorrhage shows that the surgeon has cut too far; but it is an unfortunate result of those deep-seated strictures which require to be cut so deeply that the knife necessarily invades the surrounding cavernous tissue. This bleeding, as you are well aware, may follow immediately upon the opera-

tion, or may occur at any time within two or three days. It has been customary to check it by injections of alum or of persulphate of iron, or by binding the penis with adhesive plaster about a retained catheter. In cases of moderately severe hemorrhage the injection of a 5 per cent. solution of suprarenal extract, or of a 1:2000 solution of adrenalin, is fully as efficacious, and far more convenient, than any of the above mentioned remedies. The application of the solution may be intrusted to the patient's nurse, and it may be employed without inconvenience after every urination for several days if necessary. For copious bleeding, however, strapping the penis around a retained catheter is usually the most satisfactory treatment.

Cystoscopy.—Of all the obstacles to a successful cystoscopy, the most frequent are (1) irritability of the bladder and urethra, and (2) bleeding. The former is controllable by anesthesia, the latter by suprarenal extract. Dr. Harris, of Chicago, was the first to employ this drug as a matter of routine, and he has used it with great success in his operation of urine segregation. He employs 60 c. c. of a 5 per cent. solution of suprarenal extract, which is injected into the bladder and allowed to remain there ten minutes. This solution I have employed a number of times, and have found it admirably efficacious in preventing hemorrhage from the normal or from the congested bladder wall. Yet I confess that it has utterly failed to control hemorrhage from an acutely congested or granulating prostate, or from granulations or ulceration in the bladder itself. These bleed at the slightest touch of the instrument, in spite of any astringent solution that I know of; and when such bleeding occurs the only thing to do is to repeat the astringent injection, or, thus failing, to put off the cystoscopic examination to a more favorable time. It sometimes happens in these cases that the so-called irrigating cystoscope will, by washing clots out of the way, be of more practical assistance for a hurried examination than any astringent drug.

Vesical Hemorrhage.—The control of hemorrhage in the bladder is one of the most vexatious problems confronting the urinary surgeon. Its only commendable quality is its infrequency. Be the hemorrhage from carcinoma, from papilloma, from ulceration, or from varicose veins, it may well resist all the surgeon's attempts to check it, either stopping of its own accord, or else, filling the patient's bladder with clots and requiring aspiration by the Bigelow instrument, or suprapubic cystotomy.

In cancerous cases I have tried every form of injection: solutions of gelatin, suprarenal extract, nitrate of silver, alum, and I cannot say that any of them has been brilliantly successful. The suprarenal extract stands with the rest; like alum it will temporarily check some forms of bleeding, and, if this temporary restraint is all that is required, the result is satisfactory. But in the active bladder—constantly filling and emptying itself.

driven to spasm by the existence of a congested point, causing hemorrhage by its spasm, and again increasing the spasm on account of its inability to discharge clots—the use of any form of astringent is most restricted.

LEUCOPLAKIA.*

BY W. J. CRUIKSHANK, M.D.,
Brooklyn, N. Y.

LEUCOPLAKIA is a term with which the general practitioner is comparatively unfamiliar. It was first used in 1877 by Prof. Ernest Schwimmer to designate a certain pathological condition which occurs in various mucous membranes and which had been previously described by other writers under a variety of names.

The term leucoplakia is derived from the Greek, and means, literally, whitening of the surface, or, white surface. The same condition is described by Hutchinson as leucoma. Investigation discloses many interesting contributions to its literature from all parts of the medical and surgical world; French, Russian, German, English, Turkish and American writers have described the disease under different names, many of which names are still used and which show, in some instances, the author's conception of the character of the morbid phenomena with which he is dealing.

The condition as it is observed in the mouth has been called smoker's patch, psoriasis linguæ, ichthyosis, leucokeratosis, leucoplasia, tylosis, keratosis, chronic epithelial stomatitis, glosodynæ-exfoliativa and chronic superficial glossitis.

While the disease is most frequently seen in the mouth, it has been observed in other localities. Shoemaker says it has been detected in the larynx, nose and middle ear. Schwimmer observed it upon the mucous membrane of the vulva in a patient who had leucoplakia of the mouth for a number of years. This case he records as leucoplakia lingualis et buccalis; leucoplakia vulvæ.

The disease has been known to invade the urinary bladder. Shoemaker refers to Brick as having described forty-one cases of vesicle leucoplakia which were diagnosed with the aid of the cystoscope.

The disease has been observed in the vagina, upon the uterus and also upon the glans penis. It is the disease as it appears in the mouth, however, to which I wish at this time especially to call your attention, for the reasons that it is insidious, that it is said to be on the increase, and that it is often intractable and dangerous, owing to its tendency to terminate in cancer. This variety is known as leucoplakia buccalis.

Leucoplakia buccalis, according to Marshall, is a chronic superficial inflammation of the

mucous membrane of the tongue, the palate, the cheeks and the gums, and is characterized by the presence of pearly-white or bluish-white plaques or patches; in some cases, small; in others, covering the entire dorsum of the tongue, the cheeks from the angle of the mouth back to the fauces, the palate or the entire buccal surface of the gums.

This condition is one which differs very materially from other pathological changes ordinarily met with as occurring in this region. It frequently exists for a long period of time, in some cases for years, before its presence is actually discovered. The reason for this is apparent when we consider that the condition in its early stage gives very little if any inconvenience to the patient, and the fact that anything unusual exists in his mouth is almost always, at first, a matter of accidental discovery.

In the eight cases reported by Marshall this fact is notable, notwithstanding that one of these cases occurred in the person of a physician.

May I be permitted at this point to give you the facts regarding a case which recently came under my observation, the history of which is quite typical and has some bearing upon the whole of this very interesting subject?

Mr. S. L. H. consulted me about a year ago concerning a little discomfort which he experienced in his mouth, particularly after eating. He stated that he frequently experienced a sensation at such times, as if there was something between his lips and gums, as if some parts of his mouth were thicker than others. He referred to the sensation as one of dryness. He also complained that at times there seemed to be small particles of skin which were expectorated with the saliva.

This gentleman is one with whom I am very well acquainted, having been in the habit of attending his family for about fifteen years. He is 37 years of age, was born in Brooklyn, is married, has no children and is by occupation a merchant. He says he has always enjoyed the most perfect health. He states that he has never had venereal disease of any character, and also that he had had no sexual intercourse until his marriage. His family history is negative, except that it contains the interesting fact that his father, who died of pernicious anemia, at the age of 55 years, was troubled greatly with a sore tongue for about two years previous to his death. The nature of his father's malady was not discovered. My patient informed me that he acquired the habit of smoking cigars when he was 15 years of age, but that he had never chewed tobacco. He stated that up to his twenty-first year his smoking had been extremely limited; that since that time he had been in the habit of smoking two or three cigars a day. During the summer vacation he oc-

*Read at the Regular Meeting of the Kings County Medical Association, May 9, 1902.

asionally smoked a pipe, but never at any other time. He had never used alcohol in any form. He informed me that in the summer of 1900, while in the country, he had smoked a pipe, and that on several occasions he had observed that the pipe had left a burning sensation in his tongue, and that on one of these occasions he had noticed that there was left a small, white, hard spot in the center of his tongue, which spot was situated about one inch from the tip of that organ. He described this spot as being as large as a 3-cent piece. He said that all discomfort having ceased since he had stopped the use of the pipe he had thought no more about the matter until January, 1901, when his dentist, who was filling some of his teeth, called his attention to the fact that his tongue looked as if it had been burned with carbolic acid, and advised him to consult a physician. On examining his mouth I found that the dorsum of the tongue from its tip to about the center was covered with a uniform patch of a whitish-gray color which corresponded to the position of a rubber plate on which was held one incisor tooth. This patch seems to have thickened the mucous membrane, which presented a somewhat roughened and hypertrophied appearance. The mucous membrane of both cheeks contained several pearly-white and glistening patches which extended on either side to the anterior pillars of the fauces. These patches varied in size and were irregular in shape, the largest single patch covering a space of about three-quarters of an inch. The mucous membrane covering the inside of the upper and lower lips presented a peculiar, irregular and roughened grayish-white appearance, which conveyed to the examining finger the sensation of being somewhat elevated. There were some fissures and slight excoriations on the under surface of the tongue which the patient referred to as giving him slight pain, especially when he ate oranges or other acid fruits. He complained that he felt in his mouth at times small pieces of what he described as being dead flesh. There was no ulceration and no adjacent glandular enlargement. With the exception of the condition which I have just described, the patient appeared to be in robust health, and expressed himself as feeling otherwise perfectly well. Careful inquiry, however, elicited the history of two slight attacks of rheumatism of the muscles of the chest, together with the history of an occasional disturbance of his digestion. It is now over a year since I first saw this patient, and, notwithstanding the fact that the diseased condition has received classical treatment, which has seemed at times to have entirely removed it, he has experienced occasional slight relapses, and I do not consider by any means that my patient is rid of his trouble. It is obvious that the his-

tory of this case is unlike the histories of other pathological conditions involving the mucous membrane of the buccal cavity. Therefore, in considering the question of a diagnosis of the malady with which this man is suffering, we may be permitted in all reasonable certainty to exclude tubercular disease, epithelioma, *ordinary* chronic glossitis due to excessive smoking, the so-called opaline patches usually occurring in the glass blower, and syphilis.

It might be possible to confound the condition with the latter disease, but there is absolutely no history of syphilis and not the slightest evidence of syphilitic infection in any part of the body. Besides, the local manifestations are not like those of specific disease. There is no ulceration and, moreover, antisyphilitic treatment failed to exert any influence over the condition. The mucous patch of syphilis is curdy in appearance, more or less painful and usually secretes a thin, white, watery fluid which is regarded as the source of contagion. It is generally slightly elevated above the surface and has a decided tendency to ulcerate. The conditions noted in my patient are entirely different from these. The patch does not ulcerate. Its appearance is smooth and glossy and of a bluish-white color. It is not elevated above the surface and it does not secrete any fluid.

The condition of the mucous membrane of the inside of the upper lip conveys to the finger a sensation as if elevated, but inspection shows it to be a condition of roughness. Having eliminated syphilis, together with the other disease mentioned, I know of no condition from which my patient can be suffering except leucoplakia buccalis.

This disease, according to some authorities, begins on the tongue or mucous membrane of the lips or cheeks or both in a distinct hyperemia which shows itself in circumscribed red spots with slight swelling of the papillæ. After a varying length of time, extending over weeks or months, the redness disappears and is followed by the smooth-white, bluish-white or pearly-white patch which is characteristic of the disease. This red-colored or hyperemic appearance has been called by Shoemaker the first or erythematous stage. Many prominent writers on this subject have, however, failed to recognize this hyperemia, and they describe the white patch as the initial lesion.

Schwimmer, Maurice, Barker and others are of the opinion that the disease begins as an erythema, whereas Butlin, Marshall and a host of others describe the first stage as appearing in the form of the non-sensitive pearly-white plaque.

Shoemaker, in writing on this branch of the subject, says: "Leucoplakia does not usually come under the physician's care until it has

been in existence for a long period. Nevertheless, a case is occasionally seen which presents the erythematous stage." A case illustrating this point is reported in Shoemaker's paper on leucoplakia, recently published in the *New York Medical Journal*. The case to which Shoemaker refers showed the change to have taken place from the small hyperemia of the anterior and left half of the tongue to the characteristic white plaque of the disease in six months time. Marshall, who does not recognize the hyperemia as being the beginning of the trouble, says in describing the disease: "Leucoplakia may be recognized by the presence of circumscribed or diffuse smooth-white, bluish-white or pearly-white radiating patches appearing in varying numbers upon the mucous membrane of the cheeks, lips, gums, palate or tongue. These patches often coalesce to form larger ones. In their earliest stage they are not elevated above the surrounding membrane, are smooth and glistening in appearance and range in size from tiny, irregularly outlined spots to large plaques the size of a silver half-dollar or even larger. At first they are not sensitive and may exist for a long time without the knowledge of the patient. Many cases never progress beyond this stage. Others may slowly increase in size, thickness and intensity of color, the plaque being slightly raised, the surface hard—cornified—and roughened. Accompanying this stage, especially when the disease is located upon the dorsum of the tongue, the patient will complain of a persistent dryness of the parts and inability to speak or use the tongue with comfort, except by frequent moistening of the mouth. Later, fissures appear in the tongue and there is developed a smarting and burning sensation, as though the parts had been scalded. Alcoholic liquors, fermented beverages, acid fruits, highly seasoned or very hot food or drinks and chewing or smoking tobacco increase these sensations and sometimes render the partaking of food a very great discomfort. Associated with this condition there is a tendency of some portion of the plaque to peel off or slough out from time to time, leaving a reddened or raw surface which is exceedingly sensitive and sometimes quite painful. Ulceration may follow and degenerative changes develop, ending in the formation of carcinoma. When the disease is in the tongue, warty growths sometimes appear in the leucomatous patches, which show a marked tendency under the stimulation of an irritant to take on a rapid form of carcinomatous degeneration."

Shoemaker regards the desquamation which attends the progress of the disease as of great diagnostic value. This desquamation is regarded by some writers as characteristic of the second stage. It is said to be due to the suc-

cessive reproduction of epithelium, and was so prominent a feature in one case mentioned by Shoemaker that the patient was greatly embarrassed by the necessity of scraping from his tongue thick epidermic flakes. The duration of the disease is varying and very indefinite. It may exist, as it did in one of Shoemaker's cases, for forty years without ulceration or cancerous degeneration. It is not uncommon for it to last for twenty years. As a rule, it is slow in its development and may disappear with advancing years. On the other hand, says Marshall, the disease which has seemed for many years to remain in about the same condition may suddenly assume a most rapid and malignant type of degeneration.

The etiology of leucoplakia buccalis seems still to be in doubt. The study of the cause of the disease has occupied the earnest attention of eminent observers, and many and varied opinions have been expressed concerning this branch of the subject. All authorities agree, however, that the principal exciting cause is prolonged local irritation, usually in the form of smoking tobacco. This form of irritation cannot, however, *always* be regarded as the *sole* exciting etiological factor, because, while the majority of cases occur in men who habitually smoke tobacco, a small proportion of the cases have been noted in women and children. Moreover, the disease occurs in places other than the mouth, such, for example, as the glans penis, urinary bladder, vulva, vagina and uterus.

Among the other sources of local irritation which are regarded as causing the trouble may be mentioned broken, sharp-edged and carious teeth and ill-fitting tooth plates. The disease is also said to sometimes begin in portions of the mucous membrane, corresponding to those occupied by prominently crowned teeth. The excessive drinking of undiluted alcoholic liquors, the frequent use of hot or spicy foods or condiments, the taking of certain irritating drugs, especially of mercury and iodide of potassium, have all been mentioned as contributing to the etiology of this morbid condition. Marshall believes that the use of the pipe is much more liable to produce the disease than is the smoking of cigarettes or cigars, owing to the fact that the pipe, from long-continued use, is frequently saturated with irritating and volatile oils which have a marked and irritating effect on the mucous membrane.

Park believes that the syphilitic mucous patch is frequently transformed into true leucoplakia. He says, in speaking of syphilitic mucous patches: "These late and recurring lesions lose their moist character, become quite smooth, shiny, of a bluish-white color and may mark the beginning of the condition known as leucokeratosis."

In Marshall's very interesting paper he re-

fers to 240 cases of leucoplakia collected and analyzed by Erb, and quotes this authority as believing that the lesions are, as a rule, due to epithelial thickening, resulting from syphilitic mucous patches. As a result of his analysis of this large number of cases Erb reached the following conclusions:

1. Syphilis, or smoking alone, may be the cause of this affection in about the same proportion of cases.

2. In the majority of cases it may be due to both.

3. It rarely appears without being referable to one or the other of these causes.

4. Other forms of irritation seem to play only a minor part.

With regard to the predisposing causes authorities are pretty well agreed, and the majority of writers assume a certain predisposition to the disease. Erb says that this predisposing influence must necessarily exist in view of the large number of syphilitics and smokers who never develop the disease.

Butlin says: "I suspect that the mucous membrane of the tongue in leucomatous subjects is, from the first, less thick and stable and more easily irritated than in the majority of persons. As some persons are known to have irritable and delicate skins easily influenced and prone to eruptions, and as some of these persons develop affections of the skin which are very chronic and difficult to heal, so I believe other people have tongues whose mucous membrane is abnormally delicate, prone to chronic inflammation and difficult to cure when disease has been excited."

Some authors regard the gouty and rheumatic diathesis as predisposing causes. Others deny that either of these conditions has any such influence. Gastro-intestinal disorders are also mentioned in this connection. Shoemaker says that the disease has been observed to follow typhoid fever and measles. Age is *certainly* an important predisposing factor, as the disease is rarely seen in persons under 20 and over 60 years of age.

Marshall claims sex as a predisposing influence and says that women are almost entirely exempt. This statement of Marshall's seems to be verified by those writers who have observed the disease in countries in which women as well as men are in the habit of using tobacco. The early writers regarded the disease as being identical with psoriasis, and its true relation to psoriasis is by no means as yet a settled question. That the two conditions may coexist cannot be questioned in the face of many recent investigations.

Of all the possible predisposing causes, syphilis seems to be considered the most important. Zambaco, of Constantinople, makes the statement that while nearly everybody

smokes tobacco in his country, he has never witnessed a case of leucoplakia except in the syphilitic. Notwithstanding this experience of Zambaco, together with statements of similar experiences which have been made by other authorities, it is impossible that leucoplakia necessarily depends for its existence on a syphilitic predisposition, because, as has been shown by Schwimmer and others, the subject of leucoplakia may acquire syphilis. Besides, many cases have been observed and reported by competent writers which give no history or other evidence of syphilitic infection. I am positive that there is no specific element in the case to which I have this evening referred.

After a careful study of fifty cases of leucoplakia, Janovsky referred to the etiology of the disease in the following terms:

"Besides the leucoplakia which stands in a remote or genetic relationship to syphilis there is a form which has nothing to do with syphilis, which develops in diabetes, dyspepsias and gastro-intestinal diseases generally, or in many cases independently of these affections, through direct irritation of the tongue or the buccal mucous membrane by tobacco or alcohol. Gout and rheumatism play no part in its production. A genuine leucoplakia, however, which is not necessarily to be regarded as syphilitic occurs in individuals who have had syphilis. There is also a form which develops upon a syphilitic basis, either through changes in places which previously were the seat of syphilitic processes or in situations not so affected. This form is sometimes influenced by antisiphilitic treatment, and should be designated as a parasiphilitic affection. In the treatment of this malady a distinction must be made between the mild and severe cases and between the syphilitic and non-syphilitic forms."

One of the most interesting and concise statements in reference to the relationship existing between syphilis and leucoplakia is to be found in Hyde and Montgomery's book on "Syphilis and Venereal Diseases." These writers sum up the etiological question in the following language: "It is impossible to study the scaly patches of the mouth occurring in syphilis without considering a series of phenomena exhibited in this region, the pathological and clinical position of which with respect to syphilitic and other diseases is not yet completely established. By no distinctive features can these symptoms be in each case assigned with certainty to one category or another. They stand in different cases in some relation to syphilis, to epithelioma and to lichen planus. What is definitely known can be summarized as follows:

"In male patients, almost exclusively in smokers, but also in others, appear patches, striae, spots, plaques, fan-shaped lesions and bands of a dull whitish, opaline, lead-white

and silver-white tint, smooth and shiny or roughened, and beset the milium-size nodules which are consecutive to mucous patches or which occur in the mouths of syphilitic patients where such lesions have existed. They occur along the line of the jaws, on the gums, at the commissure of the maxillæ, in the folds between the lips and the gums, on the sides and dorsum of the tongue and elsewhere. They may be the seat of fissures or may result in ulceration. In rare cases they exfoliate; still more rarely there may occur a highly exaggerated hypertrophy of the implicated tissue, in which a stripe of dead white, thickened and exceedingly dry tissue covers the dorsum of the tongue or one of the other regions named above, this tissue being so bulky as seriously to interfere with the necessary movements of the mouth.

"Epithelioma, not only in those of advanced years, but in men of middle age, is liable to result from the long-continued irritation of the part. In other cases the disease is without question a lichen planus of the mouth, not to be distinguished as to etiology from the other patches here described, seeing that lichen planus of the integument often responds to a very marked extent to the agents by which the involved tissue is irritating.

"It is practically impossible in many cases to draw a distinction merely from the clinical appearance between these several symptoms, nor is the fact greatly to be regretted. The leucoplastic condition is, in fact, not a disease, but a symptom common to several diseases. As pigment settles about the syphilitic and eczematous ulcer of the leg, and as the elephantiac affection of the same organ occurs as a complication of syphilis, lymphangitis, erysipelas and other maladies, so the scaling patches of the tongue, irritated by tobacco smoke, carious teeth, neglect and bad treatment, form, in both the syphilitic and the non-syphilitic patient, in the victim of lichen planus, and in the patient who eventually succumbs to a grave cancerous affection of the mouth."

Pathology.—Pathologists have differed to some extent when considering the primary changes which have taken place in normal tissue which has become the seat of leucoplakia. The question whether the first change is observed in the epithelium or whether it is due to an inflammatory process in the papillary region was formerly considered at length. In an article published in Morrow's text-book on Dermatology the author says: "The latter view is probably correct, the hyperkeratosis being a result of the impaired nutrition of the epidermis, rather than the cause of the underlying cell infiltration." More recent pathological investigation seems to confirm this position. Marshall, in 1899, said: "In examining the histo-

logic structure of leucomatous patches, whether 'thick or thin,' a marked change will be noticed in the character of the papillary layer of the tongue, the mucosa of the lips, the cheeks, and in the cells of the epidermis. The papillæ of the tongue are very often much atrophied and occasionally have almost entirely disappeared, while the epidermal layer has taken on a horny character more like that of the skin. This is true also of the epidermal layer in leucoplakia of the mucous membrane of the lips and the cheeks. It is also noticed that the epithelial process, both of the tongue and of those portions of the oral mucous membrane affected by leucoplakia, are much shorter than is natural and that the corium is infiltrated with leucocytes. In advanced stages of the disease true cell nests are discovered, which establishes the fact of carcinomatous degeneration. How these cell nests are formed in carcinoma is still a disputed question, but it would seem more than probable that in carcinoma of the tongue and oral mucous membrane following leucoplakia, the cell nests were developed from traumatic inclusions of epithelial cells following the repeated ulceration and healing of the leucomatous patches."

In Shoemaker's article on Leucoplakia, which was published in the *New York Medical Journal*, November 23, 1901, we find the following reference to the pathology of the disease:

"Leucoplakia appears to be essentially a chronic inflammation of the mucous membrane with infiltration, localized cellular hyperplasia and keratinization of the epithelial layer. The hyperplasia begins around the vessels, whence it spreads to the corium and papillary layer. There is an infiltration of young cells into the superficial portion of the corium and summits of the papillæ. The connective tissue of the papillæ is increased. In mild cases, or in an early stage, the papillæ can be distinctly recognized. At a later period their individuality is destroyed by the general infiltration of embryonal cells. Evidently the papillæ are flattened or atrophied and then resemble those of the skin. The proliferated cells of the corium encroach upon those of the epidermis. The embryonal cells accumulate also in the submucous tissue and glands of the mucous membrane. The epithelium of the glands is likewise proliferated. The upper layers of the epidermis undergo a cornuous transformation, while the cells of the Malpighian layer exhibit atrophy. The epithelium, as a whole, is markedly thickened. The infiltration of the tissue and the compression of the superficial vessels produce the elevation and the whitish color of the affected patches. With the occurrence of fissures comes the special danger of transformation into epithelioma. From the edges of such fissures the cells of the

Malpighian layer penetrate deeply into the corium and arrange themselves into the epidermic nests characteristic of that form of carcinoma."

In making the prognosis in cases of leucoplakia buccalis the tendency of the disease to terminate in cancer should never be lost sight of. As early as 1862 Neligan observed that this condition, then described under a variety of names, was liable to terminate in cancer. About this time Hulke, as a result of his personal and independent observation, arrived at the same conclusion and reported a case of ichthyosis of the tongue which resulted in carcinomatous degeneration.

Schwimmer observed one case in which epithelioma was developed in six months and he reported another case which terminated in cancer in two years. One of Marshall's cases resulted fatally.

Senn, in writing on malignant growths, says: "Carcinoma of the mucous membrane of the cheek is sometimes preceded by a patch of leucoplakia." Butlin states that out of eighty cases of cancer of the tongue sixteen were preceded by leucoma.

Sutton makes the statement that 20 per cent. of the cases of epithelioma of the tongue are preceded by the condition known as leucoplakia, and he further remarks that epithelioma of the cheek is sometimes preceded by a patch of leucoplakia. He says: "The disease often starts close to the angle of the mouth and extends backward into the cheek. Or it begins in the fold of mucous membrane between the gum and the cheek and occasionally it starts in the center of the cheek, often on a level with the meeting place of the crown of the upper and lower molar teeth."

Bowen, in his article on malignant growths which is to be found in "The Twentieth Century Practice," says that epithelioma is developed sufficiently often from leucoplakia to warrant the belief that there is some casual relation between the two processes. It must not be supposed, however, that all cases of leucoplakia result in epithelioma. Many of them result in spontaneous disappearance or remain quiescent through the lifetime of the patient. The assertion—which has been made by many eminent authorities—that these apparently quiescent conditions are liable suddenly to take on a violent form of malignant degeneration has not been disputed, and it is upon this tendency of the disease to terminate in cancer that the prognosis must be based.

The treatment of leucoplakia buccalis, like the treatment of all other pathological conditions which are surrounded with doubtful and varied etiological factors, has been the subject of much controversy. Authorities are, however, agreed that the disease or diseased condition is ex-

ceedingly stubborn, frequently resisting all attempts toward its control, and finally terminating in degenerative changes of a malignant character.

Marshall says the treatment naturally resolves itself into palliation and heroic operations. He further suggests that if a clear history of syphilis can be obtained, the patient may be benefited by a course of antisyphilitic treatment. He agrees with the majority of writers, however, that the disease is not benefited in any way by constitutional treatment. While each case must be considered individually, there are certain measures which should be adopted in the treatment of all cases. It is agreed that the exciting cause in the vast majority of instances is prolonged local irritation. Therefore, the first duty of the physician is to insist on the removal of every possible element of danger in this direction. The use of tobacco, alcohol, and all irritating foods should be prohibited. If an ill-fitting tooth plate or a plate which might be the means of chemical irritation of the mucous membrane is worn, its use should be substituted by an article through which both of these dangers may be eliminated. All carious and sharp-edged teeth should be removed or properly filled and rendered smooth. All roots should be extracted and all salivary calculus done away with. The teeth should be kept at all times aseptic by the use of properly selected tooth washes or powders. Antiseptic and alkaline mouth washes may be used with benefit.

With regard to application of caustics to the diseased mucous membrane, authorities seem to differ considerably, some holding that all irritating applications are harmful, in that they tend to increase the liability to malignant degeneration, while equally eminent writers advocate the use of one or the other of these remedial agents.

Butlin says: "One general rule holds good in all cases of leucoma, namely, not to use caustics."

Schwimmer suggested the application of a solution consisting of one-half per cent. of bichloride of mercury and 1 per cent. of chromic acid. He also claims to have obtained good results with papain, one part dissolved in ten parts of distilled water and glycerin. H. Niemeyer used this solution in a case affecting the upper lip and tongue, and is said to have obtained complete healing of the tongue and decided improvement of the lip in seventeen days.

Two very interesting cases are reported by Sherwell which he treated with a 50 per cent. solution of nitrate of mercury. These patients were both males, aged 44 and 57 respectively.

Sherwell's method is to protect the adjacent parts with absorbent cotton, after which he applies this solution to the diseased tissue. The solution is allowed to remain in contact with

the part fifteen or twenty minutes; to use his own words: "Cooking the tissues, as it were." He then neutralizes the mercuric solution with a solution of bicarbonate of soda, removes the cotton and allows the patient to use an alkaline mouth wash or gargle. In one of these cases Sherwell made two or three applications at intervals and obtained a recovery in three weeks. In the case of the second patient, in whom the disease was very marked, a complete cure resulted from a single treatment.

Zambaco has also used the mercuric solution in some mild cases with very good results. Bosworth advises the local use of chromic acid, preferring it to the other escharotics. Other authorities claim to have obtained good results with balsam of Peru. Lactic acid in 10 per cent. solution, 30 per cent. solution of salicylic acid, 20 per cent. solution of iodide of potassium have been used by different observers. Marshall treated two cases by applying to the plaques and to the denuded surface of the tongue equal parts of tincture of aconite and tincture of iodine every other day for two months, relieving all the symptoms except the abnormal dryness of the tongue. Cauterization of the lesions with the galvano cautery, thermo cautery and with solid silver nitrate has been suggested and advised by some of the French and German writers. Shoemaker, who has very recently and thoroughly investigated this branch of the subject, refers to it in the following language: "On account of its tendency to end in epithelioma, however, I am in accord with those who advocate a cautious local therapy and the avoidance of escharotic measures. If the lesion is ulcerated and fissured, if it has resisted mild local treatment, and, above all, if enlarged glands are detected in its vicinity, it is judicious to have recourse to a surgical procedure. The nature of the operation must be governed by the circumstances of the case." In this connection Shoemaker refers to Ransohoff's operation, which has been called decortication. Ransohoff's operation consists in the removal of as much of the cortex of the tongue as is necessary for a radical cure. Shoemaker quotes Ransohoff as saying that his operation is followed by speedy recovery and that in a few weeks normal epithelium is reproduced upon the denuded surface.

In some cases which were examined by Ransohoff several years after operation, no cicatricial tissue could be determined. Marshall is very pronounced in his opinion in favor of radical surgical interference in the severer forms of the disease. He insists that temporizing by the use of caustics is worse than useless, and he quotes the opinions of such men as Butlin, Perrin, Hulke and Garretson as agreeing with his own. "The consensus of opinion," says

Marshall, "obtained from the perusal of the most eminent authorities is that thorough and complete extirpation of the diseased tissue is the only reliable method of treatment, and this to be effective must be practiced before malignant symptoms have developed."

Finally, I beg to submit for your consideration the following conclusions:

First. That leucoplakia buccalis, by reason of the fact that it is liable to terminate in cancer, is a dangerous disease.

Second. That the dentist, because of his abundant opportunity primarily to come in contact with the disease, should be able to recognize it in order that he may refer it for proper treatment.

Third. That many of the methods employed in the treatment of the disease are worthless, and that some of them, when persisted in, may prove harmful.

Fourth. That in the treatment of the disease the question of surgical procedure should be considered as early as possible in order that recourse may be had to operative interference before the diseased tissue becomes the seat of carcinomatous degeneration.

Fifth. That while prolonged irritation in the majority of cases may be regarded as the exciting cause of the disease its true relation to syphilis is still an unsettled question.

Dr. Chassaignac, of New Orleans, has recently suggested the employment of a 1 : 2000 solution of adrenalin for the differential diagnosis of vesical and renal hemorrhage. He finds that the injection of this substance through a small soft catheter will temporarily check any bleeding from the bladder, so that the first urine passed after the injection will be entirely free from blood, or at least very much less clouded by it than the preceding specimen. But this control of hemorrhage only lasts for a few hours. I have had the opportunity of employing this test upon one case, and that a negative one. The patient was a man who had submitted to suprapubic prostatectomy by Dr. Keyes seven years previously. He came to the office complaining of hematuria, but otherwise well. There were no evidences of any lesion of the bladder, and the dark-brown color of the blood intimately mixed with the urine suggested a renal rather than a vesical hemorrhage. Dr. Chassaignac's test was applied, and its negative result confirmed the diagnosis. I may add that the patient stopped bleeding after taking turpentine in 10-minim capsules three times a day for two weeks.

Such is the sum and substance of my experience with suprarenal extract in the treatment of diseases of the urinary organs. It lends an elegance to meatotomy; it is useful after urethrotomy; it is valuable for cystoscopy; and it affords a satisfactory criterion of differential diagnosis between renal and vesical hemorrhage; while, for the control of the latter, it is not peculiarly efficacious.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. No. 8.

AUGUST, 1902.

\$1.00 PER ANNUM.

CORONATION HONORS FOR DOCTORS.

The London correspondent of *The Medical News* presents an interesting and at the same time rather caustic account of the attitude of the medical profession of England in reference to coronation favors. Coronation honors, it is expected, will be distributed with a more lavish hand than upon any previous occasion. The writer says: "There is sure to be a grand pyrotechnic display of 'stars' of various magnitude, 'crosses' and 'ribbons' of one kind or another. 'Garters' are not for such humble folk as doctors. The medical profession has to be content with such minor bubbles as baronetcies, knighthoods, companionships of the Bath, and the recently founded Victorian Order." Speaking of the late Sir William MacCormac, the writer says that the poor man longed to be a lord with an eager desire rare even in a country in which snobbery grows with a rank luxuriance unknown in any other part of the world. MacCormac's importunity in asking for titles won for him the soubriquet of Solicitor General. In speculating as to whom the favored ones of the profession should be, and what the titles, it is suggested that Sir John Williams, the distinguished obstetrician, is to be Lord Deliver Us; Sir Edward Cassel, the Hebrew philanthropist who gave the King money to found a sanatorium, is to have the title of Lord Help Us; Sir Thomas Lipton, the yachtsman, or better known as the provision merchant, is to be Lord Preserve Us; Sir George Lewis, the Jewish attorney who has served His Majesty in his somewhat extensive and variegated past, will take the appropriate designation of Lord Defend Us.

It is well known that doctors in England have little social recognition. Just now the physicians of the Royal Household consider themselves slighted because they have not been invited to be present at the coronation ceremonies. It is said that in the case of the army this social difficulty has led to the depletion of the medical

service. It has been difficult, if not impossible, to induce men of spirit and self respect to enter a service in which they were treated as the social inferiors of combatant officers, even when these officers were their own brothers or cousins. At some of the military clubs medical officers are systematically blackballed. It is a source of much heartburning in the profession that the Court sets the example of this social ostracism. Even officers who have had the titular distinction of Honorary Physician or Surgeon to the King bestowed upon them in recognition of good service are never invited to Court functions.

All of this is, of course, the fault of the members of the medical profession. No body of self respecting men need to submit to such indignities. If they had the backbone to insist upon the social consideration to which they as scientific men and representatives of a learned profession are entitled, they would get. This might involve the sacrifice of a few men. But Englishmen have known how to sacrifice themselves aforesaid in a vigorous fight for personal rights, and they ought not to hesitate now.

HERBERT SPENCER AND HIS ANTIMEDICAL BIAS.

Probably no philosopher of modern times is held in such high estimation as Herbert Spencer. As an exponent of inductive philosophy he stands preminent. Modern facilities for acquiring information have placed at his disposal facts ranging over the entire world, and he has known how to use them. More particularly has he commended himself to the medical profession as scientific men in harmonizing the doctrine of evolution with the demand for stable ethical principles, and the preservation of what is valuable in the beliefs, morals, literature and art of past generations. It is, therefore, with no slight degree of disappointment and regret that we find Mr. Spencer in his latest ut-

terances showing to a marked degree an anti-medical bias. In this connection the *British Medical Journal* of June 28th says:

"He has an almost fanatical objection to State interference in any form. This feeling finds curious expression in his recently published book entitled 'Facts and Comments,' which, we gather from the preface, may be regarded as containing his last words. Among the subjects touched upon in this volume is sanitation, which he appears to regard as a system built on fallacious beliefs supported by facts dishonestly collected and maintained by a bureaucracy which has an interest in keeping up the delusions. The 'sanitary class' is placed by Mr. Spencer in the same category as the military class and the State Church, which, it is suggested, exist solely for the benefit of officers of the army and navy and of the clergy. The sanitary delusion is, we are further asked to believe, also fostered by manufacturers and surveyors, who pocket 'illegitimate commissions.' On the subject of vaccination, again, Mr. Spencer's views do not strike us as in a scientific sense edifying. For no apparent reason, unless it be his antimedical bias, he seems to dislike vaccination without caring to declare himself an 'anti-vack.' He quotes the expression of 'a distinguished physiologist' who once was rash enough to deliver himself in Mr. Spencer's presence of the remarkable dictum that 'when once you interfere with the order of Nature there is no knowing where the results will end.' From the distinguished biologist there immediately escaped an expression of vexation at his lack of reticence, for he saw the various uses which Herbert Spencer might make of the admission. The picture of the philosopher as 'a chiel amang ye takin' notes,' and lying in wait for 'admissions' of which he can make use, is not altogether a pleasant one. But let us see what Mr. Spencer makes of this particular 'admission.' He argues that if vaccination produces immunity against smallpox it must produce further changes in the constitution, for 'the interference with the order of Nature has various sequences other than that counted upon.' So strong is Spencer in this conviction that with somewhat unphilosophic emphasis he declares that 'the assumption that vaccination changes the constitution in relation to smallpox, and does not otherwise change it, is sheer folly.' May we respectfully suggest that even granting Mr. Spencer's assumption—for it is nothing more—to be true, it by no means follows that his further assumption that the constitutional change is necessarily bad is also true? A dose of castor oil causes an 'interference with the order of Nature'; and who knows where it may end? As examples of the evil effects of vaccination Mr. Spencer points to measles, which, on very insufficient grounds as we venture to submit, he says is a severer disease than it used to be. Against this we may put the fact that

scarlet fever is a much milder disease than it used to be, and claim this as a result of vaccination. Mr. Spencer seems to be ignorant of the epidemiological law that infectious diseases go through periodical phases of severity or mildness, of which science is just beginning to be able to trace the curve without understanding the influences by which it is controlled. Mr. Spencer further finds a proof of the deteriorating effects of vaccination in influenza, of which he says: 'Sixty years ago, when at long intervals an epidemic occurred, it seized but few, was not severe, and left no serious sequelæ,' whereas 'now it is permanently established, affects multitudes in extreme forms, and often leaves damaged constitutions.' His inference is that 'the disease is the same, but there is less ability to withstand it.' Here again we have a sweeping conclusion based on a mere assumption. If Mr. Spencer had closely studied the history of influenza he would have found that centuries before Jenner was born it was 'permanently established,' that is to say, its invasions extended over several years at a time; and so serious a scourge was it that instances are on record in which it swept away all the inhabitants of a place which it visited. As for sequelæ, sixty years ago they were not understood; the effects of influenza constitute a new chapter in pathology. Mr. Spencer sees 'evidence of a general relative debility' which, it is implied, is a consequence of vaccination; but he is silent as to the increase in the average length of human life which has taken place during the last fifty years, and which might with better right be claimed as a result of vaccination. We are sorry to have to speak thus of a man who has all his life been a devoted seeker after truth, but we feel bound to protest against utterances which, coming from Herbert Spencer, will be received by many as having an importance to which in themselves they are not in the least entitled."

HIPPOCRATES AND HIS MEDICAL SCHOOL.

Under the auspices of the Imperial German Archeological Institute excavations are being made this summer in the Island of Cos. One of the main objects of the excavations is to discover the Asclepeion, the most famous shrine in the Island, and, in connection with this, the foundation and remains of the Cos Medical School is confidentially hoped to be discovered. It is known that Hippocrates was born in the Island of Cos and studied and taught his profession there. The personality of Hippocrates and the existence of his medical school become very realistic when we look upon the illustration presented in the *British Medical Journal* of June 21st, of the plane tree in the Island of Cos, under the branches of which Hippocrates is traditionally believed to have taught the healing art.

SUMMER WORK OF THE NEW YORK HEALTH DEPARTMENT.

The work of the summer corps of physicians of the Health Department of New York is to be carried on this season upon a larger scale than has previously been attempted. The number of the corps has been increased from forty-two to seventy-two and the service began the middle of June, instead of July 1st, as heretofore. as it was believed that by beginning operations at this earlier date a material saving of infant mortality might be accomplished. In order to cover the increased expenditure the Board of Estimate and Apportionment has been asked for a special appropriation of \$10,000, in addition to the \$15,000 provided annually by the Legislature. At the request of the president of the Health Department, Medical Director Biggs has prepared a report on the work of the summer corps. In it he states that it is proposed to extend this so as to include vaccination in the tenement houses. It has been the custom in the past when the number of cases of smallpox began to decrease with the advent of warm weather to discontinue the services of the special corps of vaccinators. This, he says, is manifestly unwise, as the time when most can be done in the way of eradication of the disease is when but few cases are to be dealt with. In addition to their other work, it is also proposed that the members of the corps shall undertake thorough and extensive work of inspection in connection with malarial fever and its prevention—the oiling and draining of stagnant pools, the examination of the blood of persons thought to be suffering from this disease, for diagnosis; the supplying of quinine for the treatment of cases among the poor, and the instruction of people in the districts in which malarial fever is prevalent as to the means to be adopted for its prevention.

It is gratifying to learn from Dr. Biggs' report that the investigations of the Health Department, in connection with the Rockefeller Institute for Medical Research, have resulted in a very marked improvement in the milk supply of New York City in many respects, and have afforded much valuable information as to the relation of the diarrheal diseases of children to the milk supply. While it is proposed to continue this work, he believes it to be of the greatest possible importance that the Health Department should make every effort, through the services of the summer corps, to put to practical use the results of the investigations already completed. As in previous seasons, the members of the corps will be provided with free tickets for the St. John's Guild floating hospitals and also with free tickets for sterilized and modified milk from the Straus depots, for mothers who are unable to procure proper milk for their infants. On June 2d Mr. Straus opened his fourteen depots in the parks and tenement districts. Last summer he distributed

533,507 bottles of milk among the poor, and, in addition, millions of bottles and single glasses were sold at the booths at a nominal price.

Michigan Falls Into Line.—The news from the Michigan State Society last week to the effect that it had adopted the constitution and bylaws recommended by the American Medical Association was inspiring. Dr. Connor, the president, had appointed a committee on re-organization on his own motion two months ago, and this committee reported the Association plan favorably, but asked that it lie over for one year. After full discussion, however, it was decided to adopt the entire plan by unanimous consent and make the most liberal arrangement to put it into immediate operation. This was done with much enthusiasm. The chairman of the committee who reported the plan was elected president, twelve councilors, one for each congressional district, were appointed and provision made for their expenses, and a systematic campaign was planned for the coming year. Societies only exist now in twenty-two of the eighty-seven counties of the State, but it was confidently promised that every county would be organized before the next meeting. This prompt action was no doubt largely due to the fact that so many of the Michigan members had attended and caught the spirit of the Saratoga meeting, and we have no doubt that like results will follow in other States as their meetings occur. This makes five States that have adopted the constitution and bylaws recommended by the American Medical Association, viz., Kentucky, Tennessee, Missouri, Ohio and Wisconsin. Similar constitutions were adopted by Illinois and California.

* * *

Army Surgeons Wanted.—Out of 129 candidates for appointment as assistant surgeons in the army, only eighteen have passed the examinations recently held. The Surgeon General of the Army is greatly disappointed at the showing of the doctors and almost despairs of filling the vacancies now existing by the autumn, when the services of a number of young surgeons should be available to relieve those whose terms of duty have expired in the Philippines. An army examining board has been in session in Washington since last April passing upon the qualifications of all young doctors who have been authorized to appear, with the result that forty-eight vacancies still remain unfilled, with but few applicants on file to be passed upon. The present situation is most embarrassing to the War Department and is unprecedented in the history of the corps. Usually there is not the slightest difficulty in securing excellent material from civil life for the Medical Corps. The Medical Corps of the Army, in fact, has been considered one of the most desirable branches

of the service for men just entering from civil life, on account of the rank and pay the new appointee receives. Next October the Army Board will hold another examination, and meanwhile an effort will be made to secure the attendance of a large number of candidates well qualified for commissions.

* * *

Checks on Degeneracy.—To prevent the procreation of degenerates under the laws of heredity, it is now suggested by the extremists that resort be had to modified operation of resecting the spermatic cord. Dr. Ochsner, of Chicago, speaking of the operation, which he has twice done for disease of the prostate, says: "Judging from the results obtained in two cases reported, it is evidently possible to obtain sterility without in any way interfering with the possibility of future enjoyment. In other words, this operation is one which does not mutilate the person, does not destroy the sexual power, but does prevent the power of propagation." Another writer has just announced his experience in forty-two cases of defectives, and is prepared to state positively that this operation "does not impair the sexual power of those operated upon, that they improve mentally and physically, that they increase in flesh, feel that they are stronger, and that while prior to the operation they made no advance in school, their advance is now fairly satisfactory."

The operation itself is a simple one: Cocainize the site of operation over the external inguinal ring, make a one inch incision, clear the cord and ligate at the nearest point to the seminal vesicle, and remove about one-fourth inch of the vas; close with a buried stitch.

"By this simple method," remarks a contemporary, "is the world to be ultimately reformed—ridden of the picturesque highwayman, the avaricious bankwrecker, as well as of the idiot, the imbecile and the epileptic. It would doubtless be just as well fitted for preventing the gouty, the tubercular, or diabetic inheritances; and when it comes to be practiced by advanced female practitioners, it will easily outrival in usefulness ovariectomy for the creation of neuters. It is possible that in Fifth avenue circles, where maternity is reckoned an inconvenience which precludes from the full enjoyment of pink teas and ping-pong parties, no man will be eligible for the social distinction of matrimony unless he has previously submitted himself to this harmless surgical operation."

* * *

The Annual Meeting of The New York State Medical Association will be held at the Academy of Medicine, in New York, October 20th to 23d, inclusive.

The committee has nearly completed the literary program. Besides contributions from our own members, we shall be greatly favored

by papers from such recognized authorities as Mayo, Oschner, Stengel, Thayer and some others with whom we are in correspondence. The social features of the meeting have been carefully considered. The committee has decided that Tuesday evening, heretofore taken up by a literary program, shall be free to the members and guests to seek their own recreation.

The annual dinner and reception will be held on Wednesday evening, October 22d. The innovation last year of admitting ladies to this function met with such universal approbation that the committee feels justified in urging their attendance this year, and arrangements will be made for their presence and comfort.

Luncheons will be served at the Academy of Medicine as formerly.

* * *

To Treat the Acutely Insane in New York.—The State Commission in Lunacy decided, June 24th, to have constructed in New York City, one in the Borough of Manhattan and the other in the Borough of Brooklyn, hospitals for persons threatened with insanity. Here patients will be treated immediately, and, if possible, insane symptoms will be eradicated. These patients will not be put among inmates of the State Hospitals for the Insane until their insanity is clearly established. Dr. Frederick Peterson, president of the State Commission in Lunacy, sailed for Europe June 26th, and while there will inspect the various detention hospitals for the insane similar in type to those that it is proposed to establish in New York. It is said that the commission at its recent meeting appointed Dr. Morris C. Ashley, acting superintendent of the Middletown State Hospital, to fill the vacancy caused by the death of Dr. Talcott.

* * *

A "Busy Doctor."—One of the peculiar things in our profession is the fact that we have two classes of busy doctors. One is represented by a class of men who have made a name for themselves, men who stand on the top rung of the ladder and have reached it by doing hard work, good work in a scientific way, and yet attend to a very large practice. This class of men, as a rule, take our best journals and read them. They have sent to them regularly all the new medical books that come out, and evidently they read them. Such men not only carry on a large practice and do a large amount of reading, but they also write excellent articles for publication and read papers before medical societies. This is one class of "busy doctors." There is, however, another class of "busy doctors." These men have made for them special books that are written for the "busy doctor." These books do not go too deep into the scientific side of the subject, but give only the practical. There are also certain journals that are got up for this

class of "busy doctors." They are what are called the "practical" medical journals. These thoughts come to our mind on reading a letter just received from one "busy doctor." It reads as follows: "It [THE JOURNAL] comes to me each week, but I have never read a page of it yet, and hardly expect to. I would love to read it, but have no time. I have to use every hour during the day to fill my professional calls, and at night I must sleep, so can not possibly have time to read. You may discontinue THE JOURNAL, as it is of no use to me." If any comment were necessary we might ask, Is this man faithful to the sacred trust imposed in him by his patients? Is any physician justified in being "too busy" to keep in touch with the methods and experience of other practitioners in his line of practice? Will it pay him to thus disregard the interests of his patients—to say nothing of the future of his practice?—*Jour. Am. Med. Assn.*

The Burke Benefaction.—With so much money unworthily bestowed and with so many beneficent intentions defeated through the uncertainty of testamentary dispositions, the benefaction of John M. Burke, of New York, is especially worthy of note. This philanthropist has placed \$4,000,000 in the hands of trustees to be administered for the betterment of men and women unable to support themselves by reason of sickness and misfortune. Ex-Mayor Hewitt, Edward M. Shepard, Frank Sturgis and William Hubbard White, with the founder of the trust, constitute the administrative board, and their character is sufficient to guarantee both mind and heart in solving the problems which necessarily come within their scope. There will be no competition with the hospitals, since the plan is to care especially for those discharged from the hospitals, but unable to resume work, particularly the independent wage earners, who so frequently, through some prolonged illness, find their savings gone, their positions filled and with weakened frame and languid mind are not able at once to recoup their losses. It is frequently noted in hospitals that such often return a second or third time as charity patients, and that often an illness under such conditions, with a tedious convalescence, is the turning point to a general decadence. The class to be benefited is less easily reached by ordinary methods than any other class requiring assistance, and yet their need is as urgent, although seldom brought to the attention of those who would mitigate the hard conditions. Such practical businesslike charity is growing more and more a characteristic of the true philanthropist, and each succeeding example will but tend to make others.—*Am. Medicine.*

Bad Physiology and Bad Temperance.—Such must be pronounced the extremism into which the Women's Christian Temperance Union, led

by Mrs. Hunt, is plunging in its frantic efforts to control the teaching of physiology in our public schools. Note the following from Mrs. Hunt's "History" concerning the textbook war:

"This is not a physiologic, but a temperance movement. In all grades below the high school this instruction should contain only physiology enough to make the hygiene of temperance and other laws of health intelligible. Temperance should be the chief and not the subordinate topic, and should occupy at least one-fourth the space in textbooks for these grades. Those textbooks that are largely physiology with a minimum of temperance matter * * * do not meet the requirements of the law and do not satisfy those who secured its enactment, and are determined to secure its enforcement."

The teaching of physiology and hygiene in the public schools of the United States has thus practically become a mere tool and means of a so called temperance propaganda. "Of such books," says Professor Sedgwick, "it may truly be said that they have no permanency of their own and are only with difficulty preserved in alcohol." We have every possible sympathy with true temperance reform by just and proper methods, but the W. C. T. U. by its ill considered methods has vitally injured the cause it is supposed to have at heart, and has turned into repulsion the sympathy of every true pedagog and scientist. Teachers and publishers of textbooks have been browbeaten, and they do not dare resent such action as it should be resented. The medical profession can be of great service to the cause both of temperance and of education by helping to make an end of this foolish propaganda and by bringing the teaching of hygiene and physiology back to sound scientific and pedagogic principles.—*Am. Medicine.*

Quarantine for Passengers from Cuba.—Forty-six passengers on the steamer Havana, from Havana, were transferred, June 30th, to Hoffman Island, N. Y., for observation. Hereafter all passengers not immune to yellow fever will be detained to complete the five days' period from the time when they left Cuba. The new hotel accommodations on Hoffman Island are now in use for the first time.

Health Board, Camden, N. J.—The annual report, made June 30th, shows 512 cases of contagious disease with 111 deaths. Of these, 194 were cases of smallpox. Dr. S. G. Bushey was elected president of the Board of Health.

McKinley's Physicians to Be Paid.—In the general deficiency bill passed by Congress before its adjournment last week was an item for the appropriation of \$45,000, or such part thereof as may be necessary, to defray the expenses incurred by the illness of the late President McKinley. As the physicians who attended the President have sent in no bills, it is not known how this appropriation is to be divided among them.

Ophthalmia in Schools.—The Board of Health having declared that ophthalmia is a contagious disease, especially prevalent among school children, Commissioner Lederle has appointed eleven physicians to visit the various public schools, examine the children and report each case to the Board. The pay of these gentlemen is to be at the rate of \$100 per month, and they will make daily visits to the schools.

* * *

A New Home for Convalescents, New York City.—Four million dollars in property and bonds have been donated by John M. Burke, of New York City, to form a corporation to be known as the Winifred Masterson Burke Relief Foundation, for a convalescents' home in or near the Borough of Manhattan, in memory of his mother. This is especially for the relief of worthy men and women who, notwithstanding their willingness to support themselves, have become wholly or partly unable to do so through sickness or misfortune, or who have been discharged from hospitals before regaining sufficient strength to enable them to resume their regular employment.

* * *

To Fight Tuberculosis.—The Charity Organization Society has appointed a committee on prevention of tuberculosis, consisting of eleven physicians and thirteen laymen. In addition to an investigation of the social aspects of tuberculosis the work of the committee has been outlined in part as follows: The promulgation of the doctrine that tuberculosis is a communicable, preventable and curable disease; the dissemination of knowledge concerning the means and methods to be adopted for its prevention; the advancement of movements to provide special hospital, sanatorium and dispensary facilities for consumptive adults and scrofulous and tuberculous children among the poor; the initiation and encouragement of measures which tend to prevent the development of scrofulous and other forms of tuberculous diseases.

* * *

Illegal Practitioner Fined.—Luigi Zito, Utica, whose case has been several times adjourned, was once more arraigned, June 20th, for practicing medicine without a State certificate. He was fined \$25, which he paid.

* * *

Psychopathic Hospitals.—The State Commission in Lunacy will establish in the boroughs of New York and Brooklyn two hospitals for the more active treatment of the acute insane. These institutions will be known as psychopathic hospitals. That to be established in New York City will provide for 200 patients, and that in Brooklyn for 100 patients.

Correspondence.

THE FINANCIAL END OF THE SARATOGA MEETING.

Theresa, N. Y., July 9, 1902.

Publication Committee NEW YORK STATE JOURNAL OF MEDICINE:

Gentlemen—I have been perusing with keen interest our excellent July number. It contains much of value and its allusions to the work of those who worked for the interests of the National Meeting at Saratoga were timely and deserving. But I am a little surprised that one, to me, important omission has been made. I refer to the indefatigable labor of Dr. E. D. Ferguson, of Troy, in his efforts to make this memorable meeting the grand success that it was. For weeks before the meeting he toiled early and late, and during the session saw little rest, his working day being practically twenty-four hours long.

To no man can be given more credit than to our Dr. Ferguson for the success of the meeting. Honor to whom honor is due.

J. R. STURTEVANT.

[We had expected to speak of the work of Dr. Ferguson in connection with the report of the Finance Committee. The report is not yet received, but we are glad to give place for this expression of appreciation of the successful financing of the undertaking.—*Pub. Com.*]

MEDICAL DIRECTORY OF NEW YORK, NEW JERSEY AND CONNECTICUT.

BLOOMING GLEN, Pa., July 12, 1902.

To the Committee on Publication:

Gentlemen—A few days ago I received a copy of the Medical Directory of the New York State Medical Association. I have examined the copy carefully and can truthfully add that it certainly is an excellent production of the profession of your State; it shows enterprise and is good evidence that you men will not take the "back seat" in medical affairs. It will undoubtedly aid greatly in uniting and keeping together your membership. Its publication must tend to elevate the profession of the entire State, as a man is always more careful of his conduct if he knows that what he does is watched and recorded. I have for years strongly advocated just such a move in our State Society, viz., the publication of a State Directory. So far nothing in particular has materialized; but we live in hope, by keeping everlastingly at it, to finally accomplish something. The publication of our transactions in journal form now for four years has had a wonderful influence in stimulating new membership.

Our county societies promptly report their proceedings, and in that manner a more congenial and neighborly spirit is cultivated. Members may thus learn what local affairs are occurring in their neighboring county. With high regards,

Yours truly,

A. F. MYERS,
Secretary Bucks County (Penn.) Medical Society.
collecting the names and other data for the directory

Dear Doctor—I thank you very much for the description of the method which you found most satisfactory in collecting the names and other data for the directory. I do not think it will be a great while before our State Society will attempt some such scheme. I have had more time to look over your directory, and find it admirably arranged, and I have no doubt more accurate than those directories that are published merely for the purpose of enriching the publisher.

Sincerely yours,

WILLIAM S. WRAY.

Philadelphia, July 14, 1902.

A BRIEF PRELIMINARY REPORT ON THE USE OF UREA AT ST. JOSEPH'S SANATORIUM.

TO THE NEW YORK STATE JOURNAL OF MEDICINE:

Dear Sir—In accordance with instructions received from a majority of the Advisory Board the use of pure synthetic urea in pulmonary tuberculosis was begun several months ago. In about 25 per cent. of all cases in which it has been administered there has been a very marked increase in the amount of urine excreted, forcing the patient to urinate frequently and often, on this account disturbing sleep. The diuresis is not accompanied by an increase in the urinary solids. In those cases in which the use of urea has been followed by diuresis, pain in the back, over the kidneys, is a constant symptom, which is at once relieved by discontinuing the use of the remedy. Digestive disturbance, as a result of the administration of this agent, has not been noted, contrary to the experience of Harper (*Am. Med.*, May 10, 1902). The dose employed is 15 grains three times daily, increased to 30 grains three times daily, if diuresis does not appear. This symptom has usually followed a dose of 30 grains three times daily. The remedy has at once been discontinued in every case in which symptoms fairly attributable to it have occurred, provided a diminution in the quantity administered does not relieve the symptoms.

As regards the supposed antituberculous effect of urea, I have at present nothing to offer. It is so usual for patients to improve under proper management in our climate that at best it is difficult to know just what to attribute to the action of any drug employed. I can, however, say positively that no result of the use of urea sufficiently striking to attract my attention has occurred. E. S. BULLOCK.

SILVER CITY, N. M., July 1, 1902.

Book Reviews.

ABBOTT'S BACTERIOLOGY. A practical manual of bacteriology for students and physicians. By A. C. Abbott, M.D., Professor of Hygiene, University of Pennsylvania. New (sixth) edition, revised and enlarged. In one 12mo volume of 636 pages, with 111 illustrations, of which 26 are colored. Cloth, \$2.75, net. Just ready. Lea Bros. & Co., publishers, Philadelphia and New York.

This book, now appearing in its sixth edition, has since its first appearance, ten years ago, been adopted as a standard textbook on bacteriology in nearly all the medical colleges in the United States, and not only this, but it has been generally accepted by the medical profession as the work most suited from which to gain a knowledge of its science—a science so young as not to have been a part of the curriculum of many now in the practice of medicine.

The work is accurate, concise, clear and attractive. Attractive not alone to the reader accustomed to scientific writings, but to the layman as well who may be accustomed to the so called popular writings on science.

The greatest difficulty experienced by the writer of a textbook on bacteriology is in his selection of material or rather the problem of elimination. Bacteriology being a new science and one so attractive to investigators has become a vast maze of completed and uncompleted threads, many of which are badly gnarled and tangled, and when the writer of a textbook on the subject has satisfactorily compiled his work, he has made use of that which is definite and assumed and has omitted that which is doubtful. Abbott's work is of this character. It is especially useful to the medical practitioner, inasmuch as it takes up in detail about all of the pathogenic bacteria and only deals with the nonpathogenic in a general way. The book is considerably larger than the former

editions, and a marked improvement is noted in the illustrations, though there is still room for improvement in these now that laboratory photography has attained such satisfactory results.

In the estimation of the writer, who comes in touch with many students of this science, there might, without loss to the work, be some further elimination, and thereby make room for subjects not touched upon or barely mentioned. The text on history could be made briefer; that on the microscope and on embedding and section cutting could be left to books on these subjects.

As to what might be added to enhance the value of the book, it is suggested that a hint might be obtained by a glance at the questions in bacteriology now being asked candidates for army and navy surgeonships.

PRACTICAL DIETETICS, WITH SPECIAL REFERENCE TO DIET IN DISEASE—By W. Gilman Thompson, M.D., Professor of Medicine in the Cornell University Medical College in New York City, Visiting Physician to the Presbyterian and Bellevue Hospitals. Second edition, enlarged and thoroughly revised. New York, D. Appleton & Co., 1902.

We are very glad to note that a second edition of this very valuable work has been produced. It is devoted to a subject which has been treated in the most fragmentary and imperfect way in the common run of textbooks, and yet admittedly the diet in many diseases is fully as important as the medicinal treatment. The author is entitled to still more credit, for his work is in a practically new field, and the amount of research necessary in its compilation, to say nothing of actual knowledge, must have been tremendous. The first edition was very well received and the author has thoroughly revised it and made use of the valuable contribution on scientific dietetics published by the Department of Agriculture. It deserves a place as a work of reference in every physician's library.

A MANUAL OF OTOLGY—By Gorham Bacon, A.M., M.D., Professor of Otolgy in Cornell University Medical College, New York City, with an introductory chapter by Clarence J. Blake, M.D., Professor of Otolgy in Harvard Medical School, Boston. New (third) edition. In one handsome 12mo volume of 437 pages, with 120 engravings and 7 plates in colors and monochrome. Cloth, \$2.25, net. Lea Bros. & Co., publishers, Philadelphia and New York.

The printing of the third edition of this book is an indication of its popularity as a textbook. It is to be regretted that the first half is not up to the standard of the second. The author's style is simple, his diction plain, but, unfortunately, in places, very ambiguous and faulty. On page 51 he speaks of the "lesser half of the tube." On page 85 he says "by inspiration air enters * * * ear more readily when the catheter is used than by simple catheterization." On page 139 it is stated that "irritation of the branch of the pneumogastric which latter supplies," and also on page 145 "somewhat round a wound" (typographical), and on page 347 a "horizontal incision in the vertical meridian;" on page 273 "malleous and incus should be incised"; on page 297 "two tubercles approximate one another." On page 35 he speaks of diameters without mentioning directions.

The author also has a habit of useless repetition which is not suitable for a manual's small compass. On pages 46 and 47 he repeats the boundaries of Prussak's space, and in two places tells of the advantage of scraping adenoids with the finger nail.

His description of the method for examining the drum membrane is too meager to be clear or instructive. The same criticism applies to his description of the Weber and Rinne tests. Few students would gain any information more than the names from his analysis of these functional tests.

His anatomy is not always correct, according to the

opinions of the generality of observers. On page 55 he states that the facial nerve may become involved * * * as its course is downward through the cells. On the contrary, it lies pretty well protected in the compact premastoid lamina. On page 53 he says the mastoid communicates with the posterior part of the middle ear. Of course, he means tympanic cavity. On page 44 it is stated "that the short process of the incus lies in the inferior angle of the antrum." Apparently he does not consider the aditus ad antrum as an anatomical entity. On page 395 he describes the fossa subarcuata as lying between the external (internal?) auditory meatus and the superior petrosal sinus. His description of the location of Henle's spine is not the happiest one.

His statements that mastoid disease has been due to blisters behind the ear and that salt water entering the meatus is the cause of otitis media will meet with much opposition from other clinicians, who grant to Nature a better defensive protection.

Although the author follows precedent and wastes space with illustrations of artery forceps, cotton applicator and specula, nevertheless the illustrations and plates are very fine.

One reads with pleasure his clear description of the internal ear and of the tympanic diseases. The pages devoted to mastoid surgery are replete with the author's successes and failures—personal statements that make the book a desirable one.

The printer cannot be criticized in his work.

On the whole, it is a very good book for students, and, with a careful revision and amplification of technical description, will be an extremely valuable one, because it is the reflection of long years of otological work.

THE ARTIFICIAL FEEDING OF INFANTS, by Judson and Gittings, Attending Physicians, Medical Dispensary, Childs' Hospital, Philadelphia. Published by J. B. Lippincott & Co., Philadelphia, 1902.

This work is a compilation of abstracts of original articles and otherwise expressed views of many writers on the subject of artificial feeding of infants. It cannot be said to be any great addition to pediatric literature, as it contains practically nothing new or original, nothing that is not familiar to well-informed pediatricists. The bringing together of diametrically opposite views on the same subject naturally produces distrust in the practitioner who goes his own way and allows the mother or nurse to determine the child's nourishment. As long as "mixtures" and set formulæ are advocated so long will infant feeding among the profession at large remain at a standstill. Algebraic and otherwise intricate methods will never promote an advancement of knowledge concerning this difficult subject.

In the chapter entitled "Practical Rules for Feeding" it would have been better had the authors substituted the word "boiled" for "scalded." The advisability of giving bottle babies ice water at any season of the year is open to serious objection. The authors are to be commended for their industry and good intentions.

The book will interest those who wish in one volume a review of a large part of the literature good, bad and indifferent which has appeared during the past six or eight years on infant feeding.

MORPHINISM AND NARCOMANIA from Opium, Cocain, Ether, Chloral, Chloroform and other Narcotic Drugs; also the Etiology, Treatment and Medicolegal Relations. By T. D. Crothers, M.D., Superintendent of Walnut Lodge Hospital, Conn.; Professor of Mental and Nervous Diseases, New York School of Clinical Medicine, etc. Handsome 12mo of 351 pages. Philadelphia and London. W. B. Saunders & Co., 1902. Cloth, \$2 net.

We find in the literature on morphine no other work of such general interest as the one given to us by Dr. Crothers. To some it may seem lacking in scholarly rendering and technicality, but the comparative absence of just these things makes it of greater

value to the busy practitioner. One might wish that Dr. Crothers had been somewhat more consecutive in his presentation of facts. Notwithstanding this lack, the book is one of intense interest and will hold the reader from cover to cover, and when finished will leave in the mind a store of information of a very practical nature which it is impossible to obtain in any other single compilation. We certainly agree with him most heartily in his assertion that "the alarming increase in the last few years of morphomania and associated various narcomanias imperatively demands immediate attention by the medical profession." We also firmly believe that many cases of drug addiction are now overlooked by the family physician and cases are treated for many obscure symptoms without an accurate knowledge on the etiology. Dr. Crothers' book points out many diagnostic features and will help to clear up many an otherwise involved case. The chapter on the treatment of morphinism is particularly prolific in pointing out methods of treatment and in outlining therapeutic courses not in general use in combating the fearful condition under consideration. He also treats in the latter chapters of the book the addiction to cocain, chloral, chloroform, coffee, tea, tobacco, ether, arsenic, trional, antipyrin, ginger, cologne, gelsemium, sulfonal, paraldehyd, lavender and capsicum. This work is one which the exigencies of modern life make it imperative that every physician should be thoroughly acquainted with.

Original Articles.

THE DAILY MEDICAL INSPECTION OF SCHOOLS.

BY FREDERIC WILLIAM LOUGHRAN, M.D.,
New York, N. Y.

AMONG the duties that the State owes to its children are two that are coequal—education and the preservation of their health. The first is compulsory, but in fulfilling it we violate the cardinal principles of the second.

It has long been recognized that the school is one of the most potent foci of infection. Large masses of children gather together, from all social conditions and hygienic surroundings, coming in intimate contact with each other, handling the same books, using the same pencils, their clothing often being hung together in dark, unventilated closets, drinking from the same cups—all these conditions favor the growth of bacilli.

It is with the preservation of the health of school children, and in reality of the community at large, that this deals.

There is no more promising field in medicine than the prevention of disease in childhood. The majority of the ailments from which children die are within the power of man, in great measure, to prevent. To act upon the defensive is to half win the battle, and it is much easier to prevent disease than to cure it. Physicians should aim at the solution of two distinct problems, first, the removal of the cause which interferes with the proper growth and development of children; second, the prevention of infection. The former can only come from the education, first of the profession and then the general public, in the fundamental prin-

ciples of infant feeding and hygiene. The latter must come from the profession and from legislation, the purpose of which shall be more rigid quarantine, more thorough disinfection and improved sanitation.

It would seem that while the daily medical inspection of schools for the detection of disease is the result of scientific knowledge and research, it would be comparatively easy to have it introduced into all our communities, and yet from its inception it has met with manifold difficulties, not only from the ignorance of municipal authorities, not only from the objections of the parent, but by many obstacles cast in the way by physicians of reputable standing.

How long shall the State ignore the rights of the child to hygienic surroundings—how long are the children, helpless under the ignorance of others, to be exposed to contagion?

The plans of daily medical inspection of schools must vary with the local conditions. It would be an ideal one could each child be examined by a physician before entering school, and this is practicable in small communities, but in the large cities such a course would seem almost impossible. In the latter instance we must depend upon the teacher to detect disease in the classroom. The inspector should be an agent of the Department of Health, acting under their authority to make competent examination of the school child under favorable surroundings, to dismiss the child from school if advisable, but in no case to offer treatment of any kind, but simply to advise the parent to secure the advice of the family physician.

Dr. Sharp, of St. Louis, has ably summed up the results of this plan as follows: "First, early detection of sickness in its varied forms. Second, an earlier institution of treatment under diseased condition. Third, the checking of disease in the acute and subacute stages. Fourth, the diminution of chronic affections. Fifth, the diminished number of days' absence from school. Sixth, the limitation, if not the actual destruction, of endemics and epidemics. Seventh, improved health standard of schools. Eighth, improved scholastic attainments of schools."

That early detection of sickness in its varied forms would be secured is manifest. Daily rigorous inspection by a competent physician of all ailing or complaining children and all those who may only disclose their needs objectively to the teacher will more accurately designate parasitic diseases than can possibly be secured by any other means.

In a rich or well to do family, when a child shows symptoms of sore throat, instantly a physician is called and the child kept from school in order to nurse it at home, while in a poor family, very probably the mother going out to do washing from day to day, it is impossible for her to take care of the child at home, she does not call a physician, and the child is sent

to school. The other children are not protected, hence this child innocently spreads the disease to all who come in contact with it. By a daily inspection as noted an earlier institution of treatment could be secured, and in no other way. The checking of disease in acute and subacute stages would be secured and diminution of chronic affections will logically follow; the total number of days' absence would be greatly reduced, for with earlier treatment earlier cures will be effected.

Formerly it was not uncommon, and indeed it is quite common now, where no daily medical inspection exists, that schools were closed from epidemics of scarlet fever and diphtheria. Since the establishment of daily medical school inspection in New York City no public school has been closed from either of these causes. The health standard of the schools will be improved, since the dismissal from school of the ailing raises the average of the school, and since only healthy children are attending, a higher efficiency of all the students will result. Our children are justified in expecting hygienic surroundings. The sick child demands dismissal from school and the healthful child demands that the sick be dismissed, the first on account of its physical necessities, the second for health preservation.

It is not necessary for me to go into figures to prove the efficacy of this system, though I might cite a few cases. A primary school of forty students had fourteen cases of diphtheria in eighteen days, all from one room. Of the fourteen cases, seven were discovered by a medical school inspector and three of these only by culture. All suspicious cases were dismissed from school and recommended to the care of their family physician. The next morning every child was examined and many cultures taken. The school was then dismissed from Thursday until the following Monday, and the rooms disinfected and cleaned. For ten days after his return the throat of every pupil was examined by a medical school inspector, when the children first assembled in the morning, and no pupil who had been absent with any suspicious symptoms was allowed to return until it was proved by negative culture that there could be no danger. As a result of this measure not a single case of diphtheria resulted, beyond those known to have been infected at the time the epidemic was discovered.

The preliminary investigation in New York was made as a result of the above mentioned communication to the Sanitary Superintendent, in order to obtain definite data as a basis of action. The best results were obtained by securing the absence list of the school in which a case of contagious disease had occurred, and visiting the absent children to learn the cause. Eighty-five families with scarlet fever and diphtheria were visited and showed fifteen cases of scarlet fever and nineteen cases of diphtheria,

thirty-four cases out of eighty-five in which the first case in the family was a school child. It was in the district reporting the largest number of cases of scarlet fever that the connection with the schools was best marked. The inspector reported that in his experience any severe outbreak had always come from the schools. The statistics seem to show that many cases of diphtheria went unnoticed, and the same was true in the instance of scarlet fever.

Children with sore throats sent home by teachers frequently fail to call in a physician and return to school when feeling well. The statistics of all known cases of scarlet fever in one school show that thirteen cases out of the twenty would probably have remained unknown if the absent list had not been investigated. Of these thirteen cases four returned to school, and, although still in a condition to spread contagion, would have remained if they had not been found. Several others were prepared to return, and the epidemic would certainly have been indefinitely prolonged in the absence of systematic investigation.

In seventeen cases of measles reported in three weeks in one district, upon examination twenty additional cases were found, which from ignorance and the mildness of the attack would never have been reported, nine having failed to call in a physician.

In Chicago 744 cases of diphtheria in school led to the discovery of twenty-six cases in homes that had not been reported to the Board of Health, and 230 cases of scarlet fever in schools were discovered, not by physicians at home, not by careful mothers who could see that their children were ill, but were allowed to go to school and were sent home by the physician in attendance, who then notified the Board of Health where these children lived, resulted in discovering 745 cases at home.

A most eminent physician has estimated that 70 per cent. of epidemics might be prevented by daily medical inspection of schools.

It has long been recognized in Paris that certain forms of ringworm of the scalp were so contagious and lasting that they existed from early childhood until puberty, and schools for children with ringworm have been instituted. This would have been entirely unnecessary if a rigorous inspection had been instituted.

DETAILS OF A PRACTICAL PLAN.

It is an absolute necessity that the inspector should be controlled, not by the Department of Education, but by the Department of Health, in order that the least possible time should elapse between his seeing the child and his report received by the Department of Health. Also that greater freedom would exist if he were entirely divorced from any interference of the school authorities.

It is manifest that to accomplish the best results the children should be seen before the general assembly. As soon as possible after

calling the roll the teacher should examine each child, and those who appear to be ailing or present a suspicious appearance should at once be sent to a room, set apart from the rest of the children, where they could be examined by the physician. This room should be large, light, warm and well ventilated, furnished with running water and towels for the use of the physician, and wooden spatulas that may immediately be destroyed after using for throat examination.

I can do no better than to quote from the book of instructions issued to the inspectors by the Health Department of New York: "Inspectors are required to report at the schools to which they have been assigned from 8.50 to 9.30 A. M. every day that school sessions are held.

They are to carefully examine each child that has been isolated by the teachers in charge of the scholars, and cause to be excluded from school each one affected with or showing symptoms of any contagious or infectious disease, more especially the following: Measles, diphtheria, scarlet fever, croup, whooping cough, mumps, contagious eye diseases, parasitic diseases of the head or body, or chicken-pox. They shall furnish each pupil that is to be excluded with a printed card, upon which they shall note the date, name and location of the school, age and address of the child, and the reason for exclusion. These cards, signed by the medical school inspectors, are to be taken home by the excluded pupils. Each day, before leaving a school, each inspector is required to fill out a printed daily report blank, giving the date and time of visit, the name, location, district and card numbers of the school, the number of children examined (male and female and total), the full name, age and address of each one excluded, with the diagnosis of each excluded case. Note is also to be made on the daily report of any culture that has been taken, giving the clinical diagnosis and stating whether the pupil was excluded or not. On the last school day of each week the printed summary blank on the back of the daily report blank used that day is to be properly filled out for each school day of the week. Each day, as soon as possible after leaving the last school to be visited, inspectors are required to mail a separate daily report (properly folded and "backed") for each school visited to the chief inspector at the central office, where a daily summary is made of the work performed in all of the schools visited.

All children excluded from schools for measles or scarlet fever are visited at their homes within twenty-four hours by one of the diagnosticians of the Board, and such cases as are not tabulated as true ones unless he confirms the diagnosis, when a department postal card is sent to the school, excluding the child until after its complete recovery, and when the necessary disinfection and fumigation of the

rooms where it lives have been attended to, a certificate allowing it to return to school is issued.

Pupils excluded for chicken-pox are visited at their homes by the medical inspectors of the Division of Contagious Diseases having charge of the districts in which the children live; when they confirm the diagnosis the cases are recorded as true ones and the schools notified by department postal cards.

In cases of suspicious diphtheria, when there is well marked clinical evidence in the throat at the time of the examination, the child is to be excluded after a culture has been taken; when the clinical evidence is not well marked, a culture is to be taken, but the child is not to be excluded until a report is received by the medical school inspector from the Division of Bacteriology, stating that an examination of the culture shows the presence of the Klebs-Loeffler bacilli.

In each case where an examination of a culture taken by a medical school inspector shows the presence of Klebs-Loeffler bacilli a notice to that effect is promptly mailed to the maker of the culture and also to the medical inspector of the Division of Contagious Diseases in whose district the child resides, who then takes charge of the case as far as the proper isolation is concerned, taking subsequent necessary cultures, ordering disinfection and fumigation when the Klebs-Loeffler bacilli have disappeared from the throat, and issuing certificates for the child's return to school.

The district medical inspectors have the same surveillance over each case of measles or scarlet fever where the diagnoses made by the school inspector have been confirmed by a diagnostician. When the result of an examination of a culture made by a school inspector is negative, a report to that effect is forwarded to the chief inspector, but not to the maker of the culture.

When the examination of a culture made by a school inspector does not admit of an exact bacteriological diagnosis and a prompt confirmatory culture is requested, such request (Blank E i) will be mailed to the maker of the culture and also to the district medical inspector, in order that a confirmatory culture may be taken—by the former if the child is at school, or by the latter if the child is at home. All cultures made by the school inspectors, accompanied by the "culture blanks," properly filled out, should be promptly forwarded to the nearest culture station.

Children excluded on account of whooping cough, mumps, contagious eye diseases, parasitic diseases, etc., should be told to return when cured, and should be again examined before returning to their classrooms; if not entirely well they should be again excluded.

The inspectors should ascertain from the principals and teachers of the schools the names

and addresses of all children having contagious diseases in their families, where notification has not been sent to the schools by the Board of Health, and such lists shall be forwarded with the daily reports. Inspectors shall keep a daily record in a blank book.

Medical school inspectors shall report at the central office once during each month, the time to be designated by the chief inspector. Exclusion cards for pupils, daily report blanks, addressed envelopes, blank books for recording the work performed, wooden tongue depressors, culture outfits and lists of culture stations will be furnished at the office of the chief inspector.

The daily duties of medical school inspectors cease when they have mailed their reports after leaving the schools. They are not, under any circumstances, to visit children at their homes to prescribe for them, or suggest treatment at the schools. The treatment must be received from the family physicians, in the dispensaries, or in the hospitals.

NOTE.—After the necessary disinfection and fumigation of the rooms in which there has been an infectious or contagious disease, postal cards will be mailed by the Division of Contagious Diseases, notifying the proper schools that it is safe to readmit the child or children living in those rooms.

REMUNERATION.

"The laborer is worthy of his hire." Several cities have a voluntary service, but in this country, where medical aid is given so freely in all places and at all times, no State has the right to accept the services of a physician gratis, when it can so well afford to pay him.

The results of daily medical school inspection are many and far reaching. The children, knowing they are being carefully watched, will present a more cleanly appearance, being more careful in their personal hygiene. The parent, knowing that such care is exercised in the school, will think and interest himself in the physical condition of his home.

I trust that these brief remarks will lead to the agitation of this subject in your community. Public health legislation is fast becoming a powerful influence, its purpose being more clearly understood and appreciated by the people.

Malpractice Suits Fail.—In the damage suit for \$10,000 brought by George R. Steele, Mt. Clemens, against Drs. Henry G. Berry and Harry F. Taylor, of Mt. Clemens, and Dr. Angus McLean, of Detroit, Judge Tucker ordered a nonsuit, May 22. Judge Law, of Port Huron, summarily terminated the suit of Robert Bartell, of Capac, against Dr. Ephraim J. Buck for \$10,000 on account of alleged malpractice on the grounds that the plaintiff had not made out his case.

THE MEDICAL INSPECTION OF SCHOOLS.

BY JAMES LEE, M.D.,

Associate Superintendent of Schools, Manhattan and Bronx.

IN a paper read before another body and from which I largely quote in connection with the paper just read I have taken the ground that medical inspection should go further than the mere discovery and prevention of contagious diseases. Other ailments common among children, such as the various neuroses, affections of the eye and ear, all of which interfere with or retard mental development, are matters that should receive the attention of physicians. On the special feature of the subject of Dr. Loughran's paper I would say that the assembling of large numbers of children from all sorts of home surroundings brings other duties to school authorities and medical men than mere instruction. Enforced attendance increases the responsibility. Hence the importance of a fixed authority to determine who shall be admitted to school, or, after admission, who shall be excluded. There is no doubt that the school is to blame for the spread of contagion. It is often the origin of contagious diseases. Proper physical conditions in the building itself and the treatment of the children from a physical standpoint are matters which medical men should note. The question of prevention arises. To prevent, precautionary measures are necessary. Hence an authoritative body to direct proper medical inspection. In this and other large cities the experiment has been tried. It is not necessary to enter into a detailed statement of results. Suffice it to say that we can never possibly estimate the number of lives that have been saved through the exclusion of cases of contagious and other diseases. Cases of diphtheria, scarlet fever, measles, smallpox, chicken-pox, mumps, whooping cough, pediculosis, scabies, congenital syphilis, phthisis, affections of the eyes and ears, and other diseases have been found to exist and excluded until cured.

Principals and teachers could materially aid in preventing the spread of contagious diseases if physicians and parents would notify them of the existence of these diseases in families having children at school. My experience compels me to say that if it were possible, without infringing on the rights of the parent and the physician, the latter should be compelled by law to send notices immediately and directly to the principal of the school affected. Notices generally reach schools too late to be of service in stamping out or preventing the spread of disease. This is not meant as a reflection on delays that necessarily exist; it is rather to secure more promptitude, which I believe would

eventuate in a large diminution of these cases. A more direct and thorough medical supervision would, in my opinion, wipe out 90 per cent. of the contagious diseases. I claim medical inspection does not go far enough. The time is too brief and incomprehensive. The work of inspection should extend to the classroom instead of merely examining pupils sent to the physician on the diagnosis of the teacher. It should extend to conditions in the building in so far as it is necessary to protect scholars against the dangers of school life. It should have for its broad purposes, too, the education of the children and their parents on sanitary matters. Through this education parents, for example, would be taught that their children must not necessarily have contagious diseases, and that the consequences of these diseases, such as deafness, blindness, not to mention cases which result fatally, are most to be feared.

The teacher should know the child better physically than he does. Contact with expert authority will, through medical inspection, assist him. The premonitory symptoms of the diseases, besides those that are contagious, could be discussed. A perfect mine of information could thus be obtained. If the causes exist in the school they could be removed; if at home, through the family physician, something at least can be attempted. I can see that the general practitioner might not receive due consideration, but the body controlling the medical inspection could formulate regulations to control this matter. Medical inspection of any kind should be unobtrusive to attain the best results. The knowledge by the parent that such supervision is exercised will lead him to think and to interest himself in the physical condition of his home. Thus the school would be a powerful aid in training people to live better.

ETHYL BROMIDE AND CHLORIDE RESPECTIVELY AS SURGICAL ANESTHETICS, WITH A DESCRIPTION OF AN APPARATUS FOR THEIR SCIENTIFIC ADMINISTRATION.*

BY S. ORMOND GOLDAN, M.D.,
New York, N. Y.

THE history of the newer agents for the production of surgical anesthesia has been, interestingly enough, almost universally the same—great advantages were always claimed for them which most frequently consisted simply of mixtures of the old anesthetics. Careful observations in almost if not all instances have relegated these newer (?) agents to well merited obscurity.

Ethyl bromide as a surgical anesthetic has been used more or less in minor operations, the claim for it, as well as the ethyl chloride, being greater safety, rapidity in action and absence of

* Read before the New York State Medical Association, October 22, 1901.

after effects. Ethyl chloride, until recently, has not been used except for local anesthesia, because of its impure state. Recently, however, a pure product has been produced for inhalation. Both these agents have also been used to some extent to precede ether in general narcosis.

To determine the value of these anesthetics we must subject them to the same course of inquiry as our other anesthetics, nitrous oxide, ether and chloroform. While they may be considered from various standpoints, that which has always appealed to me, and I am sure must appeal to all who give the subject of anesthesia proper consideration, is: 1. Safety; 2. Adaptability; 3. Convenience; 4. Economy. In this consideration comparisons must, of course, be made with our three general anesthetics—nitrogen monoxide, ether and chloroform. Hence arises the question, Are we justified in classing either the ethyl bromide or chloride with our other anesthetics—to be specially selected according to the requirement of the case? Here I am again afforded the opportunity of emphasizing that no one anesthetic should be used to the exclusion of all others, but each selected to meet the requirements of the case in hand.

Regarding nitrogen monoxide, ether and chloroform, we have three anesthetics possessing peculiar physical, chemical and physiological properties, each having directly opposite modes of administration—gas, on the one hand, requiring entire exclusion of air up to a certain point, chloroform requiring the greatest quantity of air possible, ideally 98 per cent., whereas ether occupies a position between the two with simply more or less restriction of air; possible with the so called closed method of administration, which experience proves to be the best method. Immediately we note the middle position of ether, with its evident safety generally.

Ethyl bromide (C_2H_5Br) and ethyl chloride (C_2H_5Cl) are both halogen anesthetics never to be considered except in the same class as methynil terchloride, or chloroform ($CHCl_3$). Their physical, chemical and physiological properties are quite similar. Their physiological properties, as compared with chloroform, owing to a difference in boiling point, differ rather in degree than kind. As they both, as well as chloroform, which is said to be seven times as poisonous as ether, have a halogen derivative, they must be classed as intense poisons, and the greatest care observed in their administration. Both these agents are said to be safer than chloroform, owing to their lower boiling point. Now, an agent having as low a boiling point as ethyl bromide and chloride will, remembering the body temperature, be inhaled and exhaled more readily. This does not necessarily mean that on this account they can be considered safer than an agent of a higher boiling point, as chloroform. In fact, it is in this rapidity of action that the danger lies, for in order to secure

the required profundity of anesthesia for surgical purposes, concentration of the anesthetic by exclusion of air beyond the bounds of safety would be necessary, and with either of these anesthetics would be, to say the least, dangerous.

While the anesthetic is more readily exhaled it may also be more readily inhaled, and so very easily cause death by overdosage. It can easily be seen that these anesthetics are only applicable to minor operations, and comparisons cannot properly be made with chloroform, an agent used for all kinds of surgical work by many operators. Everything considered, chloroform is less safe than either gas or ether, and the ethyl bromide and chloride are both less safe than chloroform, were they used in the same class of cases.

That chloroform is responsible for many fatalities in minor operations is due largely to the fact that the operation was begun before the patient was thoroughly anesthetized or not in the recumbent position.

Both of these anesthetics under consideration have been used by me with ideal results as to rapidity in induction of anesthesia and rapid return to consciousness and absence of nausea or vomiting. This is also practically true of chloroform, provided cases of the same duration are used for comparison. But many writers will compare chloroform in a long operation with one or both of these agents for a very brief anesthesia. If we consider the question of convenience and economy, neither ethyl bromide nor chloride would rank first, for a more convenient and economical anesthetic generally than chloroform does not exist. But we are not justified in sacrificing safety to either convenience or economy.

It may be said that in minor operations of *very brief duration* both these anesthetics are probably superior in safety and other respects to chloroform, but particularly less so, in my estimation, than is nitrous oxide, especially when combined with oxygen. As to skill required in the administration of these agents, there is just as much skill requisite as with our other three anesthetics, and in inexperienced hands their administration is mere guesswork. If their administration is too long continued without interruption they can cause death as rapidly and as surely as will nitrous oxide if air is not admitted at the proper time; this death may not only be asphyxial (respiratory), similar to that caused by nitrous oxide, but also vasomotor, similar to that caused by chloroform.

Ethyl bromide and chloride have features resembling nitrous oxide, physiologically on the one hand, and physiologically, chemically and physically chloroform on the other, and this similarity should always be borne in mind.

Both of these agents may be considered together. I should say the ethyl bromide was

safer than the ethyl chloride, for the reason that it does not require the same concentration as does the latter agent, is quite the same in convenience, rapidity of action and absence of after effects, and is more economical, and I would suggest the use of both agents in separate series of cases, as it is only by this plan that the exact value of these anesthetics can be determined.

Compared with ether, these anesthetics are inferior in adaptability and safety, for the same reason as chloroform. They are probably superior in many slight operations, for the same reason as in the case of chloroform.

As both the ethyl bromide and chloride are inferior to chloroform in adaptability, there is but one anesthetic with which comparisons can be made; that it is the so called nitrous oxide gas, and like that agent useful only in operations of short duration; while it is true that these agents can be used in the larger operations, the same is equally true regarding nitrous oxide alone or with oxygen; all depends upon the experience of the administrator.

Both the agents are so similar to nitrous oxide in many respects it will be of interest to note the points of resemblance. Both the ethyl bromide and chloride have, as well as chloroform, an odor or taste somewhat similar, it seems to me, to nitrous oxide. Anesthesia is induced very rapidly, consciousness is regained very quickly, absence of after effects, as nausea, headache, etc., occurs in the three agents with about the same frequency, though generally more so with ethyl bromide and chloride. A condition of analgesia with consciousness has very frequently been noted with the ethyl bromide and chloride, and the same, while not generally known, occurs with nitrous oxide. This I have observed often when administering gas for tooth extraction, when the patient frequently felt what was being done, though no pain was experienced. Both these agents, as well as nitrous oxide, are particularly valuable as precedents to ether in general anesthesia.

The ethyl bromide or chloride as precedents to chloroform are quite unnecessary, if not dangerous.

The question of position requires consideration. We know chloroform fatalities often occur in the dental chair, the patient having been in the sitting posture. As halogen anesthetics the ethyl bromide and chloride should always be administered with the patient in the recumbent posture and remaining so, consequently these anesthetics are less applicable to that minor operation so frequently performed—tooth extraction—than is nitrous oxide.

It was long the belief, if not to a great extent at present, that in order to produce anesthesia with nitrous oxide it was necessary to partially asphyxiate the patient. We now know that nitrous oxide combined with oxygen produces perfect anesthesia with no cyanosis. Ethyl bromide and chloride produce their effects

similar to nitrous oxide by replacing the oxygen in the blood. To produce profound anesthesia with these anesthetics would undoubtedly lead to asphyxia or circulatory paralysis, the latter so rapidly that cyanosis and asphyxia would not have time to be manifested.

Both these anesthetics have been administered by what may be called air restrictive methods. The ethyl bromide is generally placed upon gauze or a handkerchief and closely applied to the patient's nose and mouth; anesthesia is almost instantaneous. With ethyl chloride various devices have been employed for restricting the waste of the anesthetic; at the same time they also restrict the amount of air. As both these anesthetics are extremely volatile, especially the latter, a certain amount of concentration must be practiced, but this should never be at the expense of air inhaled. It is far better and safer to use a larger quantity of the anesthetic with a free complement of air than a small quantity with a small proportion of air. The devices used for ethyl chloride are tending toward this latter method, a particularly dangerous one.

It occurred to me, after experience in the use of these anesthetics, that in making comparisons with others crude methods must be entirely eliminated. It was desirable to restrict both active and passive evaporation which occur with every apparatus heretofore employed. I may say, then, that the apparatus presented is the most scientific and efficacious ever before made for the administration of either of these anesthetics alone or as precedents to general etherization, the latter of which is accomplished *without change of inhalers*, and quite similar to nitrous oxide.

The device, while possessing valves, is the perfection of simplicity, as a glance at the diagram will show. Instead of the gas valved device with inspiratory and expiratory valves, the one shown has this essential difference: one anesthetic chamber with two valves, one placed anteriorly, the other posteriorly. The inhaler may be described as follows:

A thin metal, horizontal cylinder into the center of which is set a chamber for gauze upon which the anesthetic is placed; upon the superior surface of the horizontal cylinder is placed an expiratory valve protected by a metal box perforated with small apertures to give vent to the expired air. Immediately anterior and posterior to the anesthetic chamber is placed an inspiratory valve, and it is by these valves that both active and passive evaporation of the anesthetic is completely avoided, thereby affording the greatest possible economy in the quantity of the anesthetic used. Both ends of the apparatus are open, affording the freest passage of atmospheric air with the anesthetic during inspiration, while during expiration the anesthetic chamber is entirely closed, the expirations passing through the expiratory valve.

When ethyl chloride is used, the small opening in the center of the cap covering the chamber is opened. This affords an aperture just large enough into which the capillary end of the graduated tube fits. Ethyl bromide may be introduced through this opening or the entire cap may be removed.

The valves are made of mica discs perforated in the center with springs just strong enough to effectually close the openings and not impede in the least either inspiration or expiration. The face piece is made of transparent celluloid, with pneumatic rubber rim; this celluloid feature permits a perfect view of the nose and mouth during administration.

Procedure. Depending upon the nature and duration of the operation, activity of respiration, the type of patient, weight, etc., from two to five cubic centimeters of either anesthetic is at once placed in the chamber, which is tightly closed and the inhaler applied to the face. After from three to five or six inhalations anesthesia is induced for the performance of the operative procedure.

The phenomena resulting from the inhalation of ethyl bromide and chloride are exactly the same; after the first few inspirations there is a feeling of numbness occurring throughout the body, congestion of the face and neck, with perspiration, owing to the paralysis of the cervical sympathetic; increased flow of saliva, with movements of deglutition, and a condition of analgesia occurs with consciousness of the patient. He can feel, though he is not conscious of pain, or he will answer questions, though afterward will have no knowledge of having done so. Voluntary motion is possible, much the same as with spinal anesthesia, though sensation is abolished. The pupil dilates with the globes fixed, respiration is deep and full, the pulse is full and slightly more rapid and muscular rigidity supervenes with complete unconsciousness.

Caution. Before a second application of the anesthetic is made the patient should become at least partially conscious. Neither of these anesthetics should *ever*, under any circumstances, be administered like chloroform.

As precedents to general anesthesia with ether (they are, as said before, unnecessary with chloroform), both these agents may be considered as practically safe, as the quantity of the anesthetic used is amazingly small and the stimulating effects very succeeds upon the effects of the ethyl bromide or chloride. In using these agents before ether, the same aseptic separable ether chamber devised by me for use in connection with nitrous oxide is interposed between the face piece and the ethyl bromide or chloride inhaler; about one ounce of ether is introduced into the chamber, with the index placed at 0, and from one to four cubic centimeters of either ethyl bromide or chloride is introduced into the chamber for that purpose.

The patient is encouraged to breathe, and after three or four inspirations or almost immediately the ether chamber is very gradually revolved from 0 to 4; deep etherization succeeds that of the ethyl bromide or chloride quite as rapidly as with nitrous oxide, and is continued exactly the same as when used in conjunction with the latter agent, except that air restriction is not so quickly practiced, thereby permitting elimination of the ethyl bromide or chloride.

The rapid introduction of ether anesthesia upon that of either ethyl bromide or chloride makes the use of these agents for that purpose particularly satisfactory, decidedly more convenient and economical and probably as safe. I say probably, as my experience with these agents is by no means as large as that with nitrous oxide and ether. Those with large clinical advantages could quickly decide this question of safety.

REPORT OF A CASE SIMULATING GLANDERS IN A MAN 68 YEARS OF AGE.

BY J. R. STURTEVANT, M.D.,
Theresa, N. Y.

FEBRUARY 18, 1896, I was called to see G. W. P., aged 68 years. Symptoms, general debility, no elevation of temperature or acceleration of pulse. The only local symptoms were several so called cankered patches on the gums. His mouth contained



only a few teeth, and those in very bad order; his breath was somewhat offensive, but not markedly so. The affection of the mouth yield-

ed very tardily to treatment, and his general condition did not materially improve. On March 7th I extracted a dead molar, which gave much annoyance from the soreness of the contiguous gums. Three days afterward I found his condition slightly improved, both as to local and general symptoms. Thus far he had no general pains in muscles or joints.

My next visit was on March 24th, when I found him suffering as at first, from an ulcerative condition of the gums and nares, and with a temperature of 99.5 degrees Fahrenheit, though there was no acceleration of pulse.

On the 25th he called my attention to what he called a "blister" on the dorsum of the penis. I found a bleb as large as a small pea, containing a slightly red fluid. The cuticle covering of the bleb was of a dullish red color, and the de-



nuded skin painful. The next day other blebs appeared on other parts of the body. At this time they would dry up in the course of a few days, only to be followed by a greater number either in the same vicinity or on more remote portions of the skin.

The tendency to greater soreness of the affected parts increased, and in ten days from the time the first bleb appeared, the tendency to repair ceased altogether, the progress of the disease from day to day was marked, and the surface of the body and limbs became rapidly involved, so that the sufferer had no spot upon which he could lie without great distress. The temperature and pulse did not increase materially until near death, which occurred on the 29th day of April.

Simultaneously with the formation of the

blebs upon the skin the mucous membrane of the mouth and nares became dry, and crusts would form in a few hours, of considerable thickness, apparently built up by the secretion of a fluid similar in appearance to that contained in the blebs on the surface of the skin.

Toward the end these crusts were frightful, and after dropping off by use of peroxide of hydrogen and other remedies would quickly reform. In one of the photographs can be seen the lower border of this crust formation not covered by the handkerchief over the patient's face.

The photographs were taken about ten days before the patient's death, and the typical appearance of the blebs is there very well shown. The thinness of the fluid is indicated by the sagging appearance of the formations in those seen in the dorsal view.

From this period these formations rapidly increased, only a few hours sufficing for the formation of new ones, and the frequent coalescing of the collapsed blebs formed extensive, raw and exceedingly painful and tender surfaces.

Inability to take food rendered nutrition difficult, and a condition of the rectum and anus, analogous to that of the mouth and nares, precluded the use of rectal feeding.

Great emaciation preceded death.

No definite source of the attack could be decided upon. The patient was a farmer of most exemplary character and habits, and was always cleanly, excepting in the care of his teeth. There were no animals upon the premises afflicted with disease of any description.

The water supply was from a well drilled into the solid rock not far from the barnyard, which was upon the same ledge, and through the seams of which it was quite possible for the fluids thereof to find their way into the well.

I regret exceedingly that no bacteriological examination was made.

I will not say anything of the treatment other than that aside from palliation it did no permanent good, but rather prolonged the patient's sufferings.

A CASE OF GUNSHOT WOUNDS OF THE INTESTINES, WITH RECOVERY.

BY HENRY VAN HOEVENBERG, M.D.,
Kingston, N. Y.

THE patient, a man aged 33, in robust health, was shot, on September 27th, in an altercation with a neighbor, while standing on the road in front of his home, with a 32 caliber Smith & Wesson revolver.

The two men were standing about five feet apart; the one who did the shooting about six inches higher than the other. The ball passed through the bands of his pants and drawers and two shirts, penetrated the skin one inch to the left of the umbilicus and passed downward and

to the right toward the iliac region, entering the abdominal cavity at the median line. He was dragged into the house by his wife, and after getting him upon a bed, she went for assistance, and sent a messenger to Kingston, four miles distant, for a surgeon.

The shooting occurred a few minutes after 5 in the afternoon and I reached the house about 8.30. I found him suffering considerable pain and turning from one side to the other. After examining the wound I gave him morph. sulph. gr. $\frac{1}{4}$ hypo. His temperature at the time was 99 degrees; pulse, 88. No evidence of shock. I informed him that unless he was operated on at once there was very little chance of his recovery, but he refused operation. My assistants, Drs. Jacob Chambers and J. L. Preston, arrived about 9.30 and we continued to urge operation, at the same time making such preparations as we could, in order that there should be no delay if his consent should be given. This was not done until after 11 o'clock. The surroundings were very unfavorable, the house being anything but clean. The water for use during the operation was boiled in a tin boiler, and the instruments sterilized in a dishpan. For light we had three kerosene lamps, held by neighbors, and with all our disadvantages we proceeded to operate. The operation was begun at 11.45, six and one-half hours after the shooting. Chloroform was administered by Dr. Preston and, as the ball had entered at the median line, I made a five inch incision over the right rectus, two-thirds being below the umbilicus. The first fold of intestine showed two perforations, one of them quite irregular; this was closed with a continuous Lembert suture; all the other perforations of the intestines were closed with the pursestring suture. In all, ten perforations of the intestines were found—two of them in the ascending colon, the others being in the small intestine. There were also two lacerations of the mesentery—one the shape of an inverted V, beginning at the bowel and returning to it, measuring five inches, and another laceration, two and one-half inches in length; neither of them completely through, and thus not cutting off the blood supply; these were also closed with continuous Lembert sutures. The bowels were quite empty, but some fecal matter had escaped into the abdominal cavity. After a careful search had satisfied me that all the injuries had been repaired, the abdomen was flushed with a 1-5,000 solution of bichlorid and afterward with normal salt solution, and several blood clots were washed out. The wound of entrance was carefully examined and no shreds of clothing found. The operation lasted two hours, and as the patient's condition had become such that time was of value, I closed the abdomen with silk sutures, including all layers of the wall; a dressing of iodoform and sterilized gauze, covered with absorbent cotton and a binder was applied. The patient rallied from

the operation without unfavorable symptoms.

At 10 A. M. on the following day (the second) his temperature was 101.4; pulse, 116. There had been no nausea since the operation, nor was there any after this time. No pain or tympanites. The third day, 10 A. M., temperature 100.8; pulse, 104. Fourth day, 10 A. M., temperature 99.6; pulse, 86; during the day a large amount of gas was expelled per rectum, and at 8 P. M. he had a small movement. Fifth day, 10 A. M., temperature 98.4; pulse, 70. Ordered calomel one-tenth gr. every hour, with result, and on the sixth day magnesiæ sulph. oz. $1\frac{1}{2}$ in three doses gave good result. On the fifth day he complained of slight localized tenderness about one and one-half inches in diameter in right lumbar region, and his temperature rose to 99.8. The sixth day I removed the dressings and, finding some inflamed condition around the stitches and a few drops of pus at one, I removed all the stitches supporting the abdominal walls with strips of adhesive plaster applied over the dressings. I attributed the rise in temperature to the condition of the stitches, but as he continued to have about one degree of temperature for several days, and the redness around the incision had disappeared, I concluded the ball must be the cause of the rise of temperature. By this time there was a well defined swelling over the posterior border of the right external oblique, which was very tender on pressure. Under chloroform I cut down upon this and found the ball lying in a small pus cavity. After the pus had been thoroughly washed out with normal salt solution and hydrogen peroxid, it was packed with sterile gauze and a dressing applied. After this his temperature dropped to normal and has continued there. From this time the history of the case has been one of uninterrupted convalescence. Until the twelfth day no solid food was given, the nourishment consisting of liquid food preparations and broths. On account of his aversion for milk, none was given at any time. On the twelfth day some custard was given, and from that time the amount of solid food was gradually increased until he was taking a fairly good quantity of solids daily. On the twenty-first day he was removed from his home to the hospital, four miles distant, over a rough road most of the way, bearing the journey very well.

The incision through the rectus has healed perfectly throughout and the wound in the side is closing up rapidly. He is able to walk around a very little, probably would do more, but I do not permit it. Considering the delay before consent to operate was obtained, and the disadvantages under which the operation was performed, the result is certainly very satisfactory.

To my mind, the case emphasizes the fact that no matter how discouraging the circumstances may be, it is the duty of the surgeon to give his patient the chance for life presented by the operation, which should be as carefully per-

formed in all its details as would be done under the most favorable conditions.

DISCUSSION BY R. H. M. DAWBARN, NEW YORK.

At Dr. Van Hoevenberg's request I comment upon his timely report of this interesting gunshot case. Dr. Van Hoevenberg, in a recent letter to me, was so kind as to attribute to my teachings his success in this case. While waiving this compliment, and realizing that his own ability as a surgeon was chiefly responsible for the brilliant outcome, I beg to call attention to two points which seem to me of great importance. First, the preliminary use of morphin in large dosage; second, the continuous suture.

As to the first, Dr. Van Hoevenberg tells me he never has seen a patient more deeply influenced—so much so that he thinks a much larger dose might have been fatal. For twenty-four hours his pupils were pinhole in size.

Now, gentlemen, this was the "morphin splint," as I termed it ten years or more ago. Because of it no peristalsis is resumed for several hours. The wounded bowel remains absolutely still. No surging currents of fluid feces are forced against the suture wounds in the bowel until time has elapsed for them to be sealed by fibrinous exudate. Hence, less danger of leakage.

It is carrying out that cardinal principle of good surgery to put a wounded part *at rest*.

Later—say ten or twelve hours—if tympanites begin, showing a tendency to septic peritonitis, we may safely begin the use of epsom salts hourly in drachm doses, as Lawson Tait did. If the wounds are ever to be tightly sealed, they will be if kept quiet during the first eight or ten hours.

The value of the morphin in preventing shock, avoiding vomiting and other ways is so well known that I do not take time to discuss it. But its use as a morphin *splint* is, I regret to say, by no means common as yet.

As to the second point, were Dr. Wyeth in the chair he would bear out my statement that when some time ago the New York Surgical Society discussed this topic, practically all the members opposed continuous suturing, because if one stitch tore out from peristaltic action, the whole wound might gape open.

My answer to this is the "morphin splint"—which renders a *continuous* suture—such as Dr. Van Hoevenberg used in his case, just as safe as any of the twenty or more kinds of *interrupted* stitches. Indeed, I never now advocate any interrupted sutures for any purpose at all in bowel work. Speed, breathless speed, is next to thoroughness and asepsis, our keynote to success; and a continuous suture—either as a purse-string, for small, roundish wounds, or, in all others, a running Lembert—is three to five times quicker than any interrupted stitch. As this case proves, the continuous stitch, combined with use of morphine, is safe. Let me express the hope that in time it will come into invariable use.

FOUR CASES OF TYPHOID CHOLECYSTITIS TWO FOLLOWED BY GALLSTONES.

BY CHARLES G. STOCKTON, M.D.,

Professor of the Principles and Practice of Medicine, and
Clinical Medicine, University of Buffalo; Attending
Physician, Buffalo General Hospital, and

ALBERT T. LYTLE, M.D.,

Former Instructor of Medicine, University of Buffalo.

I REPORT the following four cases of cholecystitis, complicating typhoid fever, for the reason that they have been carefully studied and because they offer some features of peculiar interest, and especially because two of the four cases give evidence of the relation that exists between infectious cholecystitis and cholelithiasis.

The first case was seen in consultation with Dr. Albert T. Lytle and the fourth with Dr. DeLancey Rochester. The remaining two occurred in my wards at the Buffalo General Hospital and were frequently seen by Drs. Rochester and Lytle, to whom I am indebted for valuable memoranda of which I make use in this paper.

Case 1 was under the immediate care of Dr. Lytle. Patient was American born; wife of a professional man; aged 38; of slight build, weighed ninety-eight pounds; primipara; simple habits. Never had any difficulty with pelvis or abdominal organs; in fact, she had always been practically well. Her family history is negative. During the summer of 1898 the patient visited a town in which typhoid fever was epidemic, and returned home early in September feeling well. On the 25th of October she had chilly sensations, followed with severe headache, vomiting and malaise. October 28th her temperature was 103 degrees, accompanied by a coated tongue, nausea, a full pulse and some apathy; no special abdominal tenderness. She was treated for a bilious attack, but her temperature remained elevated. November 5th, the twelfth day, the temperature was 100.5 degrees; pulse, 96; patient was very nervous. The following day the temperature was normal; patient feeling better. November 7th temperature was 97.1 degrees; pulse, 80. There was considerable hebetude and complaint of gastric distress. Subnormal temperature continued until November 9th, when it rose to 100 degrees. The stools, under the influence of calomel, became frequent and contained bile stained mucus. Widal's and Ehrlich's reactions and the blood count were negative. November 10th the temperature continued elevated; there was cough, with slightly blood stained mucous expectoration. Repeated examinations of the lungs resulted negatively; the sputum examined for tubercle bacilli, with negative results. Appendicitis was suggested, but in the absence of leucocytosis was dismissed. Temperature, 102 degrees; pulse, 120, thready and irregular; tongue dry, white, coated, with brown center; flushed face. Diarrhea, with stools showing undigested milk and bile stained mucus. Patient

nervous, restless and wakeful; Widal's test again negative. November 14th the temperature was lower, but the stools contained much mucus. November 18th the temperature rose to 103 degrees, pulse varying from 90 to 120; there was much languor and nervous depression. On November 20th the temperature fell to 99 degrees. The urine showed abundance of uric acid, but otherwise negative; there was occipital headache. On the 24th of November the temperature was normal, the pulse varying from 80 to 130 degrees. There were many stools, all containing bile stained mucus. Careful physical examination, verified by consultant, showed no evidence of complication of heart, lungs, spleen or intestine. The liver was now found tender and about one inch below the free border of the ribs. The diagnosis was made of antecedent gastro-intestinal infection, with intoxication of the nervous system and hepatic congestion. November 26th the evening temperature was 99 degrees; pulse, 88; November 27th the evening temperature was 102 to 103 degrees; pulse, 110; chilly sensations, headache, distension of abdomen, coated tongue, cough, with considerable expectoration. November 29th, thirty-five days after the beginning of the illness, the Widal reaction was positive for the first time. Blood examination showed hemoglobin, 70 per cent.; erythrocytes, 4,800,000; leucocytes, 5,000; a few poikilocytes and megalocytes; lymphocytes, 42 per cent.; polynuclear neutrophils, 58 per cent. The urine examination showed a specific gravity of 1.028; solids, 6.52 per cent.; urea, 3.3 per cent.; indican increased; bile absent; traces of albumin; abundant sediment; a few hyalin and granular casts and red blood cells; Ehrlich's test positive; diagnosis of typhoid fever was made. On December 2d the patient was flushed, the spleen distinctly palpable, liver somewhat enlarged, abdomen tympanitic, roseola present, tongue coated, typhoid odor to stools; temperature, 104 degrees; pulse, 120. The case was now characteristic. On December 9th the temperature fell to normal; on the 14th the evening temperature was normal; on the 30th the patient was allowed out of bed. Treatment consisted in cold sponging, brandy, nuclein, strychnin, with milk diet. Her temperature was taken until January 13, 1899, the eighty-first day of the illness, and was generally subnormal, usually about 98 degrees. Nervous symptoms were very pronounced. On February 2d, 100 days after the beginning of the attack, the patient complained of pain in the epigastrium, paroxysmal in character, so severe that she was compelled to go to bed. The temperature was slightly raised, and the pain was more or less continued until February 6th, at which time it became located in the right hypochondriac region. It was more severe and also paroxysmal, recurring about every three hours; morphin and atropin were required for relief. Examination revealed the liver ten-

der to pressure; its lower border on a level with the umbilicus; gallbladder not palpable; conjunctivæ slightly yellow; temperature, 100.4 degrees; pulse, 92. The pain was described as "twisting" in character, beginning at the xiphoid cartilage and radiating toward the liver. The stools again showed large quantities of bile stained mucus, and the urine contained bile coloring matter. On February 8th the temperature was 104 degrees; pulse, 120. Patient experienced two severe chills at 2 and 4 P. M., respectively. These were accompanied with cyanosis of lips and nails; the face of an ashen hue in spite of the icterus. Large quantities of bile stained mucus in masses and shreds were found in the stools. The blood examination on this day showed 4,500,000 erythrocytes, 17,500 leucocytes; polymorphous cells, 95 per cent.; lymphocytes, 5 per cent. The urine was scanty and contained much brick dust sediment; herpes zoster developed on right arm. February 9th temperature was 105 degrees; pulse, 140. Severe chill at 4 A. M. and 2 P. M. The Widal reaction still positive; the urine was bile stained; $\frac{1}{4}$ per cent. of albumin; specific gravity, 1.033; much sediment of urates, with hyalin, granular, blood and epithelial casts, free blood and renal cells. February 10th her temperature was 105 degrees; pulse, 130; erythrocytes, 5,000,000; leucocytes, 10,412; another chill at 8 P. M. February 11th temperature fell to 101.2 degrees; pulse, 120; respirations, 28. There was a chill at 1 A. M. Blood showed erythrocytes, 5,000,000; leucocytes, 9,400; polymorphonuclear cells, 84 per cent. Meantime the pain had been constantly present; at times very intense. Following the chill of this day the temperature declined steadily, until at 6 P. M. it was 99.4 degrees; pulse, 84; respirations, 20. The following day, February 12th, temperature 99.2 degrees; no chill; the blood showed 9,500 leucocytes, with 86 per cent. of the polymorphonuclear cells. February 13th, temperature the same; the blood count showed 4,253,000 erythrocytes; leucocytes, 10,000; polymorphonuclear cells, 80 per cent. February 14th the temperature rose to 100 degrees; stools contained much bile stained mucus in strings and masses. February 15th, temperature 101 degrees; pulse, 110; respirations, 24. The blood showed 10,500 leucocytes, with 88 per cent. of the polymorphonuclear cells; mononuclear cells, 11 per cent.; eosinophiles, 1 per cent. February 16th temperature was 104.8 degrees; pulse, 100; respirations, 20; the leucocytes had risen to 12,600 and the polymorphonuclear cells 83 per cent. The following day, February 17th, the temperature again fell to 99 degrees; pulse, 100; respirations, 18. Blood showed erythrocytes, 5,956,000; leucocytes, 11,000, with 69 per cent. of the polymorphonuclear cells, 28 per cent. mononuclear, and 2 per cent. eosinophiles. As the paroxysms of pain would suddenly pass off, the stools were carefully examined for evidence

of possible gallstones, but up to this time only masses of mucus were discovered. February 20th the temperature was 97 degrees, and the blood showed erythrocytes, 4,496,000; leucocytes, 6,400. From this time to the 1st of March there was little change. Patient still experienced occasional attacks of pain. On the 2d of March a gallstone about the size and shape of a small pea was discovered. The liver was still very large and tender and extended to the umbilicus. On the 16th of March the pain again became very severe, beginning as formerly at the xiphoid cartilage, radiating to the right, "twisting" in character, and lasting about six hours; morphin and atropin again required. Twenty-four hours later a second gallstone was discovered. The liver by this time had decreased in size, its lower edge being about one inch below the free border of the ribs. On April 1st the liver was not palpable. On July 1st the patient had two or three attacks of pain, insufficient to require treatment. The stools which followed contained masses of bile stained mucus. February 1, 1900, about a year after the illness, the patient reported occasional appearance of discomfort in the right side, after which was found bile stained mucus in the stools. Treatment for the hepatic symptoms consisted in hot fomentations; for general symptoms she was given hot drinks, brandy, anodynes, strychnin and enteroelysis of normal salts solution; for nourishment, somatose, nutrose and milk. The early diagnosis as to the liver was suppurative cholangitis, probably with abscess. Later developments led to the conclusion that the disease was one of typhoid cholecystitis and angiocholitis, followed by cholelithiasis. On two occasions laparotomy was decided upon; each time it was delayed until morning, and each time further postponed because of the striking improvement in the patient's condition. At this date, more than two years since the beginning of the sickness, the patient still shows the Widal reaction.

Case 2, Mary M., aged 20; born in Poland; a domestic. Entered Buffalo General Hospital December 12, 1899. Members of immediate family all alive and well. The personal history shows that the patient suffered from measles during childhood, that during the past three years she has had on several occasions attacks of moderate pain in the region of the epigastrium. She came to this country two years ago. One month before admission she experienced, while at work, sharp, sudden and severe pain in the right hypochondrium, which radiated upward and backward, and was accompanied by vomiting. Soon after, while resting in bed, the pain subsided, but recurred when work was resumed. She remained in bed about three weeks; was treated by a physician, but without marked change in her condition. Three days before admission the pain became constant and progressively severe, and was in-

creased by eating and by deep respiratory movements; there was constant headache and constipation of the bowels.

The physical examination disclosed a normal thorax; the abdomen was tympanitic and the walls tense. The lower border of the hepatic dulness was not easily discovered; there was tenderness over this area and some superficial tenderness generally over the abdomen. The patient complained of severe headache and general malaise. The Widal reaction was doubtful. The following day the blood examination showed 4,362,000 red cells and 18,275 leucocytes—a ratio of 1 to 238. The tympany was less marked, and the hepatic dulness was found to extend below the free border of the ribs, where there was increased tenderness. On the 15th, the succeeding day, the friction rub of perihepatitis was discovered at the junction of the ninth cartilage and the right peristernal line. On this day the Widal reaction was positive. The temperature varied from 100 to 105 degrees and the pulse from 90 to 140; the respirations were about 30. The blood count showed 7,200 leucocytes, and the Ehrlich reaction was positive. On the 16th the friction sound over the liver was heard quite generally. There was intense paroxysmal pain in the right hypochondriac region, and toward evening there was marked tenderness localized over the gallbladder. On this day the blood showed red cells, 4,250,000; whites, 5,737. She voided 700 cc. of urine in twenty-four hours, of amber color, specific gravity 1,034, containing thirty-five grammes of urea, no sugar, an abundance of albumin, granular casts, amorphous urates, leucocytes and epithelial cells. On the 17th day jaundice was noticed; was less marked on the following morning, but reappeared in the afternoon. Temperature gradually declined to 99 degrees, the pulse to 70 and the respirations to 20. During the next two days the jaundice varied in degree, but after the 20th became intense and remained so continuously. The pain was very severe and the tenderness marked. On the 20th the temperature was more elevated, the pulse more frequent; the urine was much bile stained, acid, 1,030 specific gravity, indican increased, a trace of albumin and, microscopically, cylindroids, epithelial cells and leucocytes were found. On the 21st the temperature reached 100.5 degrees; the pulse, 120; stools were large, brown and semi fluid. On the 24th the right hypochondriac region was tender and bulging, with severe pain at intervals. The temperature varied from 101 to 105 degrees; respirations were about 30. On the morning of the 27th there was a severe chill, and on the 28th surgical relief seemed necessary, and Dr. Roswell Park did a cholecystotomy. The liver and gallbladder were found adherent to adjacent tissues from recent inflammation. The walls of the gallbladder were thickened, its contents evacuated and

found to be a viscid mucus. The viscus was sutured to the abdominal wall, packed with iodoform gauze, a drainage tube being inserted. The day preceding the operation the temperature was 104 degrees, and on the day of the operation it reached 100 degrees; the following day it reached 100 2-5 degrees; pulse, 120; for several days afterward it remained almost steadily at 99.5 degrees and the pulse at 100. A bacteriological examination of the contents of the gallbladder showed a pure culture of the bacillus typhosus. On January 2d there were swelling and tenderness in the left parotid gland, which were relieved by the application of yeast poultices, the swelling recurring on the 5th, but was relieved with the same treatment. On the 11th the blood showed 3,818,000 reds, 13,600 whites—a ratio of 1 to 280; there was 40 per cent. hemoglobin. On the 14th the gland was again swollen and Crede's ointment was applied. There was very slight discharge from the wound; no pus. On January 22d the parotid was again swollen, and on the 24th ichthyol, resorcin and mercurial ointment were applied. On February 1st there was eczema of the face and extensor surfaces of the hands. The region of the wound was occasionally painful. From this time on the patient improved steadily, although there was still some enlargement of the parotid, occasional headaches and pain over the site of the operation. There was little elevation of temperature after the 11th of January. The patient was able to walk about during the early part of February, and was discharged from the hospital as well on the 10th of March.

On the 25th of June the patient returned to the hospital, in the service of Dr. H. R. Hopkins, and reported that on the 29th of May, shortly after having returned to work, she again suffered from pain over the upper segment of the abdomen, which was continuous and occasionally quite severe. On entrance the temperature was slightly subnormal; pulse, 90; respirations, 18; tongue heavily coated; appetite diminished; bowels constipated; there was considerable jaundice. The urine showed the presence of albumin with epithelial, hyalin and granular casts. She passed sixteen grammes of urea in twenty-four hours. The patient remained in the hospital twenty-five days, during which time her temperature was usually normal, and under treatment directed toward the digestive apparatus and the kidneys she made steady progress; the pulse declined in frequency from 90 to an average of 50. The alvine evacuations were pale, but always showed some bile coloring matter. There were nausea and vomiting accompanying the more severe attacks of pain; the liver was but slightly enlarged. The patient was discharged cured. It would be of interest to know whether or not the Widal reaction still exists in this girl, a year after the gallbladder was drained, but she has disappeared from ob-

servation. This latter attack is believed to have been angiocholitis.

Case 3, Mrs. B.; aged 29; American of German parents; wife of workingman; mother of five children in seven years; no miscarriages. Family history good, with the exception of phthisis in the family of one paternal uncle. Patient exempt from all infectious diseases except measles and pertussis. Always well until after first confinement; since then has had certain recurrent abdominal pains to be mentioned later. Has complained of "uterine trouble"; no history of menstrual disturbance. Patient is of small stature, slight, a brunette, poor dentition, good nutrition, abdominal walls much relaxed. On September 22d the husband of the patient died of typhoid fever, the patient having been the nurse. On this date she began to suffer with headache, backache, malaise and anorexia, and on the 26th went to bed, with a temperature of 103 degrees. September 29th the patient was admitted to the Buffalo General Hospital, with a rectal temperature of 105 degrees; pulse, 112; respirations, 20. There were malar flush, coated tongue, hebetude, tremor and the skin dry and hot. The abdomen was slightly distended, with gurgling in right inguinal region; splenic dulness over enlarged area, but spleen not palpable; liver, heart and lungs negative; no roseola. October 1st Dr. T. B. Carpenter examined for Widal reaction, and reported loss of motion and poor clumping; October 14th, 17th, 21st and 31st gave the same results. On December 18th the reaction was positive; Ehrlich's reaction was absent until October 14th, the twenty-second day of the disease. On October 4th, the twelfth day, in the morning, patient had a chill lasting twenty minutes; the abdomen showed considerable tympanitis, was tender upon palpation, and the liver showed some enlargement. October 10th, the eighteenth day, the liver extended from the sixth rib to the transverse umbilical line; jaundice at the same time became conspicuous. A blood count showed the leucocytes 7,900. On the twenty-second day jaundice was intense, but gradually faded, and disappeared on the thirty-seventh day, October 29th. The pulse was frequent, from 120 to 140—not corresponding with the temperature curve. After admission the temperature remained, with little variation, at 105 degrees, until October 3d, the eleventh day, when it declined to 103 degrees, and this was the average temperature until October 5th, the thirteenth day, when it fell to 101.3 degrees. The average temperature was 102 until the sixteenth day, when it fell to 100 degrees in the morning. This evening it rose again to 105.3 degrees, making a rapid decline on the following day to 101 degrees. On the eighteenth day it was 102 degrees at the highest; on the nineteenth, 104 degrees, and on the twentieth, 101 degrees, the highest point. During the succeeding four days the temperature varied strik-

or whether that process first developed three months later; in case 3 cholecystitis developed from the tenth to the sixteenth day; in case 4, on the nineteenth day. Hunner² reports a case of acute suppurative cholecystitis, with isolation of typhoid bacilli, eighteen years subsequent to the attack of typhoid fever, and Groba³ reports a similar case seventeen years subsequent to the attack of typhoid.

Suppuration and the Question of Operation.—Chiari⁴ concluded that the gallbladder was generally infected in typhoid, basing his conclusion on the examination of twenty-two fatal cases, in only three of which there was absence of typhoid bacilli in the gallbladder. Osler⁵ also pointed out the frequency of this infection. Apparently, therefore, the infection is often latent, or the inflammatory reaction may be so mild as to escape notice. Da Costa⁶ has shown that even when evident the cholecystitis may be mild and transient, which opinion is confirmed by Stengel⁷ and by other observers. As to the character and intensity of the inflammation, the matter of leucocytes would, at first thought, seem to be indicative. As a suppurative cholecystitis is usually supposed to demand operation, a marked leucocytosis may lead one to operate. In cases Nos. 1, 2 and 4 there was considerable leucocytosis. Case 1 had 17,000 leucocytes, with 95 per cent. of polymorphonuclear cells. In case 2 the blood count, several days before the most acute state, showed 4,363,600 erythrocytes and 18,275 leucocytes—a ratio of 1 to 238. No differential count was made. In case 4 there were 22,500 at the height of the attack. In case 3, at the height of the attack there were 9,700 leucocytes.

In Mason's case, nonsuppurative, there were 9,600 leucocytes. In Camac's case nonsuppurative, the leucocytes were 3,300. In Hunner's case, suppurative, the leucocytes were 29,000, a count that might be considered sufficiently indicative to guide one as to the probability of suppuration; but with counts like those occurring in our cases, Nos. 1 and 2, it would hardly seem safe to conclude. In case No. 1 suppuration was expected and the operation planned, but the sudden improvement of the patient on the two occasions selected led to postponement. In case 2 suppuration was expected, but was not found at operation. In case 4, although there was a leucocytosis of 22,500, pus was not expected, and the course of the case proved its absence. Taking the symptomatology as a whole, in some cases it is not easy to determine whether suppuration is present or not, even considering the blood count. In many nonsuppurative cases there occur severe chills, high temperature, very frequent and feeble pulse, intense pain, alarming

prostration, and operation is often necessary to save life. In two of our cases, although suppuration was not doubted, the subsequent developments justified the belief that all four cases were nonpurulent.

Parotitis as a Complication.—In case 2 there was severe parotitis which proved to be very stubborn. Osler⁸ reports a like experience in one of his cases.

Gallstones and Their Relation to Typhoid Cholecystitis.—It is known that the formation of calculi may be indefinitely deferred after typhoid fever and, as was suggested by Welch and accepted by Cushing,⁹ may result from the agglutination or clumping of the bacilli. Camac¹⁰ considers it doubtful that the presence of typhoid bacilli in the gallbladder is productive of gallstones; but the history of two of our cases would indicate to the contrary. However, it may be argued that the stones were already present in the gallbladder, but unsuspected, when infection took place; that the infection was competent to excite an inflammatory reaction of the viscus when embarrassed by stones; and, finally, as held by Riedel, the cholecystitis may have excited the gallbladder to contraction and the expulsion of the calculi. Against this argument it should be stated that in neither of these cases did the expulsion of the gallstone occur until after the disappearance of the primary cholecystitis. If calculi are present in the gallbladder preceding the typhoid infection, cholecystitis, according to Camac, is more likely to result. In proof of this he cites a case of James Bell.¹¹ Our second case seemed at first to support this theory, but when the case came to operation, no gallstone was found, and we were convinced that the early history of abdominal pain did not arise in the gallbladder. It is interesting to note that cases 1 and 3 developed gallstones, which after the characteristic attacks of hepatic colic with temporary inflammatory symptoms, were passed and ultimately found. It is assumed that there was no pre-existing cholelithiasis, although in case 3 there was a history of abdominal pain, usually referred to the xiphoid cartilage and radiating to the right. Careful study of this matter led to the conclusion that the pain was the result of a floating kidney. In case 2 there was a dubious history of previous abdominal pain that might have been attributed to gallstone, but upon operation the gallbladder was found free from calculi. Our experience in cases 1 and 3 seemed to substantiate the doctrine of Gilbert, Mignon,¹² Fournier¹³ and Naunyn, that biliary calculi are a natural sequence of cholecystitis.

Character and Location of Pain.—According to Keen, the presence of intense pain located

²Johns Hopkins Bulletin, September, 1899.

³Wien. Klin. Woch., November 9, 1899.

⁴International Med. Congress, Rome.

⁵Trans. of the Assoc. of Am. Phys., 1897.

⁶Am. Jour. Med. Sciences, 1899.

⁷Gould's Am. Year Book of Med. and Surg., 1901.

⁸Trans. Assoc. Am. Phys., 1897.

⁹Bull. Johns Hopkins Hosp., May, 1898.

¹⁰Johns Hopkins Hosp. Report, Vol. VIII.

¹¹Montreal Med. Jour., 1898.

¹²Archiv Generale de Medecine, August and September, 1898.

¹³La Presse Medicale, 1898.

in the region of the gallbladder is the most important symptom of cholecystitis. In our group the pain in cases 1 and 3 was most complained of in the epigastric region and, although severe, could scarcely be called intense save at the time of the expulsion of the calculus. In cases 2 and 4 the pain was located in the gallbladder and was intense.

Enlargement of the Liver.—In each of cases 1, 2 and 3 there was marked enlargement of the liver, especially of the right lobe, the lower border of which, in cases 2 and 3, was at the transverse umbilical line, and in case 1 some distance below that. As there was intense jaundice, it is presumable that the hepatic enlargement followed obstruction from angiocholitis. The shape of the enlargement corresponded to what is called Riedel's process. In case 4 the liver was but slightly enlarged.

Vomiting.—In all four cases vomiting was a striking feature during the height of the cholecystitis, and this symptom recurred during the expulsion of the gallstone in cases 1 and 3.

The Urine.—Albumin was present in all four cases. In cases 1 and 4 it occurred merely as a trace, but in cases 2 and 3 it was abundant. There were no casts in case 4, but these appeared in the remaining three cases, and in cases 2 and 3 were conspicuous. An increase of indican was apparent in all the cases, especially in 2 and 4. In the last case, as pointed out by Dr. Rochester, it is interesting to note that no indican appeared until the beginning of the cholecystitis, coincident with the disappearance of the diazo reaction, after which it was continuous and in large amounts until the inflammation had subsided. In the other three cases indican attracted but little attention, which is, perhaps, to be explained by the abundance of bile coloring matter present.

Delayed Development.—Unusual interest is attached to case 1 because of the remarkable delay in its development. A careful review of the history leaves one in doubt as to what constituted the real pathology during the first few weeks of the illness, but it is not doubted that it resulted from typhoid infection. The patient still shows the Widal reaction more than two years subsequent to the attack of fever.

BLOOD EXAMINATION, FROM THE STAND-POINT OF THE GENERAL PRACTITIONER.

BY F. M. HIGGINS, M.D.,
Cortland, N. Y.

THE relation of the laboratory to the practice of medicine is a topic which has been abundantly discussed in the recent journals. In our modern hospitals the clinical laboratory is considered indispensable. Here urine analyses, blood counts, serum reactions and bacteriological diagnoses are daily occurrences. Our journals are filled with reports of microscopical investigation. Many of these articles are "preliminary" and our memory

may leave us doubtful whether further examination has confirmed or denied these bids for precedence.

One of the most enticing of these laboratory studies is the examination of the blood. The beautiful proven results furnished the profession from time to time and, still more, the brilliant promises of what may be expected in the future make the subject of absorbing interest to the scientific physician of to-day. This holds true whatever his specialty may be. Many lesions of the eye are found to be explainable only by an examination of the blood, the retinal hemorrhages of leucemia, for example. The surgeon finds the number of leucocytes and the percentage of hemoglobin very important factors in diagnosis and prognosis. The specialist in skin diseases is counting the eosinophiles. In internal medicine it may be said that the diagnosis of no case is complete until an examination of the blood has been made.

If now we expect that in a modern hospital the examination of the blood should become a routine like urine analysis and that important aid in diagnosis and prognosis and treatment will thus be obtained, is it possible for us as general practitioners to gain some benefit from undertaking such examinations? This is the problem which the writer of this paper has stated for himself. His object is to determine how much of all the mass of published observations on the physical, chemical and microscopical examination of the blood may be utilized by us in general practice.

First, in considering this question we must recognize our limitations. We must rule out all hope of making original investigations. It is true that Koch discovered the bacillus tuberculosis while a general practitioner. Nor do I forget that this is a new and promising field for exploration. Few, however, have the ability requisite for solving the many existing problems in the study of the blood. Our humbler mission is that of sifting the proven results from those not yet substantiated and adapting them to our every day requirements.

Another limitation that must be recognized is the time element. The hackneyed "busy practitioner" has several spare half hours, if he will husband them, that might be utilized in the clinical examination of the blood of his patients. But it is manifestly impossible for him to give to the task more than fragments of time. Therefore, he must choose the less complicated methods. It is necessary that he have a table specially devoted to such work; that he have a north light and that his microscope always stand ready before the window; that his stains and instruments be already labeled and at his elbow; that he have some one to clean up the apparatus after him and put them back in their places; that he have the steps of each examination tabulated and in front of him; that he

keep everything scrupulously clean, and, lastly, that he does not undertake too much. Another precaution, which Janeway tells us is not unnecessary even in larger laboratories, is to label each specimen and step immediately, that the final conclusion may be applied to the right patient.

The financial side of the question is one which will occur to most of us, even when smitten by the scientific possibilities of such study. Something may be done with such an outfit as every physician should possess. A microscope with one-fifth objective will show the corpuscles, but satisfactory work can be done only with an immersion lens. The percentage of hemoglobin can be determined within 10 per cent. by letting a drop of blood fall on white paper and comparing it with Tallquist's color scale, but it cannot be obtained more exactly without a hemoglobinometer, costing about \$40. The Thoma-Zeiss blood count apparatus may be termed indispensable and costs about \$15. Hardly necessities, the spectroscope and hematokrit are the luxuries to be obtained as the fad grows on one. It may be said that \$25 will start one at work and \$100 more will be spent if his interest increases.

The third question that will occur to the general practitioner who determines to know something about the condition of the blood in his own cases is that of obtaining the technique. The very recent graduate is supposed to have acquired it. But we who took our degree before Ehrlich's writings had aroused general interest must work out our own salvation with the myelocyte and megaloblast.

Fortunately, some good text books have been recently published. Cabot's is the best known. There is certainly no better book in English than the recent fourth edition. Stengel has a fine article in *The Twentieth Century Practice of Medicine*, and will soon issue a text book. Ewing's "Clinical Pathology of the Blood" is recent and very helpful. For those who read German there is a large literature.

Personal instruction is most valuable and time saving. But even for those who have neglected the subject altogether, patient labor will enable one to master the necessary details. The essential features are soon demonstrated. Considerable practice is required to bring out all that careful staining may show.

As already intimated, the necessary apparatus is a twelfth objective, a blood count apparatus, a hemoglobinometer, an ordinary urinometer and a few stains. With these we are prepared to obtain the specific gravity of the blood, to count the red and the white corpuscles, to arrive at the approximation of the hemoglobin and to study smears.

The specific gravity is an important matter. Stern's paper before the Association last year gave a hint of its meaning.

The significance of variations in the specific

gravity is not great in the diagnosis of diseases which may be labeled. It may, however, reveal something as to defective oxidation, ability for physical labor and resistance to infective processes. We may yet see life insurance companies requiring the specific gravity of the blood.

The method of Hammarschlag is accurate to one or two points, and much cheaper than any other. All that is required is a good urinometer. In it chloroform and benzine are mixed in such proportions that a drop of blood neither rises nor sinks, when the specific gravity of the mixture determines that of the single drop of blood. Care must be taken that no air mixes with the blood drop, and the determination must be made before it becomes altered by the media. The instrument must also be perfectly dry, that no water floats on top the chloroform and is taken up by the blood. I have found the specific gravity varying from 1,032 to 1,062, so that a wide latitude exists. Excepting in dropsy, leucemia and pernicious anemia its variations correspond quite closely to the hemoglobin percentage.

The estimation of the bulk of red corpuscles is made by the centrifuge. It is quick and fairly accurate. It also corresponds closely to the blood count in many conditions, but not in all. It is well worth doing if one has the apparatus. The tubes are easily filled by capillary attraction if the outer end is held lower than the other, and they are kept clean by a horsehair.

That for hemoglobin is least accurate of all the tests. Observations are published in which variations of 1 per cent. are noted, but a margin of error of 5 per cent. at least must be allowed. It all depends on a color scale in the fine gradations of which the male sex is notably deficient. No standard yet manufactured is of the same shade as the blood when diluted. Miescher's is said to be the best instrument for its determination. Two plain indications are obtained by its determination.

First, a surgical operation should not be undertaken if the hemoglobin is as low as 30 per cent. Deaver in a recent paper cited two cases operated on successfully in spite of this rule, but still the rule holds as good as any in our art.

Secondly, in diagnosis pernicious anemia is differentiated from cancerous cachexia by knowing that the hemoglobin ratio is higher than normal in the former and lower in the case of cancer. The grade of chlorosis and, hence, its chances of cure are determined by the hemoglobin test compared with the blood count.

The blood count is of importance in many ways. Extremely accurate work to be published requires the counting of a large number of fields, but practical results are obtained in fifteen minutes.

A great increase in the number of lymphocytes means leucemia, which can be diagnosed in

no other way than by the assistance of a blood count. A leucocytosis of from 12,000 to 50,000 means an infection most often with formation of an abscess. Its importance in differential diagnosis is often second to no other symptom, but is never pathognomonic. Marked examples of its usefulness are in distinguishing appendicitis from typhoid fever, intestinal perforation in the course of typhoid and the onset of pneumonia when the physical signs are masked. The opposite condition, leucopenia, is found most markedly in fatal septicemia. The diminished leucocytes may be as valuable as the Widal reaction in differential diagnosis of typhoid.

In considering moderate grades of leucocytosis the many physiological factors causing increase in the white corpuscles must be remembered. Cabot enumerates these agencies as the leucocytosis of the new born, of digestion, of pregnancy, of the postpartum of the moribund and that after violent exercise, massage and cold baths. These influences may raise the count normal to that individual 33 per cent., and must be kept in mind. The leucocytosis caused by anesthesia is so transient that it is not liable to confuse us.

In general it may be said that suppurative, serous and gangrenous inflammations produce marked leucocytosis. We must not forget that the leucocyte count falls when the abscess is walled off.

We are promised that the study of the leucocytes may be helpful in the prognosis of pneumonia. Absence of the usual leucocytosis looks to a fatal termination, while the return of the eosinophiles, absent at the height of the disease, foretells a favorable crisis.

A diminution of the number of red corpuscles is of great importance. It may be said that iron has frequently been given to a patient with white skin who had no anemia and who derived no benefit from its use. The contrary is also true. A blood count furnishes the only rational data for the use of iron and arsenic. Pernicious anemia would be found in many cases supposed to be cancer of the stomach if the blood examination were more common.

The study of the stained specimen is the most interesting of all the steps in the examination of the blood. It is here that the novice will feel most intensely his deficiencies. Now his text book directions fail him, and confusion, not wisdom, results from a multitude of counselors.

His troubles begin with making the smear. But after one learns just how it is easy to prick the ear quickly and deeply, to wipe away the first drop, to resist somewhat the temptation to squeeze out the blood that is so loath to flow when you want it, to touch to a very small drop a cover glass that has been carefully washed in soapsuds and alcohol and polished by rubbing. Upon this another is to be laid and the two quickly drawn apart by sliding. After drying

in the air, which requires but a few moments, we must employ one of the many staining methods recommended. For the amateur it is better to use no more than one or two, and to thoroughly familiarize himself with these. Cabot says that he now uses no other than Ehrlich's triacid stain. He tells us the trick of success with it, which enabled me to use it after I had given up the stain in disgust. The specimen must be thoroughly heated before it is used—heated until the blurred brown color of the reds which you get in underheating specimens is replaced by a golden yellow. Then the details within the leucocytes will be found delicately differentiated.

The stain easiest to use is Gollasch's. The smear is fixed by immersion for a quarter of an hour in absolute alcohol to which ether may or may not be added. The stain, which is composed of hematoxylin and eosin, is applied for fifteen minutes. If you are interrupted, the specimen is not spoiled by overstaining, as occurs with the methyl blue and eosin methods. The white corpuscles are so plain that they are easily studied with a one-fifth objective. Goldhorn's polychrome stain, originally perfected for studying the malarial germ, has proved to be one of the best for general work. Clear directions accompany it.

The study of stained specimens is eye destroying and time destroying work. Here it suffices to simply enumerate the details which a general practitioner may hope to see, and what they may indicate to him. The red corpuscles may be deformed, not the result of faulty technique. This poikilocytosis means very grave anemia. The centers may not take the eosin stain, indicating a deficiency of hemoglobin, which is chlorosis or grave secondary anemia. The malarial germ may be seen. Nucleated red cells may be present, the blasts. Normoblasts mean a too active proliferation of red corpuscles, the marrow throwing them out unfinished. Megaloblasts are of grave import, indicating a fatal type of anemia.

Turning now to the white corpuscles, we notice the relative proportion of polymorphonuclear, lymphocytes and eosinophiles. Leucocytosis being already established by the blood count, an increase in the relative ratio of mononuclears would point to leucemia; in the polynuclears to the leucocytosis of infection. Two types of leucemia itself are determined by studying the greatly multiplied white cells. The presence of myelocytes indicates the splenomyelogenous variety, while the lymphatic is shown by the great number of lymphocytes.

Iodophilia may reveal the presence of pus somewhere in the system. Eosinophilia may enable us to detect a case of trichinosis which has been called rheumatism.

My endeavor has been to show that the routine examination of the blood may be profitably made by the general practitioner.

PUERPERAL SEPSIS.

BY DUDLEY R. KATHAN, M.D.,
Corinth, N. Y.

BY puerperal sepsis or infection we understand the various morbid conditions of the female genital tract, and the systemic affection dependent thereon, which result from infection during labor or the puerperium, by various micro-organisms.

This disease undoubtedly has existed since women first began to bear children, though known under a different name.

We have it mentioned in the works of our oldest writers, such as Hippocrates and Galen. In our more recent literature we find much mention of puerperal fever, which term has been dropped for puerperal infection or sepsis.

Previous to about twenty-five years ago the mortality of puerperal sepsis in general hospitals was something alarming and far surpassed that in private practice; at one time ten out of every fifteen women delivered in one of the Paris hospitals died of puerperal sepsis. This alarming condition set men to thinking and studying the causes of this frightful mortality.

For convenience we may consider the etiology under the heads of predisposing and exciting causes. Among the predisposing causes is the general weakening of the whole system during pregnancy. The blood loses much of its power to overcome inflammation and toxins; at this time the whole nervous system becomes sorely taxed, as many of us know too well. Again, at the end of labor, when the patient is all tired out and she has lost much blood, is the time when all her vital forces are needed. She has lost much of her power of resistance to the germs which so easily beset her; especially is this so in primipara and those of long and protracted delivery. Often a piece of membrane or cotyledon is torn off and left in the uterus to undergo putrefaction, and the entire lochia is a good culture medium.

Of the exciting causes, we have organisms causing puerperal infection introduced into the body from without, generally introduced into the genital tract.

Among the bacteria causing sepsis are, according to the classification of Dr. J. W. Williams, of Johns Hopkins: 1, streptococcus; 2, staphylococcus; 3, gonococcus; 4, bacillus coli communis; 5, bacillus diphtheriæ; 6, pneumococcus; 7, bacillus ærogenes capsulatus; 8, bacillus typhosus; 9, bacillary sepsis; 10, sapremia.

The first of these occurs much oftener than the others. In fact, at one time the streptococcus was the only germ said to be guilty of producing puerperal sepsis. However, we now know that the next three especially need to be watched for in every case of confinement.

Streptococcus and staphylococcus are often found in the vaginal secretions of a healthy woman, while Krönig states that he has been

able to cultivate gonococcus in 50 out of 179 cases presenting febrile puerpera, and has thus shown that it plays an important part in the production of puerperal disease.

When we stop to consider the nearness of the genital tract to the rectum one can't help wondering why we do not have more cases of sepsis due to the colon bacillus, when you consider that, according to the statement of Vignal (a French writer) one decigramme of feces contains about twenty million colon bacilli. Thus the moral for more thorough antisepsis of the perineum is easily drawn, and as it is well-nigh impossible to get it thoroughly clean and sterile, to keep the fingers off the perineum and out of the rectum as much as possible.

The other organisms mentioned are accountable for some cases of puerperal sepsis, yet not often enough to warrant us in taking your time in explaining them.

From the definition and etiology we have given of puerperal sepsis it follows that the fault can usually be laid at the door of the accoucheur. Hence, unless we practice strict antisepsis, we will not have a clear conscience or non-septic cases.

On being called to a patient in labor, let me tell you the way I conduct my cases: First, my armentarium consists of a special obstetric bag which I use for this work only. I like the habit of having a card, on which is written the things one usually takes to each case, in order that none may be overlooked in the hurry of packing the bag. It is not always advisable to have a bag packed ready for use, unless one is having a large practice in obstetrics, for some of the dressings, Kelly pad, syringe, etc., will keep better outside the obstetric bag, if not in constant use.

My grip contains: Tr. green soap, bichloride of mercury tablets, carbolic acid, saturated sol. boracic acid, 2 per cent. sol. of silver nitrate, fl. ext. of ergot, chloroform, Squibb's ether, glass catheter, glass douche tip, glass douche tip intra-uterinis, a lubricant, as creolin or lysol; nail file and brush, Kelly pad, fountain syringe, sterilized vulva pads, twenty-four hours' supply; scissors, sterilized tape for cord, forceps and perineal repair outfit.

On arriving at a case I first ascertain from the patient how long she has been in labor, and by external examination the position of the fetus in utero and how far advanced the case is.

If there is time enough and the patient's bowels have not moved inside of four hours, I direct a good soapsuds enema to be given, if I have a good nurse I can trust, otherwise I do it myself. I have a good warm bath given to the lower half of the body, the vulva and perineum especially scrubbed with tr. green soap and sterilized with bichloride 1 to 2,000. The bed is then prepared, so that it is level, and a clean Kelly pad placed under the hips of the patient and covered with a sterilized towel.

While the nurse is doing this I am scrubbing

¹ Read at the regular meeting of the Saratoga County Association, March 10, 1902.

my own hands with a good nail brush, green soap and warm water for five minutes by the clock; after scrubbing my hands and arms I immerse them in a warm bichloride 1 to 1,000 for five minutes. Now, after using some sterile lubricant, we are ready for our internal examination.

That which has to do with the taking of the pelvic measurements, etc., does not come under this paper, nor does the object to be ascertained at this examination. We will only consider the method.

At this point let me say that it is very poor antiseptic midwifery to attempt a vaginal examination under cover of the clothes, just because the patient may be a little modest on this point. If she is inclined to be overmodest, just explain to her how the examining finger is much more liable to push in ahead of it some pathogenic germs from the external genitals and the results that might follow, for I do not believe, however expert one gets in examinations, but what the woman's chances are better for no sepsis if she is exposed and the physician sees just what he is doing. One vaginal examination is usually enough. I do not believe in making more than is actually necessary, and indeed many of our best men say that in a large percentage of cases external examinations only are needed. Scofield and Spöring state that it is possible to deliver at least 90 per cent. of their cases by means of external examinations only.

By this method the laborious hand-disinfection and the dangers to the patient of the internal examinations are avoided. It is perfectly harmless and cannot offend the sense of modesty of the patient, and can be employed as often as desired. This method should always be used when we have any abnormal secretions of the vagina or when we have been attending septic cases of any kind or have been performing autopsies.

As regards the prophylactic douche which so many use at this time, I was always taught never to use it unless we have evidences of a pathological secretion from the vagina.

The normal vaginal secretions have often been proved to be antiseptic in themselves, and if these are washed away by a douche you have taken away from the patient so much resisting force.

During the third stage of labor there is absolutely no indication for introducing the hand into the vagina, except severe hemorrhage or adherent placenta. And if more of us would hold the fundus uteri for a full half hour, as is the rule before attempting expulsion, we would have a less number of cases of adherent placentas.

After the third stage I believe that in all cases where the perineum is lacerated deeper than the mucosa it should be repaired right then. In that way there would be fewer cases of sepsis, as we all know that sepsis is a wound infection,

and if the wounds are closed we then have less danger to puerperal infection.

Permit me to briefly return to where I left off in discussing my method of conducting a normal case of labor as bearing on method of prophylaxis of puerperal sepsis. At the same time in which the patient is being cleaned up and having her rectal enema I put on a stove a pan of boiling water in which is a teaspoonful of bicarbonate of soda. In this I place my scissors, the two glass douche tips, glass catheter, two pieces of tape for the cord and a nail brush and file. These are allowed to boil ten minutes, then taken out and placed in a carbolyzed solution on a stand near the bed and covered with a sterile towel.

There are several other methods of sterilizing the hands in practice, and they are more or less efficient. The one described by Dr. Kelly some years ago is perhaps the best, but the method used at the Maternity and the Mothers' and Babies' Hospitals of New York is practically the one I have described. Out of forty-five cases I have attended, and where the above method of sterilization was used, I have never had a case run to a temperature above 101° F., and seldom above 99° F.

After the third stage of labor and the perineum is repaired, if necessary, the patient should be cleaned and dressed with an aseptic vulva pad, which is held in place by being pinned to the abdominal binder or by a T-bandage.

During the puerperium the external genitals should be frequently cleansed with a 1 to 4,000 sol. of bichloride. In an ordinary case we do not approve of the routine douche, and think that it is often the source of more evil than good.

The vulva pads are far preferable to the ordinary napkin found in most houses, and the latter being seldom sterilized, ready for use at the first dressing, when one is most needed.

Sterilized vulva pads can be bought ready for use, but I prefer making my own from absorbent cotton and cheesecloth. They are made about three inches wide and nine inches long, the cotton being folded in the gauze and then sewed up on side and end, or they can be just folded up. These are then done up in a small towel pinned around them, and sterilized and laid away ready for use. A fresh, unopened package is taken to each case. The nurse is to be instructed to have thoroughly clean hands before touching a sterile pad, and then taking it by the upper edge only, and being careful not to get anything on it, after removing the package, before placing it on patient.

If the accoucheur will observe the same rules of antisepsis that he would at a capital operation, the rate of mortality in private practice would be less than that of hospitals, as it was before the days of antisepsis; whereas now hospitals have much the lowest mortality, which is said to be due to the carelessness of the private practitioner.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. No. 9.

SEPTEMBER, 1902.

\$1.00 PER ANNUM.

THE NEXT ANNUAL MEETING OF THE STATE ASSOCIATION.

To the Members of the New York State Medical Association:

This notice is to remind you that the annual meeting of the Association will be held at the Academy of Medicine, in this city, October 20th to 23d, inclusive.

The committee has nearly completed the literary program, which is given below. The social features of the meeting have been carefully considered. Tuesday evening, heretofore taken up by a literary program, will be free to members and guests to seek their own recreation.

The annual dinner and reception will be held Wednesday evening, October 22d. The innovation last year of admitting ladies to this function met with such universal approbation that the committee feels justified in urging their attendance this year, and arrangements will be made for their presence and comfort.

Luncheons will be served at the Academy of Medicine as formerly.

To provide for these social features money is necessary. Your contribution to the "Entertainment Fund" is, therefore, urgently solicited. To save complicating matters one charge is made for the dinner ticket of \$5, which can be sent to the chairman, Irving S. Haynes, 1125 Madison avenue.

Preliminary Announcement of the Program of the New York State Medical Association Meeting in New York, October 20-23, Inclusive, 1902.

(NOTE—The order of papers given below will be subject to change in the final announcement.)

Symposium on Pneumonia:

1. Pneumonia from the Bacteriological Standpoint—A. C. Abbott, Philadelphia, Pa.
2. Leucocytosis in Pneumonia—Alexander Lambert, New York.
3. Treatment of Pneumonia—Joseph W. Grosvenor, Buffalo.

Symposium on Colds:

4. Etiology of "Colds"—James J. Walsh, New York.

5. Symptomatology of Colds, with Incidental Treatment—George F. Cott, Buffalo.

6. Treatment of Colds—A. Alexander Smith, New York.

Symposium on Typhoid Fever:

7. The Pathology and Bacteriology of Typhoid Fever from the Standpoint of Recent Investigations—George Blumer, Albany.

8. The Serum Reaction in Typhoid Fever—Thomas W. Hastings, New York.

9. The Vascular Complications of Typhoid Fever—W. S. Thayer, Baltimore, Md.

10. The Modern Treatment of Typhoid Fever—W. Gilman Thompson, New York.

11. Paratyphoid Fever—Nathan E. Brill, New York.

12. Report of an Interesting Case of Typhoid Infection—Albert W. Preston, Middletown.

Symposium on the Roentgen Ray:

13. The Roentgen Ray: Its Mechanics, Physics, Physiology and Pathology—Eden V. Delphey, New York.

14. The Roentgen Ray in Surgery, Including Deep Neoplasms—Carl Beck, New York.

15. The Roentgen Ray in Medicine—

16. The Roentgen Ray in Dermatology, Including Superficial Neoplasms—

17. The Roentgen Ray in Gynecology—Eden V. Delphey, New York.

18. The Roentgen Ray in Obstetrics—Joseph B. Cook, New York.

19. The Finson Ray—Francis P. Kinnicutt, New York.

Miscellaneous Papers:

20. A Study of the Indications for Nephropexy—Augustin H. Goelet, New York.

21. Treatment in Gynecology, from a Medical Standpoint—Mary Gage-Day, Kingston-on-Hudson.

22. The Present Position of Gall-stone Surgery—William Wotkins Seymour, Troy.

23. The Newer Relations of the Pancreas to General Medicine—Alfred Stengel, Philadelphia, Pa.

24. Report and Presentation of a Case of Idiopathic Atrophy of the Skin—William S. Gottheil and R. Abrahams, New York.

25. Puerperal Eclampsia: Pathology and Treatment—Frederick P. Hammond, New York.

26. Further Observations of General Interest Regarding the Course and Management of Cataract—J. H. Woodward, New York.

27. Radical Operations for the Cure of Cancer of the Stomach—William J. Mayo, Rochester, Minn.

28. Surgery of the Stomach for the Relief of Non-

malignant Pathological Conditions—A. J. Ochsner, Chicago, Ill.

29. Appendicitis—Frederick Holme Wiggin, New York.

30. The Operative Treatment of Fractures of the Patella—Charles Phelps, New York.

31. A Case of Idiopathic Brain Abscess, with Focal Symptoms Diagnosed as Brain Tumor—Hermon C. Gardinier, Troy.

32. Strangulated Hernia in Children Under One Year of Age; report of a case twenty-seven days of age. Herniotomy; recovery—W. B. Reed, Rome.

33. Intestinal Obstruction—John B. Harvie, Troy.

34. Bacterial Flora of the Vaginal and Cervical Canal in Health; with remarks concerning infections of the female genital tract—William E. Swan, Saratoga Springs.

35. Proprietary Remedies—W. B. Bayley, Haverstraw.

36. Obesity as a Consequence of Asexualization—Heinrich Stern, New York.

37. The Advantages of Nitrous Oxide in General Surgery; exhibition and description of a stopcock for its administration, with varying percentages of oxygen—H. W. Carter, New York.

38. Advantages and Disadvantages of Abdominal Surgery—Edward J. Meyer, Buffalo.

39. New Apparatus for the Treatment of Esophageal Stricture—Theodore Dunham, New York.

40. Melancholia Agitans—William E. Douglas, Middletown.

41. The Surgical Diseases of the Kidney, from the Standpoint of the General Country Physician—George A. Leitner, Piermont.

42. An Improved Ultra-violet Electrode for Actinic Therapy—William S. Gottheil, New York.

43. Unrecognized Toxic Insanities—T. D. Crothers, Hartford, Conn.

44. Suggestions Favoring a Standard Technique in Operative Surgery—Edward Wallace Lee, New York.

45. The Function of the Perineal Body and the Etiology of Rectocele—James Hawley Burtenshaw, New York.

46. Local Anesthesia in Radical Cure for Inguinal Hernia—J. A. Bodine, New York.

RECIPROCITY AND MEDICAL STANDARDS.

We have been very much interested in the many attempts made of late to devise some plan for medical reciprocity by which the legally registered practitioner in one State may be allowed to practice his profession in the others. The great difficulty in the way seems to be the differing standards of requirement, and the only solution so far offered is to raise the qualification in the low-standard States till all are equal. Desirable as this might be in most States, it is self-evident that it must work great harm to many communities. This is well illustrated in a paper recently read before the Kentucky Valley Medical Association, which purports to be a story of personal experience and which gives a very vivid idea of the situation and medical needs of many an isolated community. The writer resided in a little town of 150 inhabitants, but with a large outlying population in the mountains, where the roads are so bad that horseback riding is the only recognized mode of transit and the saddle-bag the only source of medical supply. The exigencies of the community are well illustrated by what he says in regard to obstetrics. It seems that in a community where half

the population live a score of miles from a physician it is almost impossible to get one in time, and hence the writer considers the "granny" a necessary evil. We need not spend time on his interesting description of the obstetric methods of the "granny," for the question before us is why, with such evident need of physicians, they are so scarce. Evidently it is a question of money, for our author says:

"They charge a fee ranging from \$1 to \$3, while ours is \$5, with charges for detention and extra mileage. I have a few times traveled from nineteen to twenty miles to cases."

To give a further idea of the financial side of his profession he says: "Our rule is 50 cents per mile, with \$5 a day for detention. Calls in town 50 cents by day; night calls \$1." The calls by day or night in a town of 150 can hardly be numerous, and we think he is justified in saying that fees are "hard and well earned." But the honesty of his people has evidently been the great comfort of our doctor, for he says:

"There is not a man in our country so poor but that he can pay a doctor bill one time of the year or another if you will take what he has. I take potatoes, corn, bacon or, if he has not these, perhaps he has dried beans. The question that I invariably ask is whether or not my patron is honest; if so, I go.

"It is these people, living this life of simplicity and honesty, having all the characteristics of true American citizens, big-hearted, brave and clever, and who are not at all times in the best financial circumstances, that we physicians have principally to physic and depend upon for our well-earned finances. But, mind you, now and then you will find one of these patrons squarely dishonest, and we spot him and forever let him pass, unless, perchance, his poor wife or babe becomes afflicted, and these do and of right ought to claim our sympathies."

There are lots of such communities in this country, and they are not all in the South by any means. Physicians are so scarce that the majority of the people are born, grow up and die without their services, though the demand is so great that, as our doctor plaintively says, "the country is overrun with quacks." And yet these people are worth some attention, for these same conditions and stock produced Jackson and Lincoln. Our doctor, if he were fortunate enough to be engaged by the year at his own price, would receive \$1,500, payable in cordwood and beans, and he seems rather proud of his financial standing, and is one of the prominent physicians in his neighborhood.

Such communities cannot have the same medical standards as wealthier ones. If a man is obliged by law to study four years and invest several thousand dollars in an education, he cannot afford to practice in such a region, yet physicians are needed there as much as in wealthier neighborhoods. It is evident that there must be in the ideal scheme some grading of physicians

by which those of certain qualifications may have unrestricted licenses, while communities which cannot support the higher grade of talent must not be legally prevented from getting the best they can.

TRACHOMA IN THE PUBLIC SCHOOLS.

Some time ago the Board of Health appointed a number of oculists to examine the eyes of public school children for contagious diseases and at the same time placed granular conjunctivitis, or trachoma, on the list of diseases which compel exclusion from school. The recently rendered report of these inspectors shows a very serious condition of affairs and one in which careful consideration should precede any action. It seems that an enormous proportion of our school children are afflicted, the percentage varying from 2 per cent. in one school up to 32, and averaging among them all about 12 per cent. If trachoma were a trivial affliction which could be remedied in a few days the exclusion of 12 per cent. of the scholars would be a matter of slight importance, but when the treatment is notoriously long and painful, and relapses frequent, it becomes a much more serious affair. If it occurred more commonly among children who could afford to lose a year's schooling it would be of less moment, but it is notoriously prevalent among children to whom the loss of a year means a very large part of their educational capital.

Trachoma is often a very serious disease in its effect on the human eye, but in a very large percentage of cases it goes for months and years without producing noticeable symptoms. Like ringworm and pediculosis, it is undoubtedly contagious, but contagion rarely occurs under hygienic conditions, and the logic of excluding 12 per cent. of our children from the only hygienic conditions many of them will ever know does not appeal to us. Further, it hardly seems possible that a child who is a public menace in a well-ordered schoolroom is any less dangerous in the more intimate relations of the street and the tenement house. The Board long ago ruled that the fauces of apparently healthy children often contained the germs of diphtheria and were sources of contagion, and it seems much more likely that eyes apparently healthy may contain the so far undiscovered germs of trachoma. Some provision ought to be made for the education of these numerous unfortunates who are a menace to their mates, and it must be done in their own neighborhood, for most of these children are too young to be trusted far from home and too poor to pay carfare. Still further, some means for protecting the community outside of school hours must be devised.

Last but not least, some provision must be made for their treatment. Most of these children are absolutely unable to afford a long and tedious treatment by their family physician, and the special dispensaries are so overcrowded with

them now that the treatment is largely perfunctory and ineffective.

The simplest plan, though we do not say the best, would be to have the children kept in school, separately if necessary, and treated in school either by the inspectors or by lay assistants under their direction. We are aware that such a plan would raise the general question of the scope of a health department and the propriety of its controlling and treating under compulsion the other contagious diseases like consumption and scarlet fever, but the question has to be decided some time, and we are not likely to have any health board more capable of deciding it fairly than the present one. At least, this is no time for half-way measures, and the present plan is in effect a permanent exclusion from school of a large number of children whose value as future citizens depends on the education they receive now.

MEDICINE AND MATRIMONY.

The *British Medical Journal* makes the following comments on the proposal to restrict the marriage of the unfit by legislative action, brought before the profession at the Saratoga meeting of the American Medical Association:

"The only practical result of the prohibition of marriage to the diseased and the degenerate would be the increase of concubinage; the birth-rate of the unfit would not be appreciably decreased, and they would have the added brand of illegitimacy to make the struggle for life harder to them. What right has society, for no better end than the physical perfection of the breed, to inflict on persons guilty of nothing but a diseased inheritance, a disability which makes a life overshadowed by ill health still gloomier?"

"Doubtless we have the right to protect ourselves and those under our charge against the physical and often moral wreck that follows marriage with a person actually diseased or of unhealthy stock. We should gladly welcome any attempt to deter persons so tainted from inflicting on unsuspecting victims the terrible injury of a union with them. But we deprecate grandmotherly legislation for the preservation of the human species as not only essentially selfish in itself, but as distinctly anti-social in its tendency and probable results.

"After all, even with all the assistance for the survival of the unfit given by modern sanitary improvement and humanitarian effort, they cannot escape the doom of natural extinction for more than a generation or two. If we are to admit the doctrine that society is justified by the law of self-preservation in purging itself of the unfit, the simpler plan would be to revert to the barbarism of ancient peoples, who solved the problem by destroying them in their infancy. This method is at once more effectual and more humane than condemning them to a life of isolation from their kind and exclusion from the chief solace and support against the ills of life to which every human being born into the world

has a natural right. In the interest of society itself it might not be altogether wise to drive a large body of unfortunates who carry in their very constitution the capacity of infinite mischief into active revolt.

"The true mission of the medical profession in this matter is not to promote legislation which is almost certain to defeat its own purpose, but to instruct the public in the dangers, both to the individual and to the community, of unwholesome marriages. The education of the public mind in the practical aspects of a question in which all members, not only of the nation and the race, but of the human family, are directly interested would, although the process must needs be slow, make laws for the medical regulation of marriage unnecessary."

Our readers will remember that this journal has expressed the same views, and that the same reasoning can be applied to many other attempts to obtain medical ends by legislative means.

TYPHOID NOT ALWAYS WATER-BORNE.

One of the great surprises furnished by the Spanish-American War and the one which was popularly supposed to reflect the greatest discredit on the army management was the widespread occurrence of typhoid in camp. If, as was generally thought, typhoid infection occurred chiefly through a contaminated water supply, it could be considered as nothing less than a public scandal of the largest kind that of something like one hundred thousand men encamped in their own land, nearly one-fifth should be infected within five months.

So rapid was the spread of this epidemic that a board of medical officers was appointed to investigate and report. The very extensive report of the board was filed in the library of the Surgeon-General's office, and later an abstract was published which deserved very much wider professional attention than it has received. The conclusion of the commission that is of especial interest is that infected water was not an important factor in the spread of typhoid during this epidemic.

This remarkable statement calls for most careful consideration. Notwithstanding the general conviction of the medical officers in attendance on the troops, a close and careful investigation of the source, condition and distribution of the water supplies, of the distribution of the disease among the troops, and of other conditions capable of diffusing the infection led the commission to the opposite conclusion—namely, that the outbreaks were due in much larger measure to other agencies than water.

Strong evidence is adduced in favor of their conclusion against water as the chief causative agent in the fact that when the suspected water was replaced by a supply proved to be pure the epidemics continued as before, and in several cases continued to increase.

For instance, one division removed from

Chickamauga Park to Knoxville, another to Lenoxville. At both of these places the water used by the citizens was found to be pure, and the citizens were free from disease. Yet among the already infected divisions the typhoid fever continued to spread: "There were hundreds of cases among the troops."

The most striking evidence is found in the history of the 7th Army Corps, which was encamped partly in and partly near Jacksonville—

That the water was not infected at Jacksonville seems to be beyond question. This supply came from artesian wells more than 1,000 feet deep, and was distributed through the camps by means of pipes. In August and September of 1898 there were in round numbers at Jacksonville 30,000 civilians or inhabitants of the city and the same number of soldiers encamped near by. Both civilians and soldiers drank water from the same source. There were only a few sporadic cases of typhoid in the city at a time when each of the three division hospitals was receiving a score or more of patients with this disease each day.

Failing to find in the water supplies a common cause for the widespread epidemics, the commission with greatest labor traced out and located every case of typhoid which had developed in a number of regiments. In this way 1,608 cases were investigated. All these cases were plotted out in charts, showing the tents in which they occurred and the dates of their occurrence. As a result of this investigation the commission came to this important conclusion:

Typhoid fever, as it developed in the regimental organizations, was characterized by a series of company epidemics, each one having more or less perfectly its own individual characteristics.

The truth of this statement will be evident after the inspection of the charts showing the distribution of the typhoid fever among the companies of the different regiments. On making such an inspection one must be impressed with the fact so plainly evident there that men who are closely associated develop typhoid fever simultaneously. Men in the same company came down with the disease on the same day. This is still more marked when we study the cases with reference to the tents occupied by the men.

In 1,608 cases of typhoid fever which we have been able to accurately locate in the particular tents in which they occurred, together with the date of the commencement of the attack, the results may be summarized as follows:

Directly connectable attacks (in same tent).....	563, or 35.01 per cent.
Indirectly connectable attacks (in next tent).....	447, or 27.79 "

Total connectable attack.. 1,010, or 62.80 per cent.

Certain tents were badly infected, and the majority of their inmates developed the disease, while other tents wholly escaped.

The evidence adduced is sufficient to make a very strong case for the verdict of the commission that the direct and indirect infection in tents were most important factors in the spread of the epidemics.

It is to be hoped, therefore, that the War Department may publish the report *in extenso*, so that as many as possible may have access to this most valuable and instructive investigation of the etiology of typhoid fever.

TOBACCO AND STERILITY.

Dr. Le Juge de Segrais refers to a communication presented by Dr. Georges Petit, general secretary of the French Anti-Tobacco Society, to the Congress of Scientific Societies in 1901, on changes in the organs of generation produced under the influence of tobacco. He made experiments on a number of animals—dogs, cocks, guinea-pigs, rabbits (male and female)—which were exposed to the action of tobacco smoke, fed with tobacco leaves, and treated with enema of nicotine solution. In some cases acute intoxication was produced, and the testicles were found congested, the tubuli seminiferi being the seat of cell proliferation and epithelial desquamation. In other animals in which chronic intoxication had been produced the testes were the seat of a true atrophic sclerosis approximating to the cirrhotic type, the vesiculæ seminales were, as it were, withered, and no spermatozoa could be discovered. In the female rabbits the ovaries were shrunk and atrophied. These facts may, perhaps, help us to regard the war of the tobacco trusts with satisfaction, as likely to result in a diminished consumption of tobacco.—*British Medical Journal*.

Laryngeal Paralysis and Their Importance in General Medicines.—In an interesting and scientific paper, the writer devotes much attention to the anatomical and physiological aspect of the subject. He deals with the experiments of Krause, Lemon, Storsley, etc., and shows, as taught by Krause, that the planatory cortical center in dogs is located at the descending surface of the prefrontal convolution. Irritation of one of these areas by electricity is always followed by symmetrical bilateral adduction of the vocal cords, which always takes place when one phonatory center has been experimentally removed or destroyed.—GLEITSMANN (*New York Medical Journal*).

Treatment of Puerperal Eclampsia.—Herman disagrees with those who contend that emptying the uterus is an almost certain means of arresting eclamptic convulsions. Schauta quotes from the records of the lying-in clinic of Vienna 342 cases of eclampsia, in 185 of which the fits began during labor. In only 62 of these did they cease on delivery, while they continued in 123, in 50 with increased violence. Brummerstadt gives a record of 63 cases, in 18 of which the fits ceased on delivery, in 17 became less severe, and continued unaltered in 28. Herman cites the figures of Dührssen, Olshausen and others, showing similar results, and then reports from his own experience two cases of eclamptic fits, with a temperature of about 105°. In the treatment the use of tepid baths reduced the temperature and resulted in the abatement and early cessation of the convulsions and final recovery of the patients.—*American Medicine*.

A Supposed Case of Leprosy.—It is believed that a case of leprosy has been found in Providence, R. I., the patient being a gentleman who recently returned from South America. At the Rhode Island Hospital, where he went for treatment, the purplish condition of his skin made the physicians suspicious of leprosy. Before any official action was taken for removing him to the contagious hospital, he left the city, and is now said to be with his family in New Bedford, Mass. He lived in South America for four years, returning to Providence in 1897.

* * *

Burrage Hospital, Boston Harbor.—A new hospital for crippled children, handsomely built and well equipped, on Bumkin's Island, Boston Harbor, has just been completed by A. C. Burrage. In order that the children may suffer no inconvenience in going from floor to floor, the hospital has an inclined runway in place of stairs or an elevator. Among the other improvements found in this thoroughly up-to-date and well-equipped hospital are high bath-tubs, so that the nurse who bathes the crippled child does not have to stoop over.

* * *

The Oldest Medical Society in the United States.—The oldest medical society in this country, and still in a healthy state of existence, is the Litchfield County Medical Society, of Connecticut, which was founded in 1765.

* * *

Typhoid Fever Investigations.—In a recent inspection of Camp Thomas, Chickamauga, the question arose as to whether the germs of typhoid fever, which caused the epidemic there during the Spanish-American War, could have been responsible for the recent outbreak of the disease at Chickamauga. Contract Surgeon James Carroll, U. S. A., has dug up specimens of earth from the disused sinks and drains of the camp of four years ago, in order to make bacteriological tests. As such experiments will take at least six weeks, the solution of the question must be postponed. Surgeon-General Forwood is now preparing plans for the new hospital, with a capacity of forty-eight beds, soon to be erected at Camp Thomas.

* * *

Smallpox in Virginia.—Surgeon-General Rixey, U. S. N., has recommended, in view of the epidemic of smallpox at Norfolk and Portsmouth, that all persons living within the limits of the Navy Yards, not showing satisfactory evidence of recent successful vaccination, be vaccinated, and that all civil employees and people whose business takes them within the yard limits be required to present satisfactory certificates of recent vaccination. The Health Board of Norfolk has asked for an appropriation of \$5,000 for the purpose of compulsory vaccination.

Government Report on Hookworm Disease (Uncinariasis or Ankylostomiasis).—At the request of Dr. Walter Wyman, Surgeon-General of the United States Public Health and Marine-Hospital Service, Dr. Stiles, Zoologist of the United States Bureau of Animal Industry, has prepared an article entitled "The Significance of the Recent American Cases of Hookworm Disease (Uncinariasis or Ankylostomiasis) in Man." This article will appear in the forthcoming annual report of the Bureau of Animal Industry, but an advance edition of 5,000 reprints was issued about August 15th for free distribution among physicians. The report covers thirty-seven pages, containing a general discussion of the subject, full descriptions of the parasites involved, with their life-history; also symptoms, methods of infection, preventive measures, treatment, abstracts of the cases thus far reported for this country, and a bibliography of American literature on the subject. It is illustrated by eighty-four text figures of the parasites in different stages, and of the eggs of other parasites which are found in feces and which might lead to errors in diagnosis. There is also a description of the method to be followed in fecal examination. Applications for this publication should be made (preferably upon a postal card rather than in letter) to the "Chief of the Bureau of Animal Industry, Washington, D. C."

* * *

Atropin as a Safeguard in Chloroformization.—In the course of a series of experiments on blood pressure, conducted by Dr. R. D. Rudolf at the University of Toronto, a special study was made of the action of atropin in conjunction with chloroform. First, as to the effect of atropin when administered previously to the giving of the anesthetic; and, secondly, the antidotal action of atropin when given after poisoning from chloroform has occurred. Dr. Rudolf's experiments led to the conclusion: First, that the previous use of atropin lessens the tendency to death from chloroform poisoning in dogs. Theoretically, also, one might assume that from its powerful stimulating effect on the circulation it would, especially if combined with morphia, tend to lessen the chance of syncope occurring during, but not necessarily due to, chloroform administration. Second, that when, during the administration of chloroform, danger has occurred, either in the form of syncope or of respiratory failure, atropin in moderate doses (say 1-100 grain) would tend to stimulate both the circulation and the respiration, and hence would be a valuable adjunct to other means of saving life in such emergencies.—*American Medicine.*

* * *

Origin of the "Water Cure."—A correspondent of the Boston *Transcript* calls attention to the fact that the "water cure" was employed by the Dutch nearly three centuries ago. In Martin's history of the Indian Empire an account is given of the struggles of the European powers

to secure the rich trade with the East Indies. In 1623 the Dutch seized the Japanese at Amboyna and subjected them to torture to make them confess to a conspiracy. "Each victim was placed on the rack and compelled to inhale water at every attempt to draw breath, until his body became inflated and he swooned, was recovered and the same horrible process repeated."

* * *

Cause of Yellow Fever Not Found.—Regarding the report from Havana that the United States Medical Commission at Vera Cruz had discovered the cause of yellow fever, it is stated in Washington that no report from the commission has been received. Under the direction of Dr. Parker the commission has been at work for more than a month, but as yet has reached no definite conclusions. A physician of Vera Cruz, while recently in New York, stated that yellow fever was now more prevalent in the former city than for several years past. The sanitary condition of the port is lamentable, and persons who have lived for long periods in the city and considered themselves immune to yellow fever have been stricken.

* * *

Death Rate for 1901.—According to statistics just issued, Washington had the third highest death rate among the larger cities of the United States during 1901. Charleston, S. C., stands at the head of the list with a death rate of 29.11 per 1,000; New Orleans next, 21.44; Washington, 21.14; Baltimore, 20.25; New York, 20; Boston, 19.70; San Francisco, 19.34; Cincinnati, 18.88; Philadelphia, 18.27; St. Louis, 17.67; Chicago, 13.88. Iowa was the most healthful State, with a mortality record of 9.2 per 1,000, and among the Territories, Arizona was first with a rate of 3.3. Louisiana had the largest percentage of deaths, 20.65. The healthiest town in the United States was Ellsworth, Wis., where, with a population of 1,500, there were only two deaths, one of those being from smallpox.

* * *

Insuring Against Illness.—The San Francisco *Chronicle* states that over 8,000,000 persons in Germany are insured against illness. Regarding the amount of insurance on King Edward, it is said that if he had died at the time of the operation, British companies would have lost \$100,000,000. "There is no such thing in the United States as insuring a second person, and if such a line of business ever was thought of by our great leaders in insurance, the exceedingly narrow escape of the British companies has chilled the notion. It is to be hoped that our home companies will never indulge in such insurance, no matter how great the profit. So doing tempts murder and anarchy. A great many thoughtful moralists are objecting to child insurance, on the ground that it induces cruel mothers to neglect or directly kill their infants for immediate gain."

Venesection and Transfusion in Puerperal Eclampsia.—Dr. R. Abrahams asserts that the abstraction of blood in eclampsia produces (1) an immediately favorable change; cyanosis, muscle rigidity, spasms and twitchings all stop at once. (2) The pulse loses its tenseness. (3) The coma yields, either abruptly or slowly, but surely. Transfusion (1) improves the pulse; (2) induces free sweating and free micturition; and (3) produces intense thirst, which causes the patient to drink copiously.

* * *

Treatment of Placenta Previa—Cesarean Section Not Justifiable.—Dr. Robert A. Murray, New York, in a contribution on this subject, referred to a paper read last year before the American Association of Obstetricians and Gynecologists, by Dr. Zinke, Cincinnati, on this subject, also to a discussion which it elicited. In Zinke's paper a strong plea was made for the treatment of placenta previa by Cesarean section. Dr. Murray protested against such a radical measure, and believes that by proper treatment one can avoid the performance of this operation in many instances. In fact, only a very small minority of cases of placenta previa should, in his opinion, be treated by Cesarean section.

Dr. J. Whitridge Williams, Baltimore, questioned the propriety of Cesarean section for placenta previa, and said the operation was done too frequently. Recent statistics as to the great safety attending this operation were liable to do almost as much harm as good. If the society did not take a decided position in regard to Cesarean section in cases of placenta previa, he feared that this operation might be practiced as frequently and indiscriminately as was oophorectomy. In his opinion there was a small field for Cesarean section in placenta previa.

Dr. Edwin B. Cragin, New York, said that numerous conditions must be present to justify Cesarean section in placenta previa; among them were a good condition of the child, good surroundings for the patient, and a cervix so rigid that there would be great difficulty in dilating it and resorting to version. These three conditions were rarely met with in cases of placenta previa. A fourth condition was central implantation of the placenta.—*New York Medical Journal*.

* * *

The Heart in Diphtheria.—There can be no doubt about the statement that "cardiac failure is one of the most important as well as the commonest of the toxic effects of diphtheria." A large percentage of patients have signs of cardiac failure at some period or other of the disease, and death during the acute toxic stage unless due to an accidental cause, as asphyxia, is invariably the result of primary cardiac failure. The fatal termination, as Dr. Bolton says, usually takes place during the first fortnight of the disease, the onset of the signs being first noticed generally about the sixth day.—CHARLES BOLTON (*Edinburgh Medical Journal*).

The Charity Organization Society's Committee on Tuberculosis needs not less than \$10,000 to meet the expenses of the work which it has undertaken. Contributions made to the society for its usual current operations should not be reduced and cannot be diverted in any large amount to the purposes of this special committee. The expenditures to be made by the committee are for the following main objects:

1. Research into the social, as distinct from the medical, aspects of tuberculosis; for example, into the relations between the disease and overcrowding, infected tenements and unhealthy occupations, and also into the influence of improved diet and hygienic living upon recovery.

2. *Education.* The publication of leaflets and pamphlets, the giving of lectures and the promulgation in every possible way of the fact that tuberculosis is a communicable and preventable disease; the widest distribution of the results of scientific research in this field and of the results of modern treatment both in sanatoria and at home.

3. The encouragement of movements for suitable public and private sanatoria, both for advanced and for incipient cases, for adults and for children, for free care and also for the care of those who can pay moderate fees.

4. The relief of indigent consumptives by the provision of suitable food and medicines, by the payment of rent when this is necessary to secure adequate light and air, and by transportation and maintenance at a distance when in the judgment of the committee this is essential.

The labors of the committee will be directed not only toward the amelioration of the condition of the large class of consumptives, but also toward the benefit of the community as a whole, in which there is encouraging reason to believe that tuberculosis may be practically eradicated. The work of the committee is not intended to be a temporary matter, but its continuance and effectiveness will depend upon the public encouragement and support received.

For research and publication the committee can easily make use of the \$10,000 asked for, and could employ a larger sum to good purpose. In the relief of special cases existing agencies will be asked to cooperate, but any funds which individuals may be willing to supply for this special purpose will lessen the burden upon organizations which are already overtaxed by cases of need arising in large numbers from the class of consumptive poor.

Contributions should be sent to the Charity Organization Society, 105 East 22d street, New York City.

* * *

Life of the Typhoid Bacillus.—A bacteriologic test of specimens of earth taken from the site of Camp Thomas, at Chickamauga, is being made to determine if the typhoid bacilli responsible for the recent outbreak of typhoid fever had retained their vitality since the epidemic during the Spanish-American War.

Fourth District Branch Association.—The annual meeting of the Fourth District Branch Association was held at Chautauqua on Wednesday, July 23d. Dr. Charles A. Wall presided.

After a brief address by the president on the organization of the medical profession Dr. Joseph Burke, of Buffalo, read a paper entitled "Congenital Narrowness of the Aortic System." He cited the reports of 100 cases with autopsies. The paper was discussed by Dr. Julius Ullman.

Dr. A. T. Livingston, of Jamestown, read a paper on "The Broad Therapeutic Action of Ergot." He stated that ergot was indicated in most every condition where the equilibrium of the blood current was deranged, particularly in hemiplegia and edema of the lungs. He has found it of value in certain nervous disorders, such as hystero-epilepsy, neurasthenia and migraine. It is valuable combined with morphin, reducing the disagreeable after effects of the latter. He gives it hypodermically entirely—30-60 minims of the fluid extract. He has never noticed any oxytocic effects. The paper was discussed by Dr. Eli H. Long, of Buffalo.

Dr. Wisner R. Townsend, of New York City, read a paper on the "Differential Diagnosis of Diseases of the Hip Joint," emphasizing the value of the X-ray in certain obscure cases. It was discussed by Drs. William C. Phelps, of Buffalo, and William M. Bemus, of Jamestown.

Dr. Frederick H. Wiggin, of New York City, read a paper on "Post-operative Intestinal Paresis," which was discussed by Drs. Eugene A. Smith and Marcell Hartwig, of Buffalo.

A paper entitled "Eczema" was read by Dr. Grover Wende, of Buffalo. It dealt chiefly with the causation of the disease. The writer leaned to the view that it is parasitic in nature, that the etiological factor was a staphylococcus toxin. The paper was discussed by Dr. Alfred Diehl, of Buffalo.

After the morning session dinner was served at the hotel.

The following officers were elected for the coming year:

President, Dr. J. W. Morris, Jamestown.

Vice-president, Dr. Bernard Cohen, Buffalo.

Secretary, Dr. William Irving Thornton, Buffalo.

Treasurer, Dr. Joseph Burke, Buffalo.

Nominating Committee to the New York State Association: Dr. G. A. Bennet, Buffalo; Dr. T. D. Strong, Westfield.

After the meeting the members were taken for a ride on the lake on a chartered yacht. Buffalo was chosen as the place of meeting for 1903.

* * *

The Orange County Association held its regular monthly meeting at the office of Dr. M. C. Conner, Middletown, N. Y., on Wednesday, July 16th, at 2 p. m. There was a good attendance

of the members. Dr. William Evans, formerly of Westtown, N. Y., now located at Norfolk, Va., was present, and gave some interesting facts regarding medical work in his new field.

The scientific session was opened with a report of interesting cases cited by several of the gentlemen present, among them being reports and a discussion of the severe complications attending the epidemic of measles now prevailing in Middletown and the surrounding country. The complications noted were the following: Acute ileocolitis and gastritis, acute catarrhal otitis media, membranous laryngitis, acute meningitis with fatal results and in one instance pulmonary tuberculosis. Most of those present had noticed the apparent tendency to grave and fatal complications during this epidemic, more so than in previous years.

Dr. E. A. Nugent, of Unionville, then read a very interesting paper on "Infantile Paralysis," in which he introduced some valuable and altogether original ideas in the treatment deduced from practical experience. The doctor carefully reviewed the etiology, symptoms, diagnosis, prognosis and treatment as outlined in the recent text-books. He differed radically from the stereotyped applications of blistering and so-called counterirritation to the inflamed nerve cells in the anterior cornua of the cord embedded in a bony encasement and overlaid by several inches of muscles and fat. As the main agents, in his judgment, we should employ cold externally over the apparent seat of the lesion in the cord and, in fact, along the whole course of the nerves of the part, and instead of disturbing the little patient in every conceivable way possible in our efforts to counterirritate, we should enjoy absolute rest, and thus avoid any further extension of the inflammatory process. Later, of course, after all inflammation had disappeared, massage, the galvanic current and suitable apparatus to increase the action of the paralyzed parts and aid in regaining some of the loss of power would be proper.

At the conclusion of the reading of the paper those present took part in a very spirited discussion on the various lines of treatment recommended in infantile paralysis, and the consensus of opinion regarding the methods of treatment of this disease was that all were very disappointing, especially as the patient usually recovered with a paralyzed limb, which was always a reminder of the inefficiency of any method of treatment. But the rational lines of procedure as outlined by Dr. Nugent gave more hope of limiting the morbid process than any now in vogue. The thanks of the Association were tendered the doctor at the conclusion of the discussion for his very practical and highly instructive paper. Motion was made and carried that the Association adjourn until the third Wednesday in September.

Correspondence.

PRAISE FOR DR. FERGUSON.

CLYDE, N. Y., Aug. 3, 1902.

Publication Committee New York State Medical Association:

Gentlemen—In the August number of our valuable journal I read the communication of Dr. Sturtevant of July 9th in which he seems to be quite sensitive in relation to the "important omission" of giving credit to Dr. E. D. Ferguson for his herculean labors, to the end that the Saratoga meeting should be the success that it was. I hope it will be shown that Dr. Ferguson does not feel so. Since that "memorable night at the Delevan" in February, 1884, I have "summered and wintered" with the indefatigable Doctor and I say what I know when declaring that to *no man* in the State of New York is more credit due for the present lofty condition and position of the New York State Medical Association, and as a legitimate result the successful meeting at Saratoga. But if it should be proven that Dr. Sturtevant has a good foundation for his criticism I will fasten myself to his side and unite with him in the execration of any element which may desire to pluck a laurel from the brow of him who has been a willing slave to the best interests of our State Association, and never, by it, seeking for honor or fame.

D. COLVIN,

Ex-President New York State Medical Association.

BLACKMAILERS AND ILLEGAL PRACTITIONERS.

Editor NEW YORK STATE JOURNAL OF MEDICINE:

My Dear Doctor—The items of "Illegal Practitioner Fined," on page 220, and "Malpractice Suits Fail," page 225, of the August JOURNAL, call to the attention of Association members, perhaps more forcibly than anything else could, the necessity of the protection to which all careful and honest members of the medical profession are entitled.

If each member would for a single instant stop and consider the expenses that a medical blackmailer may thrust upon a wholly innocent doctor, the advisability of our great Association taking this matter up would be appreciated, and there would be no longer any hesitancy to surround members of the State Medical Association with this bulwark. The physicians referred to in the article did much to sustain the profession in standing up and fighting, but there are many who of necessity must stop and consider the financial possibility of a lawyer, and maybe burden themselves with a term of years' settlement because unable to pay counsel fees. It is for the weak that protection is imperative, and for the strong, surely a convenience.

The prosecution of illegal practitioners, if undertaken by the State Association, would doubtless receive in fines enough to pay its counsel such remuneration as would allow him to attend to these threatened suits for alleged malpractice, in addition to prosecuting these medical mountebanks, than whom there exists no greater danger to the public health. Up at Utica there appears a case prosecuted, whether or not in the name of the State Medical Association is not stated. All these prosecutions should be done by the State organization, and the fines turned into the State Association treasury. With no regular corps of detectives, your counsel, representing the New York County Association, which alone does this work, has been able to collect several hundred dollars in fines; but he cannot enlarge his field, as the work is of necessity confined to New York County.

These two branches of medical work go along hand in hand: protection of your members from assaults from without, and protection to the public from the dangers caused by those who represent themselves, among the poor especially, to be members of your profession. The New York County Association has undertaken both and succeeded.

The coming annual meeting in October, which promises so much for those who are able to attend, should give these matters its most serious and definite attention.

Faithfully,

JAMES TAYLOR LEWIS, Counsel.

Book Reviews.

A SYSTEM OF PHYSIOLOGIC THERAPEUTICS. A practical exposition of the methods, other than drug giving, useful in the prevention of disease and in the treatment of the sick. Edited by Solomon Solis Cohen, A.M., M.D., Professor of Medicine and Therapeutics in the Philadelphia Polyclinic, etc. Volume IX, Hydrotherapy, Thermotherapy, Heilotherapy and Phototherapy. By Dr. Wilhelm Winternitz, Professor of Clinical Medicine in the University of Vienna; and Balneology and Cronotherapy. By Dr. E. Heinrich Kisch, Professor in the University of Prague. Translated by Augustus A. Eshner, M.D., Professor of Clinical Medicine in the Philadelphia Polyclinic. Illustrated. Philadelphia. P. Blakiston's Son & Co., 1902.

The preceding volumes comprising this admirable system have already been reviewed at length in these columns. In each instance it has been a pleasure for the reviewer to commend most highly the subject matter and its arrangement. No other system covers the same ground. The subjects already treated comprise electrotherapy; climatology and health resorts; prophylaxis, personal hygiene and care of the sick; dietotherapy; mechanotherapy, and rest and mental therapeutics. The two volumes yet to be issued will treat of pneumotherapy and inhalation methods and serotherapy, organotherapy, etc.

Volume IX, now before us, fully keeps the promises made for it. The work of the editor and of the translator has been carefully done, and in every respect the book is a credit to them and to the publishers. Part I is devoted to the physiologic basis of hydrotherapy, and contains chapters on the effects of hydrotherapeutic measures upon special tissues and organs; the chemical effects and internal use of water; the reaction; and fundamental principles and practical applications of heliotherapy and phototherapy. Part II describes the technic and the methods of hydrotherapy. Chapters are devoted to general baths; partial baths; the wet compress; wet and dry pack, bags and coils and irrigations; sweat baths, etc. In Part III, special hydrotherapy, its application to acute febrile infectious diseases; intoxications; diseases of the nervous system and of the muscles and joints; of the respiratory organs, circulatory apparatus and digestive and urinary systems are discussed at length.

The supplementary chapters, on heilotherapy, phototherapy, thermotherapy and saline infusions and irrigation indications for the general and local uses of sun-gations are very complete. Under the first head are light; under thermotherapy the physiologic effects of the Turkish bath, counterindications and precautions; hot air baths, local and general; the dry pack, etc., while in the chapters devoted to saline infusions and irrigations considerable space is given to the methods of administration, special indications, contraindications, etc.

Under balneology and cronotherapy, the latter word signifying "spring treatment," to distinguish it from balneo-therapy, or "bath treatment, Part I is devoted to mineral waters and their uses, and Part II to balneo-therapeutic and cronotherapeutic indications for the individual forms of chronic disease.

Many columns of the JOURNAL could profitably be devoted to a review of special subjects treated of in this book, but the space at our disposal makes this impossible. From the outline above given an idea may be gained of the scope and completeness of the work. It is fresh, up to date in every particular and valuable in every department, and no live physician can afford to be without it and its companion volumes.

AMERICAN EDITION OF NOTHNAGEL'S ENCYCLOPEDIA—Diphtheria, Measles, Scarlet Fever and German Measles. Diphtheria. By Wm. P. Northrup, M.D., of New York. Measles, Scarlet Fever and German Measles. By Prof. Dr. Th. Von Jurgensen, Professor of Medicine in the University of Tubingen. Edited, with additions, by William P. Northrup, M.D., Professor of Pediatrics in the University and Bellevue Medical College, New York. Handsome octavo, 672 pages, illustrated, including 24 full-page plates, three of them in colors. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$5 net; half-morocco, \$6 net.

About one-third of the volume, 188 pages, is devoted to a general review of the subject of diphtheria by Northrup, of New York. Diphtheria is treated with a master hand. The bacteriology, pathology, symptoms and treatment are considered in exhaustive detail. The article on intubation is one of the most complete that has appeared in medical literature. Under Treatment the value of antitoxin and the method of its administration are well brought out. The advisability of suggesting nasal irrigation is open to criticism. The dosage of strychnin under the heading of Stimulation is excessive.

Scarlet Fever, Measles and German Measles, by Von Jurgensen, are comprehensive and most valuable contributions to pediatric literature. The monographs furnish most instructive reading to those particularly interested in pediatrics, but would be rather tedious to the general practitioner, who would be obliged to read many pages to get the knowledge desired. Suggestions regarding treatment are in the main excellent. In this country the cold douche (59° F.) as an antipyretic in scarlet fever would meet with serious objections in many American families. The work as a whole is of a high order of merit.

A TEXT-BOOK OF PRACTICAL THERAPEUTICS: With Especial Reference to the Application of Remedial Measures to Disease and Their Employment Upon a Rational Basis. By Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia. With special chapters by Drs. G. E. deSchweinitz, Edward Martin and Barton C. Hirst. New (ninth) edition. In one octavo volume of 851 pages, with 105 engravings and 4 colored plates. Cloth, \$4; leather, \$5; half-morocco, \$5.50 net. Lea Bros. & Co., Philadelphia and New York.

The fact that this is the ninth edition of this work to be issued during ten years is ample evidence of its popularity among physicians and the general appreciation of its author's work as a therapist. He long ago formed the opinion that the ordinary expositions of laboratory work were more a source of confusion than of help to the bedside practitioner, and in the first edition endeavored to present the results of laboratory research in such form that they should have a practical as well as a theoretical value.

In this ninth edition he has carefully revised his former work and also included such new measures as seem to have commended themselves as valuable. He has also included in his list of subjects many of the proprietary remedies where results have seemed to justify their use. The book is divided into four parts, the first of which is devoted to general considerations, such as classifications, compatibility of drugs, indications and contraindications.

The second part is devoted to individual drugs, which are arranged alphabetically for the greater convenience of the reader. This part is treated concisely and with thoroughness, and yet the book is stripped of much of the rubbish that has for years been suffered to accumulate in our works on materia medica. Part three treats of remedial measures other than drugs, and includes antiseptics, antitoxins, the use of heat and cold, counterirritation, the diet of the sick and kindred topics. We are much surprised at the omission of electricity and light from this chapter, for we had supposed that radio-

therapy and the different applications of electricity were at least as much entitled to mention as the virtues of cardamon and tansy. Part four is devoted to a list of diseases extending alphabetically from abortion to worms, with clear and concise methods of treatment, and the value of the book is increased by a complete index of diseases and remedies. The book contains a number of illustrations, and in general appearance is fully up to the standard of its publishers.

A TREATISE ON DISEASES OF THE SKIN. For the Use of Advanced Students and Practitioners. By Henry W. Stelwagon, M.D., Ph.D., Clinical Professor of Dermatology Jefferson Medical College and Woman's Medical College, Philadelphia; Dermatologist to the Howard and Philadelphia Hospitals. Handsome octavo of 1,125 pages, with 220 text-illustrations and 26 full-page lithographic and half-tone plates. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$6 net; sheep or half-morocco, \$7 net.

This handsome volume purports to be for the use of advanced students and general practitioners, and with this end in view devotes an unusual amount of attention to the differential diagnosis, which the author rightly considers the most perplexing part of dermatology. A like importance has been accorded to treatment, the author, in addition to the remedies and methods used in his own practice, having referred frequently to those employed and used by others. The amount of arduous preparation for the work is in evidence on every page in the numerous references to literature and the copious footnotes, but we question whether these references to the work of others will afford much assistance to the reader in attaining a true picture of disease, and we are almost certain that the sections on treatment will often confuse by their very volume. But while stating that the book is primarily intended to be practical, it is not to be understood that etiology and pathology have been neglected. These have been given very satisfactory consideration and present a concise statement of our present knowledge. The illustrations equal, if they do not exceed, those of any of the dermatologies which do not pretend to be atlases. It has always seemed to us, however, that for books of this type the illustrations in black and white convey a much better idea of the clinical picture than those in colors, and the present volume does not cause us to change that opinion.

The work, though originally planned for the student, seems to us much more suitable for the specialist and the more intelligent class of general practitioners. It is hard enough for the student to fix in his mind the ordinary type of disease without bothering about the exceptions, and to remember one line of treatment, to say nothing of half a dozen which may be apparently inconsistent with each other. The same reasoning applies to a host of practitioners. This book will hardly be popular with the men who are satisfied with a name, a picture and a prescription, but will be very valuable to those who have interest enough to read and intelligence enough to discriminate.

Mosquitoes and Malaria.—It is reported from Tokio, Japan, that the military authorities in Formosa are experimenting on a large scale in order to determine the influence of mosquitoes in transmitting malaria. A battalion of soldiers, during the malarial season, was completely protected from mosquitoes for 161 days and it entirely escaped the disease, while an unprotected battalion at the same place had 259 cases of malaria. The exposure to conditions considered incident to the acquiring of malaria was the same in both instances, except for the protection from mosquitoes.

Original Articles.

THE PHYSICIAN IN LITERATURE.*

BY ELIAS LESTER, M.D.,
Seneca Falls, N. Y.

Gentlemen of the New York Medical Association and Friends—I regard it a very great honor to be elected to the high position of presiding over the work of this Association for this, our annual meeting. I do not know of any other temptation which would have drawn me away from the quiet of ordinary life into an arena so public as this than the love and reverence for a profession which I have followed in an humble way for over forty years. Thanking you for this honor, I will ask your indulgence for a moment to listen to a few remarks upon the subject of "The Physician in Literature."

Almost every physician has made a place for himself in the literature of the profession. There are few who have not written something for the help of their brother practitioners, who have not described some case that has come under their care or collected statistics from some passing epidemic to give to some medical journal or to the local press for publication. The eminent physicians and surgeons of our cities, whose field for clinical work has been large, have done much to extend the literature of the profession, and there is not a doctor in the most obscure country town who cannot read lectures and papers written by specialists and thus keep up with the advancement of the profession and become acquainted with new remedies.

But while we are loading the mails with new theories of diagnosis and mechanical improvements, what does literature say of us? During ancient and medieval times the practice of medicine was so surrounded with superstition and mystery that the so called physicians were regarded either with undue reverence or held up to vulgar ridicule; and in later times the barber surgeons and ignorant leeches were objects of toleration rather than of admiration. Thus it is not strange that our earlier writers of fiction have depicted the character of the physician in a way that is revolting to the members of the profession to-day.

Le Sage, you remember, described De Sugarado, who instructed his assistant, Gil Blas, in his theories of practice. Blood letting and the value of hot water as a remedy were so firmly fixed in his mind as the true practice that he wrote a book on their use and slavishly adhered to his theories whether right or wrong.

Smollet, one of the early English novelists, being a physician himself, one would think would have depicted as his characters noble and able gentlemen, but in his "Roderick Random" he portrays the debased condition of the as-

sistant surgeons aboard the English man of war—their persecution and suffering; and selects Morgan, an ignorant Welshman, very uncleanly and vulgar in his habits, for his principal character. In his "Perigrine Pickle," the character of the English physician who accompanied Mr. Pallet and himself through Flanders was that of a pompous, ignorant crank. He it was that gave the dinner of the ancients that amused all Europe.

The characters that Charles Reade has chosen from the medical profession were all scoundrels—men signing away people's liberty by placing them in lunatic asylums, or quacks writing prescriptions for lovesick girls, thus picturing medical men either as rogues or charlatans.

Thackeray in his presentation of characters has been more fair, and the few physicians that he has admitted to his books have been described as men more in keeping with the profession as we consider it to-day.

As Charles Dickens always saw and usually described the ridiculous, we are not surprised that in "Pickwick Papers" he introduces us to a pair of "sawbones," Bob Sawyer and Ben Allen, whose slovenly manner of dressing, convivial habits and exaggerated accounts of clinical and hospital duties disgust even the tolerant Mr. Pickwick. He allows these big talking students to tell absurd stories, like that of the child who had swallowed the necklace, to which to-day no self respecting medical student would descend; still, even these fellows are an advance over the doctors described by Smollet.

Mr. Pilkins, the family physician, and Sir Parker Pepps, the specialist, who were present at the encouchment of Mrs. Dombey, in their grave and well meant advice to Mrs. Dombey to make "an effort" seem ridiculous to the physician of to-day, who is zealous in his desire to alleviate the suffering of his patients, and has many practical resources that he uses to that end. However, Dickens did not confine his descriptions of physicians to bragging students or servile practitioners. Allen Woodcourt, the physician in "Bleak House," is a man whose sterling worth and devotion to his profession compare favorably with the better class of physicians of to-day. As it is more difficult to describe adequately a sensible, thoroughbred gentleman than one full of peculiarities, this dignified, chivalrous man makes a less vivid impression on the reader's mind than the namby-pamby Dr. Chillup, who ushered "David Copperfield" into the world, but the character serves to show us that Dickens knew and appreciated what a true physician should be, and it also shows us that there were such men in England at the time he wrote "Bleak House."

Passing to the short stories, the immortal "Rab and His Friends" of Dr. John Brown gives a vivid picture of hospital life, and in a few graphic words describes students and physicians of the modern type without the humorous

* President's address read at the annual meeting of the Third District Branch.

exaggeration of Dickens or the coarse realism of Smollet. The picture of the eager but sympathetic students and low voiced, skilful surgeon about the operating table where lay the beautiful, patient, old Ailie will always be a classic in the opinion of doctors.

To the physician whose lot it has been to practice in a small town, the country doctor described by Ian McLaren in "Beside the Bonnie Brier Bush" will always be an ideal. To many of us it is given to recall scenes like those described in this story; the long drives or rides in the storm, the grateful family and friends of the patient and even the faithful old horse are to many of us here to-day familiar and pleasant recollections. In this story we find, perhaps, the best description of the self sacrificing, devoted physician in all literature.

It is interesting to notice in passing that even the poets have recognized the work and worth of the physician. Shakespeare, with that skill that has made men speak of him as "the poet of all time," has introduced into the sleep walking scene of "Macbeth" a doctor who seems thoroughly modern in his manner in the sick room. He realizes fully that Lady Macbeth in her mental breakdown is disclosing secrets of a grave nature, and when he makes his report to her husband he tells him that "she's not so sick, but troubled with thick coming fancies that keep her from her rest," and when Macbeth, in unreasonable, regal command says to him, "Cure her of that," and adds:

"Canst thou not minister to a mind diseased,
Pluck from the memory a rooted sorrow,
Raze out the written troubles of the brain
And with some sweet oblivious antidote
Cleanse the stuff'd bosom of that perilous stuff
Which weighs upon the heart?"

with quiet dignity the doctor replies:

"Therein the patient must minister to himself."
And when Macbeth has impatiently answered:
"Throw physic to the dogs; I'll none of it," and half arrogantly, half pitifully appeals to the physician again for help, the doctor closes the scene with the significant and thoroughly modern sentiment of a good physician:

"Were I from Dunsinane away and clear,

Profit again should hardly draw me here."

This character of the doctor in "Macbeth" stands out as almost the only dignified and self respecting physician described in the earlier English literature, and it is gratifying to us to know that even in the sixteenth century—in those days of ignorance and superstition along the lines of medicine—there were men who possessed the true ideal of a physician's duty and dignity.

The energy and power for doing good in the world that characterizes the life of a doctor are vividly pictured by Browning in his poem entitled "An Epistle." Here the young medical practitioner describes the case of Lazarus, whom Christ raised from the dead, to his pre-

ceptor living in a distant city. He attributes the mental torpor of Lazarus to epilepsy and looks on him as a most interesting and unusual case. Browning, however, shows how much worthier, nobler and more useful is the active, keen minded physician than the dreary Lazarus, whose vision of heavenly things has unfitted him for life's work on earth.

Many more examples might be selected from literature to show how physicians as a class have been and still are regarded by the world at large, but these few, I think, show that the profession has advanced with the march of civilization, and that while the unprofessional physician or the quack is a laughingstock, the dignified, earnest physician has been revered and admired in all times.

MODIFICATION IN THE METHODS OF OPERATIVE SURGERY, RESULTING FROM LABORATORY RESEARCH.

BY JOSEPH D. BRYANT, M.D.,
New York, N. Y.

THE relations between the deductions of theoretical inquiry and those of practical demonstration are not matters of recent significance. All along the pathway of human advance are noted conspicuous evidences of these relations in every line of great attainment. In fact, the establishing of important truths and beneficent results demands the cooperative influences of creative thought and demonstrative action.

Benjamin Franklin, in nature's laboratory, with his kite and key, demonstrated the identity of lightning and electricity, the presence of electric current, and laid the foundation of electric utility.

In the same workshop, some years before, Newton conceived the idea that gave birth to determining the power that controls the physical stability of tangible objects—the universal law of gravitation.

The foresight and courage of Martin Luther, stimulated by papal abuses, led to the Reformation and laid the foundation of religious tolerance and popular education throughout the civilized world.

Tyndall's demonstration of the presence of germs in a single pencil of light, followed by Pasteur's isolation of them by filtration of air through cotton; and, later still, the determining by Pasteur, Schwann and Von Dusch that organic matters, like blood, tissue, etc., were preserved from putrefactive changes when protected from the influences of these organisms, caused the wise and thoughtful Lister to guard fresh wounds from deleterious changes by excluding and destroying the agents producing them.

Thus by the creative labors of Tyndall, Pasteur and others, supplemented by the no less im-

portant demonstrative work of Lister, was scientifically laid the foundations of a modified surgical technic, more beneficent in its contributions to relief from the effects of human physical disaster and affliction than that of any other therapeutic conception.

Although it is true that some of the conclusions of these eminent gentlemen proved fallible, yet it cannot be justly denied that their labors in this field laid the foundations of and attended at the birth of modern antiseptic care.

Antisepsis, the older, and asepsis, the younger, of the offspring of these surpassing conceptions will increase in importance in direct proportion to the increase in the number of the human family, and the environments that beget human physical mishaps.

In a broad sense, the modifications of operative method flowing from pioneer thought and labor are almost limitless in their application and quite incomprehensible in the beneficence of their outcome.

It may not be amiss at this time, in passing, to refer to the fact that the reader was not born yesterday. Although superfluous as a statement, yet it may serve the purpose to impress the idea that his early experience in Bellevue Hospital as interne, compared with that of a later experience as visiting surgeon there, emphasizes in no uncertain manner the importance of the findings of laboratory research in the outcome of the treatment of physical injuries within the walls of this institution.

Neither verbal contention nor questionable tradition can enter into the consideration of the differences of the outcome of these periods, since the records of the time and the memory of this participant are agreed.

From October 1, 1870, to April 1, 1871, the reader served as house surgeon in Bellevue Hospital, terminating thereby an eighteen months' service as interne in that institution.

No mention will be made of the associated services, except to say that all suffered alike from frequent invasions of erysipelas, and the almost constant presence of pyemia, usually of the chronic character.

Bellevue Hospital at this time received nearly all of the surgical cases in the city, as the New York, Roosevelt, Presbyterian, Gouverneur and many other of the present important hospitals were yet unthought of or in practical abeyance.

Bellevue only had an ambulance service, established a few months before, at the instance of the then Warden, the late Hon. Thomas S. Brennan. The visiting, numbering many of the best names in the profession, were zealous and effective in their efforts, according to the understanding of that period of professional activity.

Carbolic acid, balsam of Peru, oakum and long established remedies of corresponding nature were freely and constantly employed. Antisepsis, in the present sense of comprehension, was practically unknown and certainly unappreci-

ated; and asepsis, of course, yet further removed from the field of utility.

As an illustration of the status of special scientific investigation on the part of some at this time, I am prompted to repeat the assertion of a distinguished visiting surgeon of my own division, who, while examining a somewhat appalling array of temperature findings in a series of cases of compound fractures, said: "I can tell the temperature as well without as with the thermometer, and before long, young man, its use for this purpose will be discarded." It is with no intention of in any way belittling the well earned reputation of this gentleman that this incident is recalled, but rather to illustrate the then lack of appreciation of the scientific value of accurate records; also to emphasize a truth, viz., that the outcome of close clinical observation begotten of broad and intelligent experience, without the aid of technical means, is apt to be quite as trustworthy as is the outcome of extended scientific technique unfortified with a proper degree of rational observations.

A short time before and during this period the echoes of the practical demonstrations of Lister in wound treatment, based on the laboratory findings of Tyndall, Pasteur and others, began to arouse the favorable attention of many and the forcible opposition of some of the eminent surgeons of the period.

It should be emphasized at this time that then, as to-day, Bellevue Hospital, though of comparatively meager appointments and devoted to the cause of charity, yielded as creditable results to surgical aims as were elsewhere attained.

But enough of this. Please listen to the fact that during my house service of six months not less than nine patients died from pyemia as a complication of compound fractures and of amputations.

Then severe compound fractures and compound dislocations were amputated to obviate pyemia, and thus save the patients' lives, and many of these died thereafter from it, because of primary or secondary involvement.

To-day and long ago only such compound injuries as forbid retention of the damaged parts are amputated, and pyemia so seldom occurs as to escape the recognition of the house staff, and perhaps at first of the modern visiting surgeon as well.

During an active visiting service in the surgical wards of Bellevue Hospital from 1882 to the present time (nineteen years) I do not recall having to deal with as many cases of pyemia as during my previous six months' house service.

During the earlier period, as before remarked, antiseptics were used blindly, empirically, and, therefore, most inefficiently. They were known to be serviceable, but for what exact reasons and to what extent were enigmas.

The following case is historically a matter of some interest, as bearing on the question of the

initial use of the Lister dressing in Bellevue Hospital:

"John McNamara, aged 50, admitted March 11, 1871, compound depressed fracture of the skull from blow with a hatchet; bone elevated; dura not involved; Lister dressing applied."

In the treatment of this case was employed by the reader Lister's lac plaster dressing. It is believed to be the first application to a wound in Bellevue Hospital of the then Lister plan of antiseptic procedure. The patient recovered only after the occurrence of erysipelas.

We are not disposed now to attach much special importance in this line to this particular method of treatment, except in so far as it related to the influence of cleanliness.

To inform those not familiar with the lac plaster and its use, the following statement is added:

Extract from *British Medical Journal*, November 14, 1868, p. 516:

"*Lister's lac plaster* is formed thus: Shellac, 3 parts; crystallized carbolic acid, 1 part. Heat the lac with about a third of the carbolic acid over a slow fire until the lac is completely melted. Then remove from the fire and add the remainder of the acid, and stir briskly until the ingredients are thoroughly mixed. Strain through muslin and pour into the machine for spreading plaster; and when the liquid has thickened by cooling to a degree ascertained by experience, spread to a thickness of about one-fiftieth of an inch. Afterward brush the surface of the plaster lightly with a solution of gutta-percha in about 30 parts of bisulphide of carbon. When the sulphide has all evaporated, the plaster may be piled in suitable lengths in a tin box without adhering, or rolled up and kept in a canister."

The gutta-percha and bisulphide of carbon were applied to prevent the plaster adhering to skin.

The idea was to provide an agent that would not be impaired by the discharges, and when placed around the wound it would render the discharges more or less innocuous because of the local influence of the exhalations of carbolic acid.

This dressing bespeaks the ingenuity exercised by Lister thirty-three years ago in his effort to perfect the method of treatment that now bears his name.

Prior to established antiseptics, the pleura, meninges of the brain and spinal cord, and especially the peritoneum, were regarded as almost inviolable from surgical invasion; and when suffering from involuntary trespass, even of trivial degree, the gravest apprehensions for the safety of the patient were justly aroused. It is not impossible that this sentiment influenced the course of action of eminent visiting surgeons in the following illustrative cases that

fell under the writer's observation during his hospital internship.

History: "A patient with a greatly distended bladder, from retention due to stricture, was given an anesthetic for operative purposes. During the active stage of anesthesia the bladder ruptured into the peritoneal cavity.

"At once the case was declared hopeless, and no active effort was made to forestall the inevitable result, and the patient died eight hours after.

"Autopsy revealed 2½ quarts of light colored fluid in abdomen, bladder collapsed; circular opening at apex one-half inch in diameter bearing no evidences of ulceration."

The present active methods of relief rescue over 60 per cent. of such cases as this.

In 1870, "a rugged patient, 36 years of age, was admitted with extraperitoneal rupture of bladder, from retention due to stricture.

"Free incisions were made to relieve extravasation, and abscesses due to it were opened. No effort was taken to determine and repair the seat of rupture.

"The patient died at the end of six weeks from exhaustion.

"Autopsy revealed rupture of anterior wall of bladder."

The present method of operative practice saves about 70 per cent. of this class of cases.

Penetrating gunshot and stab wounds of the belly received no active interference at this time, opium being the agent employed in the treatment. The outcome and the reasons for it require no comment.

Pistol shot wound of abdomen in hypogastric region:

"Patient, aged 48, admitted November 27, 1870, 2 A. M. Probe entered 1½ inch. Bloody urine. Soon after admission, pulse, 76; temperature, 98½; respirations, 30.

"Treatment: Drainage of bladder by catheter and abundance of cups to kidneys. Gradual failure until died 4.30 A. M. on following day.

"Autopsy: Ball passed through several knuckles of small intestine, penetrated bladder posteriorly, entering obturator internus muscle. Several pieces of clothing found in bladder. Considerable clotted blood in peritoneal cavity."

Modern methods of procedure in gunshot wounds of the intestines result in 30 per cent. recoveries instead of 95 per cent. deaths, following the old expectant plan of treatment. From 13 to 40 per cent. of stab wounds of abdomen recover now from this method.

I recall, about 1875, a consultation of the surgical visiting staff in a case of intestinal obstruction.

History: "Patient, æt. 34, April 22, 1875.

"Past history of 'inflammation of the bowels' nineteen years previous, following childbirth.

"Present history: After having had no movement for two days was seized with cramps, five

days after which she entered hospital, distended, tender and vomiting, having had no movement for seven days, vomiting bile and mucus. Pulse, 108; respirations, 15; temperature, 100½.

"Distention became extreme, vomiting continued, no movement of bowels and on fourth day after admission a consultation of physicians and surgeons was called.

"It was concluded that there was a constriction caused by some bands of adventitious tissue, the result of an old peritonitis. It was decided to perform gastrotomy to relieve the constriction; and that immediately before the operation, with the patient completely anesthetized, a cannula of an aspirator should be plunged into the abdomen at various places, in order that in this way exit might be given to the gases.

"This being done and followed by the desired result, the operation was performed in the following manner:

"Abdomen opened and adhesions around transverse colon and sigmoid flexure torn up.

"Patient died ten or twelve hours after operation.

"Autopsy: Peritoneal cavity contained moderate amount of blood stained serum. Recent peritoneal exudation. Large intestine distended and contained some feces. A loop of small intestine near ilio-cecal valve was strangulated over a band. It was filled with fecal matter."

Modern methods of practice rescue from 20 to 50 per cent. of these cases as they present themselves for relief.

It is hardly required to further multiply personal examples substantiating the fact that the important operative practice of to-day represents largely the methods born of human ingenuity and courage fortified by the outcome of modern laboratory research.

Then, patients with rupture of the spleen, kidneys, intestines, etc., and with serious structural and traumatic injuries elsewhere were left to recover through nature's resources, to die unrelieved, or in the latter class subjected to destructive operative practice.

Now, the knowledge gained from laboratory study of the fluids and solids of the body enables us to exercise scientific prudence in determining the operative cases, and in indicating the time when operation may be done.

Now, antisepsis and asepsis point the way of safely attaining operative aims, by the establishing and maintaining of absolute cleanliness of the operative field, and of everything coming in contact therewith at all times.

Now, the dangers from shock, hemorrhage and sepsis, the old and indefatigable trinity of surgical disaster, are met with a degree of precision that has quite shorn them of their dread uncertainties, and consigned them to the field of rational scientific deduction.

The outcome of surgical effort, guided by the

high order of laboratory knowledge, and of human courage and experience, have established an era in surgical attainment in the relief of human suffering and physical shortcoming, akin in the medical world to that of the fulfilment of the beneficent sayings of the prophets in the spiritual.

However, it should not be forgotten that practical effort does not necessarily require the guiding hand of laboratory research in all instances, and also that a too great heed to its admonitions may rob a patient of valuable chances of relief.

Time will not permit, nor does the occasion seem to me to demand, that I shall enter into the consideration of the specific modifications of methods of operative practice arising from bacteriological and pathological research. These are already well expressed.

It is possible that too much time was given to the somewhat striking examples of the *then* in the earlier and the *now* in the later part of the paper. If so, in the former instance the course was prompted by the fact that nowadays one not infrequently hears from those of the more recent periods of surgical activity the statement, "I've been told that gunshot wounds of the belly were untreated formerly," and that "intestinal obstruction was not operated on then as now," and other remarks like unto these.

Yes, my friends, such was the case, and had you been living then you also would have dared no more than they, and, like them, would have regarded your efforts, as you may now, the exemplification of the best that is known.

Yale Medical School's New Clinic.—The new clinic building of the Yale Medical School, New Haven, Conn., which has just been completed at a cost of \$96,000, is the gift of Mrs. T. G. Bennett, whose husband for a number of years was a member of the Yale corporation. She gave the clinic in memory of her mother, Mrs. Winchester, who, ten years ago, gave to Yale the electrical laboratory known as Winchester Hall. It is expected to erect three other buildings to complete the new medical school—one for anatomy and pathology to cost \$132,000, another for offices and lecture-rooms to cost \$56,000, and the third for chemistry and physiology to cost \$79,000. * * *

Diseased Immigrants.—The Government may be compelled to establish a detention hospital at Niagara Falls. The recent capture by the immigration officers of diseased foreigners who were attempting to enter the country has attracted the attention of the Health Department, and an appeal has been taken to Washington. Many immigrants with trachoma are attempting to enter the country, and arrests have been made and the suspects isolated until their cases are finally disposed of at Washington.

PELVIC INFLAMMATION IN THE FEMALE—ITS DIAGNOSIS AND MANAGEMENT BY THE GENERAL PRACTITIONER.*

BY ABRAM BROTHERS, B.S., M.D.,
New York,

Visiting Gynecologist to the Beth Israel Hospital; Adjunct
Professor of Gynecology New York Post-Graduate
Medical School and Hospital.

AS a large number of female complaints either begin or are, sooner or later, associated with pelvic inflammation, it may be well before proceeding further to endeavor to define our subject. What, then, do we mean by pelvic inflammation? Twenty years ago Thomas described it thus: "Let the reader suppose that these pelvic organs were fixed in their place by having a fluid mixture of plaster of Paris poured around, among, and over them, which had afterward become solid." That was the picture of pelvic inflammation in those days and, from contact with elderly medical men whom I meet occasionally taking postgraduate courses in gynecology, that is very much the prevailing impression of a certain proportion of the medical profession of today.

To the specialist the term "pelvic inflammation" is a vague appellation of some pelvic pathological state. It means nothing in particular. Pathologically, the uterine and tubal interior may be the seat of the lesion and constitute the "pelvic inflammation." Or the ovary, the pelvic peritoneum, the pelvic areolar tissue, or the lymphatics of the broad ligament may be involved. Hence, writers describe "pelvic inflammation" under these various headings. Freund adds a special variety of parametritis, which he calls "parametritis atrophicans," and Schultze calls attention to another special form of parametritis, involving the uterosacral ligament, which he calls "parametritis posterior."

From the standpoint of the clinician, Pozzi subdivides pelvic inflammation into four types: 1. Serous perimetrosalpingitis. 2. Pelvic abscess. 3. Phlegmon of the broad ligament. 4. Diffuse pelvic cellulitis. But, as one writer very properly says, "It were just as rational to consider the peritonitis, the cellulitis and the abscesses complicating an appendicitis as independent of the inflammation of the appendix as to separate these same conditions from the salpingitis." (American Text-book of Gynecology.)

Some of the latest writers approach the subject of pelvic inflammation from the bacteriological standpoint. As Howard Kelly puts it, "The first effect of the entrance of the infecting organism into the uterine tube is to set up a reactionary inflammation which, as a rule, tends to close the fimbriated end. In mild cases the inflammatory condition may pass off without the production of a pyosalpinx; when the infection is more severe pus forms in the tube, and may discharge into the uterus, or the fimbriated end may

rupture and permit the escape of pus into the pelvis over the ovary, producing perioophoritis and pelvic peritonitis, if it is a gonorrhoeal infection, or a general peritonitis, if more virulent, pus-producing organisms are present."

The routes of infection are as follows: 1. By extension from the uterus to the tubes and general peritoneal cavity. 2. By contiguity of inflamed uterus and tubes, into the connective tissue of the broad ligament. 3. By means of the lymphatics and blood vessels. While the lymphatic route certainly accounts for some of the most virulent forms of streptococci infection, the old theory of de Mussy and Championnière, most recently advocated by Pryor, that "broad-ligament cellulitis is broad-ligament lymphangitis" is not sufficiently sustained by demonstrated proofs (Pozzi, Gebhard), and hence the conditions known as "cellulitis," or "parametritis," or "pelvic abscess" are recognized and included by nearly all writers on gynecology under the heading of "pelvic inflammation."

Pelvic inflammation, then, does not mean any one single condition, but refers usually to an infection arising in the uterine interior and resulting in a number of simultaneously existing pathological lesions. In all cases there is or has been a focus or point of origin which may continue to be present and complicate the clinical picture. Thus, frequently an endometritis, purulent salpingitis or appendicitis will be associated with a localized or general peritonitis, cellulitis or lymphangitis.

Pus in the pelvis is a common termination of pelvic inflammation. In 86 cases observed by the writer on the operating table, the pus was present in tubes, ovaries or both in 57 cases, and in the pelvic connective tissue or pelvic peritoneum in 29. Hence, twice as many pus cases were found in the tubo-ovarian tract as in the pelvic connective tissue and peritoneum.

The frequency of pelvic inflammation in the female is so great that Bandl tells us that in more than half of the autopsies on child-bearing women remains of circumscribed peritonitis are found.

The etiology of pelvic inflammation may occasionally be traced to traumatism, to sudden suppression of the menses, to twists or irritations of intrapelvic tumors, to dysmenorrhoea, to pessaries (Fritsch), to ectopic gestation, etc., but we fall back involuntarily upon the two bacterial causes indicated years ago by Semmelweiss and Noeggerath—namely, puerperal and gonorrhoeal infection.

The prevalence of gonorrhoeal over puerperal forms of pelvic inflammation is not established, even though the writer, in 56 pus cases which required operative intervention, was able to readily trace 32 to a gonorrhoeal origin. The general practitioner will probably find the majority of his cases to be of puerperal origin.

Pain is the cardinal symptom of pelvic inflammation, and depends upon the involvement of

*Read before the New York State Medical Association, October 22, 1901.

the peritoneum of the pelvis. In the absence of pus, irregular hemorrhages and leucorrhœa may be the only concomitant symptoms.

In acute conditions the intensity of the pelvic pain may vary from the mildest expression to the greatest possible physical agony. The locality of the pain will naturally depend upon the site of the trouble, although in rare instances I have found a pus tube or even an ectopic gestation on the side opposite to that to which the pain had been referred. Ordinarily pain referred to one or the other side of the pelvis, to the appendicular region or to the vicinity of the bladder or rectum (especially when the functions of these viscera are simultaneously disturbed) will sufficiently indicate the location of the active seat of the inflammation.

Of course, in acute cases general disturbances will usually be present, such as fever and rapid pulse, but the practitioner experienced in pelvic inflammations will not be misled by the subsidence or absence of these symptoms, as in a respectable minority of cases the inflammatory process may actually go on to pus formation with a normal temperature. Such pus cases, without rise of temperature, I have repeatedly seen in both the puerperal and gonorrhœal varieties of pelvic inflammation. The rule, however, is that as long as bacterial absorption goes on fever will be present, and usually associated with chilliness and sweating. In about one-half of the chronic cases, according to Kelly, pus in the pelvis spontaneously becomes sterile through the death of bacteria. This fact was also pointed out by Prudden more than a dozen years ago.

Acute cases of pelvic inflammation ordinarily terminate in complete recovery. Exceptionally do they pass into the chronic state. Very rarely do they terminate fatally when under proper care. Of course, we constantly see cases of acute septic infection of the pelvis which, by extension to the general peritoneal cavity, result in death. Or a rapid intraperitoneal rupture of an active pus sac may set up a general peritonitis and lead to death. Or slow exhaustion and death may follow the rupture of a pus sac in other directions. But if modern gynecology can accomplish anything it is that, in many of these cases, lives which formerly were surely doomed can be saved by timely and proper treatment.

In the subacute and chronic forms of pelvic inflammation the pelvic pain is again the distinguishing clinical feature of the disease. In these cases, however, the pain is of an intermittent character, and may be entirely absent for a few days, weeks, and even months at a time. In fact, at autopsies extensive inflammatory changes are frequently found in subjects whose histories showed nothing to attract attention to the pelvis. These are ordinarily walking patients. But every now and then a slight exertion—a sudden movement, walking beyond a certain limit, lifting a baby or bundle, washing,

scrubbing, sewing at a machine or sexual intercourse—will result in relighting the pelvic inflammation, and often put the patient to bed. The other symptoms—cystic and rectal tenesmus and disturbances of the menstrual function with leucorrhœa—may again manifest themselves as in the acute cases, but normally in lesser intensity. Fever is not apt to be present in subacute and chronic cases.

The general health, however, suffers in the course of time. The nervous system is rapidly undermined by the constant pelvic irritation. The appetite and digestive functions become more or less disturbed. Dysmenorrhœa, irregular uterine, hemorrhages, leucorrhœa and dyspareunia are complained of. Finally, it is from this class of patients that the most obstinate cases of sterility are recruited; and, unfortunately, when pregnancy does take place in many of these women it is of the ectopic variety.

Once pelvic inflammation assumes a chronic form it is the exception for the patient to regain a perfectly normal condition of her pelvic organs. She may cease to complain of her symptoms, but usually some souvenir of her old inflammation will be left *in situ*. It is not rare for the general practitioner of medicine to meet with pelvic exudates, which apparently disappear in the course of months. Fritsch refers to exudates which take from a year to a year and a half to get well, and Bandl records a case which took twelve years to disappear. My own conviction of such cases, founded on observations made on the operating table, is that nearly all exudates which persist for months or years contain a pus nucleus, and I am also convinced that where the purulent focus is small it may undergo spontaneous absorption. This, however, is the rare exception. Ordinarily persistent exudates, when not absorbed, become purulent, and Fritsch refers to a case which ran nineteen years before enlargement of the exudate and fever gave indications of pus.

The course of chronic cases of pelvic inflammation, however, is rather of an interrupted character. When not subjected to surgical treatment these women turn up every few months or years to be "patched up" by local treatment for a fresh period of relief. I know several women who have followed this plan, chiefly because of fear of the knife, partly because they were so advised by the family physician, and who are apparently content to go through life in this manner. Occasionally, however, the pus collections present in many of these women rupture into the rectum, bladder, peritoneal cavity or other parts, and these poor sufferers make an unexpectedly hasty departure from this life.

The diagnosis of the general condition known as "pelvic inflammation" is exceedingly simple. With the exception of tuberculosis, the history of the disease will start from a traumatism, from marriage, from a certain miscarriage or labor, from a trifling operation about the genital tract

—perhaps from a local examination in a doctor's office or at a clinic. In all of these ways traumatism plus infection will usually be the starting-point of the disease. The local examination in very recent and acute cases may be limited to noting the tenderness, tympanitic distention and rigidity of the suprapubic region. As Skene properly points out, bimanual examination in such cases is apt to reveal nothing, and, if made, should be done with the greatest gentleness. Indeed, frequent local examinations in these patients are apt to aggravate the disease.

In most of these cases, however, sooner or later, the carefully made local examination will detect an inflammatory mass, or tumor, and, with this, tenderness and immobility of the pelvic contents. The mass or exudate at first is hard and may entirely disappear as the patient recovers. Frequently enough, however, it gradually forms a fluctuating soft tumor as pus develops. Persistent hardness of the mass, however, does not exclude a pus focus, and the careful practitioner will either introduce an aseptic aspirating needle or consult an experienced specialist before making the diagnosis of chronic pelvic exudate, or chronic cellulitis, or chronic parametritis.

As this paper is intended rather for the general practitioner than the specialist, and as the non-surgical treatment of the various conditions included under the term "pelvic inflammation" is practically one and the same thing, no attempt will be made to enter into the diagnosis of the individual lesions, which is more or less unsatisfactory, even by trained specialists. The presence or absence of pus, however, constitutes a sharp line of demarcation between the medical and surgical treatment of these cases—whether the patient is to continue alone under the care of the family doctor or in conjunction with the specialist. The persistence of fever, chills and sweating in connection with the pelvic fluctuating mass leaves no room for doubting the presence of a pelvic abscess. The severe subjective symptoms with a persistent, hard, boardlike mass in the pelvis, frequently mean a pyosalpinx. An irregularly hard and soft sensation to the pelvic roof may indicate circumscribed purulent foci which later merge into one single abscess (Gebhard). Or to those practitioners who make frequent use of electricity, Massey's modification of Apostoli's diagnostic test may be called into use. According to these authorities, "an intolerance of intrauterine galvanic application points so unerringly to encysted pus as to become a means of establishing an exact diagnosis."

The simple, non-purulent, inflammatory conditions in the female pelvis—salpingitis, oophoritis, cellulitis, pelveoperitonitis—become in their later stages frequently complicated with pus, and the careful practitioner will be on the qui vive to determine the transition from the one to the other stage. For all practical purposes it is

a good rule to remember that persistent inflammatory tumors usually contain pus and are only amenable to surgical treatment.

Ordinarily an acute pelvic inflammation following childbirth terminates in complete recovery. Too much stress cannot be laid upon this observation, which I am sure will readily be confirmed by every practitioner of even moderate obstetric experience. In these cases, in spite of more or less fever, pelvic pains, and perimetric exudate, complete recovery is the rule. In a very small proportion of cases permanent lesions giving rise to subsequent invalidism remain. How this can be avoided by treatment in many of these women will be referred to later on.

In pelvic inflammations subsequent to gonorrheal infection a purulent condition of the tubes may be present very early in the disease. The frequent relapses are characteristic of gonorrheal tubal disease, so that surgeons are divided among themselves whether, in removing such a pus-tube, it is not better to remove the opposite tube, or, when both are affected, whether it is not to the patient's interest to remove the uterus at the same time.

If left to nature, in the absence of pus, the symptoms due to chronic pelvic inflammation gradually subside by the time the menopause is reached. Still I have met with exceptions to this rule, and in one instance was requested by the physician in charge to remove the pelvic organs in a woman past the menopause who had suffered for twenty years from pelvic inflammation.

The treatment is preventive, palliative, or radical. Of course, where the husband becomes infected with gonorrhoea—and such cases are not very rare—there is only one course to pursue, irrespective of consequences, and that is to get him to make a clean confession to his bed-fellow, with the full explanation of the dangers of gonorrheal infection in the female. In the case of young men having marriage in view, the attending physician must make sure of the absence of gonococci in the slightest gleet discharge before giving his consent to such marriage. Once the uterus has become infected with the gonorrheal virus, I cannot agree with those authors who advise immediate curettage. I have seen one fatal case which followed this procedure, and have been told by a colleague of mine of a most violent pelvic inflammation started up under similar circumstances. When the case has become chronic, I know of no objection to curettage for gonorrheal endometritis.

Preventive treatment in the puerperal state depends entirely upon asepsis in the management of abortion, miscarriage and childbirth. Once the uterus has become infected and symptoms of sepsis have appeared, the sooner the uterus is cleaned out the better. Simple intrauterine douching may be sufficient; curettage will usually be necessary. In a large number of

infected cases which were admitted during the past year to the Tarnier Clinic in Paris not a single patient was lost by following this plan (Budin). The advice of Henrotin to make vaginal incision and drainage in acute cases of pelvic inflammation has not been generally adopted. It has been rejected after trial by such a skilful gynecologist as Boldt, and although regarded from an expectant standpoint by Kelly, he does not recommend its use. Pryor, on the other hand, is very enthusiastic in its advocacy. As for myself, I have used the method in one case, with temporary relief, the patient dying subsequently.

The presence of pus constitutes the sharp line of division between the medical and surgical treatment of pelvic inflammation. The former line of treatment clearly belongs within the domain of the general practitioner. It is the palliative treatment. Circumstances, however, arise on account of which a certain proportion of these cases fail to be benefited by the measures employed, and then these cases, as well as all pus cases, properly go to the surgeon for operative treatment.

As stated elsewhere, for purposes of palliative treatment, it is not essential to distinguish the various lesions present in non-purulent pelvic inflammation. This is the field which properly belongs to the general practitioner, and a few words may be permitted regarding the various therapeutic measures at his command.

In acute inflammatory processes the first essential is absolute rest in bed. By this single measure alone the large majority of cases will get well. Without it all the other measures combined may be without avail. The rest must be absolute, as the pelvis must be kept as fixed and immobile as though it were a fractured limb. To maintain this rigid horizontal decubitus, the assistance of intelligent trained nurses is requisite to properly look after the smoothness of the bed, to keep the patient's back rubbed regularly with alcohol in order to prevent the formation of bed-sores, and to attend generally to the wants and comforts of the invalid. Examination by the physician must be made only once every few days, and under no circumstances is the use of specula or local vaginal medication permissible.

Ice externally, applied in bags and kept up more or less continuously, ranks next in importance. Its employment requires care, as I have seen extensive sloughing of the integument follow its use. The same accident frequently occurs with the use of hot applications, which sometimes give relief in the subacute and chronic forms of pelvic inflammation.

Although Pozzi, in his model gynecological pavilion at the Hôpital Broca, which I visited several years ago, has a special arrangement for the use of hot baths and hot vaginal irrigations which can be kept up for hours or even days at a time, the use of hot douches in the acute

stages of pelvic inflammation may sometimes result in more disturbance than benefit to the inflamed pelvis. In fact, some of our leading specialists dispense with their use altogether.

There is not so much objection to their use in the subacute and chronic stages of pelvic inflammation. But they must be given properly, with the patient on her back, preferably in the warm bath, and must be kept up for fifteen minutes at least. Or the metal bedpan may be used by walking patients who, for this purpose, lie on a couch and allow several gallons of hot water (at about 110° F.) to slowly flow into the vaginal canal. I have frequently had such douchings repeated every three to six hours where the patient was more or less incapacitated and a good nurse was at hand.

Local treatment is applicable to subacute and chronic cases, and when it fails a prospect of ultimate cure will still be possible through surgery. Chief among the local measures is the use of tampons saturated with glycerin, boroglycerin, thiol, ichthyol, etc. As a matter of fact, after many years of work with large dispensary material and private cases, I have come to the conclusion that, when benefit follows the use of tampons, it is not so much because of the nature of the medicament employed as of the support which the tampon gives to the heavy uterus dragging on inflamed broad or sacro-uterine or round ligaments, and the relief given for the same reason to swollen ovaries, inflamed tubes and intraperitoneal adhesions. Exceptionally, however, I have known tampons to start up a violent pelvic cramp, simulating a labor-pain in its intensity, and in such cases, of course, tampons are contraindicated.

Counter-irritation to the vaginal vault by means of iodine may be employed at times in cases of salpingitis or pelveoperitonitis, with the object of relieving pelvic pains and perhaps of checking the progress of the disease in subacute cases. I have used blisters in cases of non-purulent exudates, and agree with Mundé that at times they are distinctly beneficial. They are applied over the suprapubic region on one or the other side, according to the location of the exudate.

Massage is seldom used by specialists in this country, and ought never come into general vogue, in spite of the teachings of Thure Brandt and his followers. Continental authorities like Olshausen and Fritsch are partly or entirely opposed to its employment. Indeed, Fritsch maintains that physical disturbances may follow its employment in hysterical women. I am inclined to agree with one writer who says that "massage has no place in acute cases, and is too dangerous for the general practitioner to apply in any case."

Similarly, the use of electricity is contraindicated in acute cases of pelvic inflammation. In subacute and chronic forms, in which pain is the chief symptom, I am sure that I have seen

benefit follow the use of the galvanic current (of about 15 or 20 milliamperes with the positive vaginal electrode and a large, flat, abdominal sponge) applied several times weekly during the intermenstrual period. In the absence of a galvanic apparatus, or alternately with it, the faradic current applied with the same electrodes may also prove serviceable. At most, however, electricity is of very doubtful permanent value, and probably often owes its success in great measure to the element of "faith cure."

Medication should be strictly limited to indications. In acute cases the fever may be met by the cold sponge, quinine, or the coal-tar products. The free use of opium for the relief of pain is just as clearly indicated in the acute forms of pelvic inflammation as it is contraindicated in the chronic forms. In this position I am sustained by our lamented and distinguished colleague, the late Dr. Skene. Cases of chronic pelvic inflammation in which the suffering is so intense as to require the frequent use of opiates are clearly not cases for the general practitioner, but pass over to the territory of the gynecologist for radical procedures.

The indications arising from the patient's digestion, nerve state, blood condition, and general health will be met by the general practitioner as they arise. In fact, the careful family physician will perhaps be better able to cope with the symptoms arising from a disturbance of the general condition of his patient than the specialist.

Although the whole chapter on the subject of the surgical management of pelvic inflammation has not yet been touched in the present paper, only the slightest allusion to it will be made, for the reason that I have only attempted to sketch briefly the management of pelvic inflammations as they are met with in the domain of the general practitioner.

The moment the diagnosis of pus in the pelvis is made, the patient ought to be placed under the care of the gynecologist, for, as Kelly properly says, "active surgical interference is the rule in 99 out of 100 cases."

In bringing this concise paper to a conclusion the writer feels that he has only reflected the views of every intelligent general practitioner of medicine. But if he has struck the happy medium between the surgical extremist, who finds a laparotomy necessary in every case of pelvic inflammation in the female, and the extremist in conservatism, who undertakes the cure of every case by non-surgical methods, the valuable time of the Association will not have been taken up in vain.

Verdict in Favor of Dr. Moras.—Dr. Edmund R. Moras was given a verdict against the West Chicago Street Railway Company of \$45,000, for injuries sustained by him six years ago, which resulted in the amputation of his left arm at the elbow.

THE BROAD THERAPEUTIC APPLICATION OF ERGOT.

BY ALFRED LIVINGSTON, M.D.,
Jamestown.

THE therapeutic use of a decoction of the smut of rye for the purpose of contracting the womb in the inertia of labor, or after the emptying of that organ, is ancient. The use of the modern extract of ergot to control hemorrhage from the lungs, stomach, kidneys, bladder, etc., is one of the many developments in therapeutics of the last quarter or third of a century. These two general purposes, uterine contraction and hemostasis, comprise essentially the therapeutics of ergot as applied by the mass of the medical profession to-day.

The first-mentioned use of this drug I was taught by my professors of materia medica and obstetrics—the use as a hemostatic I learned later. While assistant to the late Dr. John P. Gray, in the State Lunatic Asylum at Utica, I was taught to apply it in a general way to the brain disorder in insanity. It was then only used in a fluid or solid extract given by the mouth. During my incumbency at Utica I experimented somewhat with solutions for hypodermic use, and this led to an incident which I will relate, because it was the basis of the gradual development which followed, in my own theory and practice, up to what I now designate as the broad therapeutic application of ergot.

Soon after I removed from Utica to Philadelphia I was called late one evening to an old man, whom I found lying back in a great arm-chair, retching as if he would bring something from his very boots. I had never before, nor have I since, seen such retching. I learned that after eating his usual supper (in which there was nothing to account for the disturbance of his stomach) he had gone out upon the street, but soon returned and began to vomit, and after thoroughly emptying his stomach he had gone on retching. It was 11 o'clock when I was called to him, so that he had been vomiting and retching for about four hours. He was very plethoric, and so turgid were the vessels of his head and face that the frontal vein was as large as my little finger. I could get no information from him except that between hisretchings he muttered the word "pain." His housekeeper could give me no light on his case. His pulse was exceedingly tense and bounding, and I feared every moment that there would be a break of a cerebral vessel. As I watched him I could only conclude that whatever the primary cause of the circulatory disturbance, the horrible retching was due to the intense cerebral or cerebellar congestion. It happened that only a day or two before I had prepared in a drug store a half-ounce of a solution of ergot for hypodermic injection. I happened to think of this ergot and immediately filled my syringe and injected the solution into his arm. Before I

had emptied the syringe I observed a lessening both of the retching and of the vascular tension. Within twenty minutes he was quiet and comfortable, and his pulse was soft and the congestion of head and face had completely disappeared. The tornado of circulatory disturbance had passed. He was, of course, very much exhausted. The excitement over his condition had quite filled the room with street loungers, and I detailed half a dozen of the men to undress him and put him to bed. Although he then seemed perfectly comfortable, as a precaution against being called to him during the night I gave him another syringe of the ergot before I left him. I was told the next morning that within fifteen minutes after my departure he fell asleep and slept six hours before awaking. A few weeks later I was called to him again early one morning and found him in extreme nervous excitement and mental depression. This time there was a very apparent cause. The old man had just discovered that his *escritoire* had been pried open and a wallet containing nearly a thousand dollars had been stolen. I again applied my ergot, with the result of calming the poor man, although it did not restore his money.

The magical action of the ergot in controlling the greatest disturbance of the circulation I had ever seen, in the first instance, and, in relieving an intense nervous excitement from a moral cause, in the second instance, impressed me so profoundly that I was led to experiment with the drug in other states of circulatory disturbance and in conditions that we denominate nervous. Gradually, through years of practical experience, there developed in my mind a theory of its action which I now believe to be rational, and I have marveled many times that I had not seen in the beginning, or more nearly in the beginning, what has now long seemed so plain. Ergot contracts unstriped or involuntary muscular fiber. It, therefore, contracts blood vessels. It does not, however, contract all blood vessels alike or equally. If it did there would remain the same relation of disturbed equilibrium. Ergot contracts those blood vessels most which are relaxed, and so contain too much blood. I believe it to be the greatest equalizer of the circulation which our present *materia medica* gives us. The most magical and beautiful effects of ergot are seen in acute or recent disturbances of the circulation. If a congestion has existed in any locality for some time there is then something more than a congestion—a tissue alteration has occurred which will not be immediately corrected by the equalizing effect of ergot on the circulation; at the same time the securing, to the greatest possible extent, the equilibrium of the circulation is the best means toward bringing about those tissue changes. This suggests the alterative action of ergot, for if a proper supply of blood is brought about and continued in any part which has been congested and as a result of the congestion has structurally altered, those oc-

cult vital processes that belong to that part will restore the normal structure.

Again, congestion interferes with function, whatever the organ, from skin to brain. If the congestion be acute, recent, the hypodermic application of ergot to the general circulation will immediately restore the accustomed function. I have seen cases of aphasia and hemiplegia relieved completely within half an hour by one or two hypodermic injections of ergot. In the same manner I have often arrested convulsions and intense states of nervousness bordering on the convulsive. Even the extreme cyclonic disturbance which we call hystero-epilepsy has yielded at once and permanently to ergot. I believe that nearly all symptoms that come under the general term nervous are due to irregular blood supply, and in all such ergot will give more or less relief, dependent upon the acute or chronic character of the case. The nervous agitation of the alcohol or opium habitué will be relieved by ergot more promptly than by any other means of which I know. In treating the habit cases I immediately and wholly discontinue the narcotic, regardless of the extent to which it has been used, and never substitute any other. Within twenty-four or thirty-six hours after such discontinuance the extreme nervous reaction will occur. As soon as the case comes under my care I begin to administer ergot hypodermically and apply galvanism to the cervical and spinal sympathetic centers, and in the worst cases I have ever seen a period of forty-eight to seventy-two hours has sufficed to restore nervous equilibrium, after which the treatment of such cases is easy to the physician and comfortable to the patient.

In a case of opium poisoning three grains of morphia had been administered hypodermically to relieve an intense pain. Two physicians had worked over him for hours before I was called to see what my battery would do for him. I found him lying upon the floor limp, cold, cyanosed, absolutely pulseless; even the heart-beat could not be clearly detected. A careful examination discovered three or four respirations to the minute. I had him lifted upon a couch and applied the full strength of a large faradic coil, with at first no perceptible effect, but after a long time there were contractions of the pectoral and intercosta muscles, and still later he winced as the electrode was drawn over the chest or side. Finally he cried out from the pain of the treatment, but the moment the application was suspended he relapsed into the former stupor, and no other means except the strong current aroused him in the least. While I was treating him I asked myself, "What is the condition that produces this universal paralysis?" But one explanation occurred to me—intense cerebral and pulmonary congestion and lack of oxygenation. With that thought came the idea of ergot to contract the dilated vessels. I immediately suggested this theory and measure, but one of the

two physicians would not consent to it. He believed, as we all had believed, that the man would die, and he argued that if we gave him another hypodermic and he did die, the friends would believe that we had killed him. I was obliged to yield for the time, and went on with the faradism. A little later this physician was obliged to go to his office, and after he had gone I gave, with the approval of the other doctor, a hypodermic injection of ergot. Within twenty minutes the patient was sitting on the couch without support and conversing with us as clearly as if he had never been influenced by an opiate, nor did he relapse in the least degree from that moment. His life was saved by ergot.

From that time to this I have never given a dose of morphia hypodermically (which I seldom use) without combining it with ergot to prevent the congestive action of the morphia, and I do not have the unpleasant after effects of that drug which I used to see. I say that I seldom use morphia, and the reason is that I have found that in the majority of cases of pain in which morphia is ordinarily used to give relief, ergot alone does relieve the pain. I therefore conclude that pain is not so much "the cry of a nerve for food" (as some one has poetically declared) as it is the cry of a nerve because overloaded blood vessels are squeezing it too harshly.

In a case of appendicitis, diagnosed as such by Dr. Roswell Park, of Buffalo, ergot promptly relieved the intense pain which morphia had not soothed. In the same case the pulse rate was reduced forty beats in half as many minutes. I have often observed the calmative effect of ergot upon heart action, both in reduction of number of pulsations and in their quality, producing in a short time a soft and regular pulse. One of the most satisfactory effects of ergot I have seen several times in that distressing condition called angina pectoris. In every case in which I have used ergot hypodermically relief has been marked before I had completed the injection.

The same satisfactory result has followed the use of ergot in asthma. When I speak of the use of ergot it may be understood that I always mean the hypodermic injection of the drug unless I particularly specify otherwise. There is no comparison between the effect of ergot administered hypodermically and its administration by the mouth. Outside of the class of emetics it is one of the most offensive drugs to the stomach, and no assurance can be felt as to the extent or promptness of its absorption. On the contrary, I have never seen any ill effects from ergot administered hypodermically, although I have given to the same patient more than one thousand hypodermic injections of ergot. I have frequently given four syringefuls (each containing three grains of the solid extract) in succession as rapidly as I could refill my syringe, as I once did in the case of the late Dr. Waterhouse, to whom I was called by Dr. Wiggins,

who had been attending him several days in a so-called uremic attack. When we entered the room the patient said, "I cannot see you; I cannot see anything." His head and neck were very much congested, and we both regarded his condition as serious. In addition to the ergot I thoroughly drycupped the cervical region, and as he had been constipated for some days I gave him a mercurial purgative, followed by a saline. You will appreciate the relief given him when I tell you that the next day he came to town and attended to his duties as pension examiner in company with his confrères of the Board.

There is one word that is so intimately associated with the effect of ergot that I have heard it uttered by my patients thousands of times. That word is "comfortable," and it implies and expresses as well as any other word the subjective sense experienced by the patient after a proper amount of ergot has been administered. The pain, or nausea, or nervousness, or apprehension, or palpitation, or sense of weakness, which had existed are gone, and the patient says, "I am comfortable." In this respect it is much more satisfactory, both to patient and physician, than is the relief of pain by opiates, for the physician knows in advance, and the patient will soon discover, in the majority of instances of the use of the latter, that there is a more or less dreadful reaction. There is absolutely no such reaction from ergot. There is but one condition in which I use especial care in administering ergot, and that is during menstruation, yet I can safely say that in an experience of more than twenty-five thousand hypodermic injections of ergot I have not produced uterine cramp half a dozen times. I never hesitate to give ergot to a pregnant woman when it is indicated, and I have never had a woman abort from its use.

Headache is perhaps the most common disorder in which the beautiful effect of ergot is demonstrated. The instances in which I have failed to relieve headache, however severe or long continued, by ergot are few and chiefly such as were associated with zymotic fevers. When the nervous centers are constantly prodded by the poisoned or bacteria-laden currents which are flowing through them it is not reasonable to expect the symptoms to be relieved by merely contracting the dilated vascular areas. A peculiarity of ergot that should always be considered by the physician who uses it is the mild and gentle character of its action. It does not overwhelm like the opiates, producing their effect in spite of the patient, but it needs to be permitted to have its effect. If, for instance, I gave a hypodermic injection of ergot to relieve a headache and the patient immediately arose and went about his business he would probably have little benefit from it. The patient should always remain quiescent, better recumbent, for at least half an hour after an administration of ergot, and if he does the probability is that he will fall asleep. While I do not class ergot as a hypnotic,

I do assert that it is one of the best aids to a hypnotic, producing a longer-continued and more natural sleep and avoiding the unpleasant sense of "having a head" which is so often experienced on awaking after taking a hypnotic. Another striking effect of ergot is the prompt relief of coldness of the extremities and of poor general circulation. This, of course, is due to the more equal distribution of the blood, but the effect is so noticeable to the patient that I hear remarks to the above effect almost daily.

Pneumonia, especially when involving both lungs, is so dreadful an affection that I will take the liberty to relate another "case" which illustrates the therapeutic value of ergot. My friend Dr. Shaw called me one stormy night to Kennedy to see a young man who, with one exception, was as severe a case of double pneumonia as I have seen. Respiration could be detected only in the lower half of the left lung. The temperature was high and pulse and respiration very rapid, and at each expiration a moan from the sharp stabs of pain. I immediately injected ergot into his arm, and gave him, in all, four syringefuls. Between the injections I applied drycups over the chest, back and sides. Before I had emptied the second syringeful the patient took a deep breath and exclaimed, "Why! it does not hurt me now to breathe!" The doctor reported to me later that the case, which had begun so seriously, became a mild, simple one, and progressed satisfactorily to recovery.

There are many other conditions in which I have seen delightful effects of ergot, as in concussion, sunstroke, meningitis, delirium tremens, neurasthenia, sea and car sickness, inflammatory affections of the skin, iritis, retinitis and deafness. I believe it is indicated in typhoid fever to modify the local congestion which leads to the most serious element of that disease, the breaking down of the intestinal wall. I have repeatedly arrested peritonitis and pelvic inflammations by ergot. In fine, ergot is indicated wherever the unstriped muscular fiber is relaxed. As a heart support, especially in those serious states denominated heart failure, ergot accomplishes what the entire list of so-called heart tonics fail to accomplish, because they merely prod an exhausted organ, while the ergot contracts the congested areas which have been obstacles to the heart and have produced its fatigue.

I will further detain you only to speak of one other field in which ergot should be permitted to do its efficient work. I will not be surprised if this suggestion evokes the smile incredulous upon the faces of our surgical friends. We are living in the most glorious era of surgery—the era of antiseptic surgery, the era of the surgeon's victorious battle against the infinitesimal bacterium. Why this battle and why this exultation over the victory? The obstacle in all ages to the surgeon's success has been inflammation. The bacterium provokes inflammation. Antiseptics destroy the bacterium. I rejoice in these discov-

eries, and would not utter one word that might be construed as depreciating them. But before these momentous discoveries were made thousands and tens of thousands of successes in surgery occurred. When operations resulted successfully there was vascular tone in the subject. If there is a proper vascular tone the bacterium cannot produce inflammation, for the first stage of inflammation is congestion—a vascular relaxation. Where there is not proper vascular tone ergot will produce it, and, notwithstanding all the advantages of modern surgery, I believe it to be the best preparation which can be made for an important surgical operation to get the subject well under the influence of ergot, and also that one of the best after-treatments is to keep him so influenced, and it is now nearly twenty years since I began to act upon this theory.

Speaking of surgery reminds me of my former teacher and friend, Dr. Julius F. Miner, who always took occasion at some time during the term to jokingly animadvert upon medicine as contrasted with surgery. He would finish by saying that he only needed three elements from the materia medica with which to practice medicine—namely, mercury, quinine and opium, and, indeed, he thought he could get along without the first two. While I am not a surgeon and do not animadvert upon the materia medica, I have often thought that if I were obliged to select three medicaments with which to practice medicine they would be mercury, the cinchona alkaloid and ergot—these three; but the greatest of these is ergot.

THE CORRECTION OF DEFORMITIES FOLLOWING OSTEITIS OF THE KNEE.*

BY WISNER R. TOWNSEND, A.M., M.D.,
New York.

OSTEITIS of the knee, involving either the lower end of the femur or upper end of the tibia, or both bones, with or without destruction of the joint, is followed in about 50 per cent. of the cases by deformity. This is a most remarkable exhibit when one realizes that in almost every case, by proper treatment during the acute stage of the disease, deformity can be prevented, and that all patients should recover with straight limbs.

How to prevent deformity has been discussed by many surgeons, and while they may differ as to details, whether in a given case to use plaster or a brace, whether to allow motion or not, whether to use a splint or to do an arthrectomy, an excision, or an amputation, yet all agree that deformity, except of very slight character, should not occur, and, when it does occur, indicates either faulty treatment or a failure on the part of the patient to follow instructions or to permit to

*Read before the New York State Medical Association at its eighteenth annual meeting, October 21, 22, 23 and 24, 1901.

be carried out necessary procedures which would have prevented or overcome it.

The author's views do not materially differ from those of other surgeons, and may be found in an article on "Treatment of Tuberculosis of the Knee Joint," published in the *Journal of the American Medical Association*, January 12, 1901.

The amount of motion following treatment will vary. The more efficient the previous or early treatment the greater will it be, and this is very well illustrated in the admirable monograph by Gibney on "Final Results in Tubercular Osteitis of the Knee in Children," presented to the New York Academy of Medicine, January 7, 1892, and published in its transactions, Second Series, Volume IX. He traced 300 cases and found that 40 patients died, in 14 excision, in 4 amputation was practiced; the 242 remaining patients being accurately measured and the method of treatment and the result in each case shown. Under the expectant plan, the old method, 60 per cent. recovered with motion; under the fixation plan, an improvement over the old, but not equal to the new, 76 recovered with motion, while under the protective plan, the latest and the best, the one followed by most surgeons of to-day, 95 per cent. were cured with motion in the knee joint.

With more efficient treatment and the knowledge that deformity can and must be prevented, the class of cases to which reference is made in this article will be largely diminished in the future, and the final results of treatment of osteitis of the knee will be much better.

The deformities that follow this disease or that are due to it may be classified under two headings: First, subluxation of the tibia; secondly, all other deformities, flexion, knock-knee, bow-legs, outward rotation of the tibia upon the femur, and genu recurvatum or anterior displacement of the tibia. All of these deformities may be present with or without ankylosis of the joint. Subluxation, more or less severe, is usually present with the other deformities. Complete luxation but rarely occurs.

Many ingenious devices have been utilized for the correction of the subluxation deformity, the best being the Goldthwait genuclast and the Billroth splints. They are efficient in the hands of one skilled in their use, but will never be popular with the general surgeon, and equally good results can usually be obtained by forcible correction under anesthesia, pressing the tibia forward as the leg is straightened, and cutting the hamstring tendons when necessary.

For the correction of the other deformities, of which flexion is by far the most common, three methods are available: 1. Forcible correction. 2. Osteotomy, linear or cuneiform. 3. Excision.

The applications of force under anesthesia will correct in most cases, even where fibrous ankylosis is present, and adhesions can often be broken up, which, prior to the administration of the ether or chloroform, seemed firm and apparently bony. The force should be gently applied, and in some

cases partial correction only is possible, and at a subsequent time the limb can be entirely straightened. When adhesions are broken up they usually recur, so that we get new adhesions with the limb in an improved position. Cutting of the hamstring tendons may or may not be necessary. If it is, the external should always be divided through an open incision, for fear of injury to the external popliteal nerve. It is perfectly safe to cut the internal by subcutaneous incision. After the limb is straightened it should be held so for a considerable period of time, for the tendency to recurrence is great. The more perfect the correction the less the danger of recurrence; so, if an ankylosed joint is broken, one must be sure that the limb is perfectly straightened before the patient is discharged from treatment. If motion is present, the same, or even greater, care must be taken, and retentive apparatus kept on for several months.

Where the deformity is so great that the lower leg cannot be brought into a straight line with the upper, whether ankylosis is present or not, osteotomy is preferable to an excision, except in two classes of cases: First, where the subluxation is extreme; secondly, where the deformity is almost a right angle, complicated with subluxation. These cases are very exceptional, and excision is therefore rarely indicated for the correction of deformity, for the reasons that osteotomy, linear or cuneiform, is a less dangerous procedure; sacrifices less tissue, and does not interfere with the subsequent growth of the limb; produces much less shock; is not so liable to cause a relapse, as we rarely cut through the diseased tissue as we are forced to do in an excision; the healing is more rapid; the danger of sepsis much less, and the subsequent deformity is more easily prevented than after an excision.

The interference with the growth in excision and the danger of the occurrence of flexion and other deformities have led most surgeons to abandon the operation in children. This subject was presented by the author in an article on "The Prevention of Deformity After Excision of the Knee in Children," and published in the *New York Medical Journal*, April 1, 1899, and need not be here discussed.

The other deformities can all be corrected by osteotomy, and, in many cases, even severe in character, a simple subcutaneous linear division of the femur above the condyles will suffice. Cuneiform osteotomy is only indicated where the deformity is extreme. Linear osteotomy should be done subcutaneously and with the Vance osteotome. The skin wound is only as long as the blade is wide, or from one-quarter to one-half an inch in length. By forcing the osteotome through the skin and other tissues to the bone, the use of scalpel and an open wound are obviated, and, when the instrument is withdrawn after the bone has been chiseled through, the small wound closes at once, and no sutures, even for the skin, are needed. The osteotome is in-

troduced in such a manner that the external wound has its greatest length in the long axis of the limb, and after piercing the periosteum it is so turned as to cut across the bone. Cuneiform osteotomy, of course, demands an open wound and subsequent suturing of soft parts. In cases where motion exists in the knee and the deformity needs correction, osteotomy, if properly done, will relieve this and not interfere with the motion in the joint, although it has a disadvantage, in that the condyles are displaced forward to form an angle with the shaft, which condition may be overcome by a subsequent osteotomy on the tibia, or by doing this operation without the supracondyloid incision through the femur. The fact that excision destroys all future possibilities of motion should, therefore, lead to the more frequent use of osteotomy in such cases, while the results, in the correction of deformity when ankylosis exists or after excision, are extremely satisfactory.

CASE I.—A boy, aged 16 years. Admitted to the Polyclinic Hospital, *February 4, 1901*, for deformity after excision of the left knee. He had a marked genu recurvatum. Bending backward began one year after the excision, which was done at the age of 12 years: The measurements were as follows: Ra., $32\frac{1}{4}$; La., 25. Length of right femur, $18\frac{1}{2}$; left femur, $17\frac{1}{4}$; length of right tibia, 13; left tibia, $10\frac{1}{2}$. Under ether a subcutaneous osteotomy was done above the site of the original excision wound, and the leg forcibly straightened. The osteotome was introduced from the side, and there was practically no hemorrhage or disturbance. The after-treatment consisted of a plaster-of-Paris splint, which was left on for eight weeks, when examination showed that union had occurred. The splint was removed and a lighter one applied, and the boy was allowed to go around on crutches.

September 30, 1901, shows that the left leg has been lengthened two inches by the operation. Tibia displaced backward; no angular displacement; no motion. The patient walks well with the aid of a patten $3\frac{1}{2}$ inches high.

In this case the deformity was extreme, and several who saw the case believed that it would be impossible to reduce it by simple linear osteotomy. The result speaks for itself.

CASE II.—A girl, aged 15 years; had an excision at the age of 6 or 7 years, and the knee began to bend several years after the operation had been performed. There was flexion deformity of 90 degrees, the limb was ankylosed; no patella; some knock-knee.

May 21, 1901, at the Hospital for Ruptured and Crippled, under gas, an attempt was made by manual force to overcome the deformity, but the adhesions could not be broken up.

On *May 28th*, under gas and ether, a subcu-

taneous supracondyloid osteotomy was done and the leg put up in plaster of Paris, extended to 125 degrees.

July 9th, under gas and ether, it was again put up, at 145 degrees.

August 27th, under gas and ether, a cuneiform osteotomy was done at the tubercle of the tibia, the limb put straight, or at 180 degrees, and the knock-knee deformity corrected.

October 5th there is only one-half an inch difference between the length of the two limbs. The leg is perfectly straight, with no signs of bending. Patient to continue wearing a light plaster cast.

This case presents an unusual feature, that, despite the excision and the subsequent osteotomies, there is so little difference in the length of the two limbs.

APPENDICITIS.

BY JOHN B. DEAVER, M.D.,
Philadelphia, Pa.

IN presenting another paper on the subject of appendicitis the thought naturally arises, What is there new in this subject to call to your attention?

The literature of this subject is so voluminous and has received such careful study by the very first minds of the surgical profession that it would seem that the "last word" must have been written, and that we could say with Ambrose Paré that there only remain to posterity a few small details to be discovered.

Yet, with appendicitis, despite the valuable work of McBurney, Morris, Richardson, Price, Fowler and many others, new phases are continually presenting themselves, new lessons being learned or old convictions strengthened.

It has been my privilege to operate for this disease between three and four hundred times a year for several years past, and yet I can truthfully say that nearly every case has for me some new lesson in the living pathology of this disease. With each lesson learned as to the course and phases of this protean disease, the deeper is burned into my mind the conviction that the only true conservatism in appendicitis lies in recourse to the aseptic scalpel of the surgeon just as soon as the diagnosis is made.

Whoever hopes to recognize the disease under discussion must first study its pathological anatomy. He, above all things, must be familiar with its antemortem pathology, which teaches far more than the postmortem pathology. The practitioner of internal medicine is, unfortunately, thrown upon his observations at the bedside and the postmortem table alone. Would that every

practitioner and student of medicine could have the opportunity of studying the living pathology of large numbers of cases of appendicitis at the operating table, for then the lesson of what is true conservatism in the treatment of this disease would be impressed upon them.

Let us not lose sight of the important fact that every death from appendicitis, in an individual otherwise well, excepting those of the fulminating type, could have been prevented by the use of the knife at the proper time.

If we are to operate our cases early, an early diagnosis is necessary, and, therefore, it is the early diagnosis of appendicitis to which I will first direct your attention.

If the three cardinal symptoms of appendicitis are kept in mind the early diagnosis is, in nine cases out of ten, very simple. There are, it is true, a few atypical forms which are very puzzling, but these are very rare, and the chief difficulties in early diagnosis are either due to forgetting the three cardinal symptoms, or, more commonly, to being confused by other symptoms that are only secondary or intercurrent. The early diagnosis is usually the easiest, for it is in the protracted cases that most of the confusing symptoms arise to draw our attention away from the real cause of the trouble.

The three cardinal symptoms are pain, tenderness and rigidity.

Sudden abdominal pain in an individual previously well is the first point. Pain sudden in onset, general, or localized to any part of the abdomen, is usually the first symptom. Then, after a short time, localization to either that valuable anatomical landmark, McBurney's point, corresponding to the position of the base of the appendix, or to a point over the tip of the organ, which may be nearly anywhere in the abdominal cavity.

The tenderness may be at first general or local, and a very valuable diagnostic point is general abdominal pain, with tenderness limited to McBurney's point. The typical tenderness of appendicitis is not that elicited by carelessly applied pressure, or tight clothes, but a tenderness confined to a small area elicited by the pressure of a single finger. Another important sign is that pressure in other parts of the abdomen often causes pain, not where the pressure is applied, but under McBurney's point. The tenderness is more often localized to McBurney's point than is the pain, probably from the fact that in the unusual positions of the appendix the base is commonly more superficial than its tip.

Rigidity of the neighboring part of the rectus and overlapping flat muscles is nearly always present from the onset, but this can sometimes only be demonstrated by the most delicate and gentle touch. Many a doctor who has sufficient practice and experience, nevertheless never learns palpation, since lightness of hand is wanting. Examine in the region away from the seat of disease first. This rigidity is, however, often

so marked that it gives the examiner the impression of an abdominal mass and an abscess is diagnosed when it does not exist.

None of these three symptoms is itself pathognomonic, but, taken collectively, in 90 per cent. of cases present a picture that cannot be mistaken.

If in examining a suspected case of appendicitis we first carefully inquire into these three symptoms, ignoring for the time any other symptoms that may be present, we can usually decide whether we must look otherwise for the seat of the trouble. A case presenting these symptoms is generally appendicitis, and almost as large a percentage of cases of appendicitis present these symptoms in the first few hours.

The diseases which, in our experience, are the hardest to differentiate from acute appendicitis in the early stages are typhoid fever, extra uterine pregnancy, cholecystitis and acute mechanical obstruction of the bowels.

However strange it may seem, typhoid fever is the most difficult to differentiate from a mild case of catarrhal appendicitis, where the previous history of vague abdominal colic referable to the lower abdomen cannot be elicited. In the diagnosis the prodromes of typhoid fever are very important. Then, in this disease, the tenderness is more diffuse and there is usually gurgling, a sign that we have found very unusual in appendicitis. The blood count may furnish a valuable means of diagnosis, as a leucocytosis practically excludes typhoid fever. The Widal reaction is valueless, as it has not been established in the early stage in which confusion usually occurs.

The diagnosis between ruptured extra uterine pregnancy and appendicitis is not important, as both conditions call for immediate operative interference. The history, vaginal examination, low temperature and signs of shock are usually sufficient to differentiate the two conditions.

Cholecystitis may usually be separated from appendicitis, but in some cases of terminal appendicitis, especially if accompanied by jaundice, the diagnosis is, we believe, impossible. Jaundice is not very rare in appendicitis and is due, we think, to the same intestinal infection that lights up the appendicitis, causing a catarrhal inflammation of the bile ducts. The history, point of greatest tenderness, character and distribution of the pain and a rectal examination are all valuable points, and are usually sufficient.

The diagnosis between acute mechanical obstruction and appendicitis is also not very important, for here again is immediate operation indicated in both. The temperature, pulse and the three cardinal symptoms are nearly always sufficient to differentiate these conditions, but it should also be remembered that the immense majority of cases of acute obstruction in the adult are caused either by hernia or a previous peritonitis, and this point should be looked for in the history.

We have not attempted to give you a full ac-

count of the symptoms of appendicitis, but only wish to impress upon your minds the importance of the three cardinal symptoms, and that if, in approaching the diagnosis of any abdominal disease, these points are clear in your mind many cases, otherwise difficult of diagnosis, will not be troublesome.

The practice of keeping the patient under observation to see whether the case will become an operative one or not, is highly to be condemned. The only justifiable excuse for delay is uncertainty of the diagnosis, and in case of doubt it is the duty of the physician to seek counsel to settle the question as soon as possible.

I appreciate the difficulties of a country practitioner who is not always able to obtain the best professional counsel and is, therefore, sometimes justified in delay until the diagnosis is certain. I do not hesitate to say that it is unjustifiable to defer operation after the diagnosis has been made. It is high time that a word of warning be given to the gentlemen who are in the practice of following such a course, for time after time have I seen valuable lives sacrificed on the altar of this variety of procrastination.

The pathology of appendicitis is that of an infection in all its forms, and this fact is important to keep in mind. The kinks, strictures and fecal concretions act as a cause only by retarding drainage and giving the organisms in the appendix an opportunity to multiply and become virulent. This fact alone explains why surgery is the only sure and conservative form of treatment.

The treatment of appendicitis can only be rationally discussed from the surgical side. Every right-thinking medical man must admit that the medical aspect of appendicitis relates to the diagnosis only; therefore, so soon as the diagnosis has been made, the case is no longer medical, but surgical.

The surgical treatment of appendicitis, which means the administration of the aseptic scalpel of the surgeon at the earliest possible moment after the diagnosis has been established, will surely, in by far the greater majority of cases, restore the patient to a condition of health. The few exceptional cases are those of the fulminating variety, and occur usually as the first attack; in this variety of appendicitis it must be conceded that this form of treatment promises the only chance of recovery.

The time to operate in appendicitis to obtain ideal results, is in the stage of appendiceal colic, before the wicked hand of inflammation has taken possession of the vulnerable tissues composing this organ. We are all familiar with the disastrous effects of delay, procrastination, or call it what you will, in this type of inflammation, and we all know, too often to our sorrow, the result of this dilly-dallying; therefore, I will not go into a detailed description of the various reasons why operation should not be delayed, but will at once take up the considera-

tion of some of the more common disastrous sequelæ of delayed operation.

Formerly abscess formation was regarded as the indication for operation, certainly a most unfortunate view, for then the time for an ideal operation has passed. There are still a few men who teach that a high grade of leucocytosis should be present to indicate the time for operation, but this form of procrastination is the cause of a high mortality and cannot be too strongly condemned.

A walled-off abscess is often called a fortunate event, but in reality it is a most unfortunate state of affairs. The procrastination which ever allows an abscess to form is to be deplored, and it is due only to a kind Providence, and not to the physician's skill, that instead of a walled-off abscess a general septic peritonitis has not rendered all hope of recovery impossible.

An abscess cavity must heal by granulation, cicatrization and contraction. In appendiceal abscess, of any size, the inner wall is formed by adherent loops of small bowel. During contraction the caliber of the bowel is often occluded and acute mechanical obstruction results, which, unless relieved by immediate operation, must result in the death of the patient.

In the experience of the writer at the German Hospital, where he performs yearly from one hundred and fifty to two hundred operations for acute appendicitis, many of which are of the abscess type, the percentage of intestinal obstruction is comparatively large. The writer fears this condition, which usually does not occur for ten days, two weeks or later following primary operation, so much that immediately upon the appearance of paroxysmal abdominal pain, nausea, inability to pass flatus or to have the bowels moved by simple purgative medicines, aided by high enemata through the rectal tube and given by hydrostatic pressure, and with the presence of slight tympany, with paroxysmal pains provoked by gentle palpation of the abdominal wall, he immediately advises a section. By this practice I am able to record recoveries in patients that otherwise would have perished.

It is the practice of the writer in dealing with these large abscess cases not only to content himself with the evacuation of the abscess and the removal of the appendix, but further to relieve the adherent coils of bowel, which, done with proper manipulative skill and disposition of sterile gauze to guard against infection of the general peritoneal cavity, and the placing of gauze drains, prevents this complication being more common than it otherwise would. Again, in these abscess cases it happens frequently that in addition to the principal focus of suppuration there are other foci; in other words, secondary collections. In such instances the evacuation of the primary focus of pus does not necessarily mean the evacuation of the secondary collections. This phase of treatment I regard as one of the most important. I am sure that overlook-

ing secondary collections figures conspicuously in the mortality of this class of cases.

It is not the practice of the writer in dealing with these cases to disrespect the non-involved peritoneum; therefore, he does not evacuate or break up adhesions and use general irrigation with simple distilled water, saline, or any chemical agent, but lays more stress upon the proper disposition of sterile gauze for protection before the abscess has been broken into. The abscess having been evacuated, he occasionally uses limited irrigation—by which I mean irrigation simply of the abscess cavity—but more often does he cleanse the cavity by wiping it thoroughly dry with sterilized or iodoform gauze. A form of packing for drainage he is fond of using is the so-called coffer-dam.

Where the appendiceal inflammation has involved to any degree the neighboring structures, particularly the great omentum, as is so commonly seen in abscess cases, it is necessary to tie off the involved portion of the omentum, which frequently is partly or entirely gangrenous. While we should exercise every precaution to tie well off to the proximal side of the involved portion of the omentum, it happens in a small percentage of cases that the septic process, through the involved lymphatics, results in the formation of a pus collection, found, at subsequent operation or autopsy, immediately below the transverse colon.

Portal pyemia is the consequence of phlebitis of the walls of the appendix or the meso-appendix. This condition is more commonly seen, in the experience of the writer, in highly acute and virulent cases of appendicitis rather than in those cases which result in a walled-off collection of pus. Necrosis of the cecum and ascending colon from the pressure of the neighboring pus collection and consequent general sepsis, with ultimate death, is not an infrequent sequel to appendiceal suppuration. This form of local necrosis and general sepsis is more likely to occur where the abscess is diffused, extending well up to, if not involving, the right lobe of the liver. In a small percentage of postcolic appendiceal abscess cases the lower part of the right lobe of the liver not only forms a part of the wall of the abscess cavity, but is often also the seat of ulcerative necrosis. Another odd but not very unusual manifestation of appendiceal suppuration is an abscess either penetrating or working up behind the diaphragm and causing a pyrothorax, which sometimes ruptures into a bronchus, and the pus is expectorated. The writer has seen a number of cases of this type and the pathological rôle which appendiceal suppuration is capable of playing is almost indescribable, the pathological freaks being so numerous and diversified. In the experience of the writer, the largest mortality is seen in late postcolic appendiceal suppurations.

That the most common cause of appendiceal fecal fistula is pressure necrosis from the presence

of pus cannot be disputed. That appendiceal fecal fistula is a most unfortunate pathological condition cannot be denied. That appendiceal fecal fistula when involving the small, as well as the large, bowel is a most serious condition must be admitted. That operation for the cure of appendiceal fecal fistula is attended by much more risk than is the primary operation for the removal of the appendix in acute appendicitis, if done at the earliest possible moment after the establishment of the diagnosis, is the unquestioned truth.

I have recently read an article upon this subject before the New York State Medical Association, which appeared in the *JOURNAL* of that association, and to which I refer my listeners for a further description of this deplorable, and in a great majority of cases preventable, surgical affection.

I regret to have to call attention to the tampering with human life by either stupidity or prejudice; certainly inexperience, to say the least, in not recognizing the note of warning by those who are in a position to speak authoritatively. I regret that too many of our teachers have not yet awakened to the fact that students are to be properly taught, and not as they are to-day in too many of our colleges, that there is a medical treatment of appendicitis, and that the so-called appendiceal surgeon is too keen to use the scalpel. So long as this teaching prevails, so long will many deaths from appendicitis have to be recorded, the responsibility for which must rest upon the shoulders, not of those who are taught, but of those who teach.

That many doctors are misled by the disproportion between the local signs and the constitutional symptoms there is no doubt; by which I mean that the patient with a comparatively high temperature and a correspondingly high pulse rate, in whom the bowels have been freely moved, not presenting marked localized rigidity, and this perhaps less than on the day previous, will lead the attendant to believe his patient is better, while the most serious condition of affairs may be present and making rapid extension within the abdominal cavity. The progress the disease is making, locally, is less likely to be recognized when the appendix occupies the upper portion of the pelvis, and therefore not within as close reach of the palpating finger as when it lies immediately beneath the abdominal wall in the right iliac fossa. An anomalous position of the appendix is often responsible for misjudgment in the hands of the inexperienced.

I will not continue the discussion any further, as it would require hours to cover the various disastrous pathological phenomena which appendicitis is capable of bringing about. In thanking you for the privilege of appearing before you and the attention you have given me while reading this paper, I will request that you have your cases of appendicitis operated at the earliest possible moment.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. NO. 10.

OCTOBER, 1902.

\$1.00 PER ANNUM.

OUR MEDICAL DIRECTORY FOR 1902.

By the time the JOURNAL reaches our readers the new directory will have made its appearance and have been inspected, criticized and judged by them. All of the lists have been carefully revised, and in many instances compared with certified lists from the registers of the County Clerks' offices. By this means many names that have no right to appear in the directory have been eliminated, and many new names have been added; the additional names amount to 720. In the State list the name of the town appearing last upon the right-hand page has been placed at the top of the page, with the hope that this device will assist in finding the towns of the State more readily. A new feature also of this year's directory is the insertion of the permanent members of the State Medical Society. Following the Code of Ethics of the American Medical Association will be found the revised form of the code as presented at the last meeting at Saratoga. Another new feature is the placing of the alphabetical list of the State of New York in blue. This sharp division of color facilitates reference to the desired departments of the book.

In the preface it will be found that the total number of names contained in the lists of physicians is 13,364, of which 10,606 are in the State of New York, 1,655 in New Jersey and 1,103 in Connecticut. Of the 10,606 names in the New York State list, 3,948 are credited to the Boroughs of Manhattan and Bronx, 1,323 to the Borough of Brooklyn, 115 to the Borough of Queens and 58 to the Borough of Richmond, a total for Greater New York of 5,444, which leaves the number of physicians residing in the rest of the State outside of this territory 5,162.

It is hoped our members will read the statement on the inside facing of the front cover and act in accordance with the suggestion therein contained. It is well to keep in mind also the information conveyed on the page standing opposite to this, as well as on the following page.

THE NINETEENTH ANNUAL MEETING OF THE NEW YORK STATE MEDICAL ASSOCIATION.

The sessions of the Association will be held in the New York Academy of Medicine, October 20th to 23d, inclusive.

The programme for the four days is as follows:

First Day, Monday, October 20th.

Meeting of the Council, 10 A. M.

LUNCHEON, 12:30 P. M.

Meeting of the Council and Fellows, 1:30 P. M.

ORDER OF BUSINESS.

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 and action thereon.

Members, Fellows, Delegates and guests are invited to attend the meeting of the New York County Medical Association, to be held in Hosack Hall at 8 P. M.

Second Day, Tuesday, October 21st.

MORNING SESSION, 9:30 A. M.

ORDER OF BUSINESS.

- Calling the Association to order.
Address of welcome by the Chairman of the Committee on Arrangements.
Special report from the Council and Fellows.
Reports of Special Committees.
The reading and discussion of papers.
1. "The Pathogenesis of Eclampsia." A plea for a more systematic observation and treatment of patients during pregnancy. FREDERICK P. HAMMOND, New York.
 2. "Bacterial Flora of the Vaginal and Cervical Canal in Health; with Remarks Concerning

Infections of the Female Genital Tract." WILLIAM E. SWAN, Saratoga Springs.

3. "Treatment in Gynecology from a Medical Standpoint." MARY GAGE-DAY, Kingston-on-Hudson.

4. "What Advice Should Be Given to a Woman Suffering from Fibroid Tumor of the Uterus." J. RIDDLE GOFFE, New York.

5. "The Function of the Perineal Body and the Etiology of Rectocele." JAMES HAWLEY BURTENSIAW, New York.

LUNCHEON, 1 P. M.

Second Day, Tuesday, October 21st.

AFTERNOON SESSION, 2 P. M.

SYMPOSIUM ON COLDS.

6. "Etiology of Colds." JAMES J. WALSH, New York.

7. "Symptomatology of Colds, with Incidental Treatment." GEORGE F. COTT, Buffalo.

8. "Treatment of Colds." A. ALEXANDER SMITH, New York.

9. "The Newer Relation of the Pancreas to General Medicine." ALFRED STENGEL, Philadelphia, Pa.

10. "The Present Position of Gall-stone Surgery." WILLIAM WOTKYNs SEYMOUR, Troy.

11. "A Study of the Indications for Nephropexy." AUGUSTIN H. GOELET, New York.

12. "The Surgical Diseases of the Kidney from the Standpoint of a General Country Physician." GEORGE A. LEITNER, Piermont.

Second Day, Tuesday, October 21st.

EVENING SESSION, 8 P. M.

13. "Obesity as a Consequence of Asexualization." HEINRICH STERN, New York.

14. "A Case of Idiopathic Brain Abscess, with Focal Symptoms Diagnosed as Brain Tumor." HERMON G. GORDINIER, Troy.

15. "Melancholia Agitans." WILLIAM E. DOUGLAS, Middletown.

16. "Report and Presentation of a Case of Idiopathic Atrophy of the Skin." WILLIAM S. GOTTHEIL and R. ABRAHAMs, New York.

17. "Appendicitis." FREDERICK HOLME WIGGIN, New York.

18. "Advantages and Disadvantages of Abdominal Surgery." EDWARD J. MEYER, Buffalo.

19. "The Operative Treatment of Fractures of the Patella." CHARLES PHELPS, New York.

20. "Proprietary Remedies." W. B. BAYLEY, Haverstraw.

COLLATION.

Third Day, Wednesday, October 22d.

MORNING SESSION, 9:30 A. M.

21. "Strangulated Hernia in Children Under One Year of Age." Report of case 27 days of age. Herniotomy. Recovery. W. B. REED, Rome.

22. "Local Anesthesia in Radical Cure for Inguinal Hernia." J. A. BODINE, New York.

23. "Intestinal Obstruction." JOHN B. HARVIE, Troy.

24. "Radical Operations for the Cure of Cancer of the Stomach." WILLIAM J. MAYO, Rochester, Minn.

25. "Surgery of the Stomach for the Relief of Non-malignant Pathological Conditions." A. J. OCHSNER, Chicago, Ill.

26. "New Apparatus for the Treatment of Esophageal Stricture." THEODORE DUNHAM, New York.

President's Address. ALVIN A. HUBBELL, of Buffalo.

LUNCHEON, 1 P. M.

Third Day, Wednesday, October 22d.

AFTERNOON SESSION, 2 P. M.

27. "Further Observations of General Interest Regarding the Course and Management of Cataract." J. H. WOODWARD, New York.

SYMPOSIUM ON TYPHOID FEVER.

28. "The Pathology and Bacteriology of Typhoid Fever from the Standpoint of Recent Investigations." GEORGE BLUMER, Albany.

29. "The Serum Reaction in Typhoid Fever." THOMAS W. HASTINGS, New York.

30. "Paratyphoid Fever." NATHAN E. BRILL, New York.

31. "The Vascular Complications of Typhoid Fever." W. S. THAYER, Baltimore, Md.

32. "The Modern Treatment of Typhoid Fever." W. GILMAN THOMPSON, New York.

33. "Report of an Interesting Case of Typhoid Infection." ALBERT W. PRESTON, Middletown.

Third Day, Wednesday, October 22d.

EVENING.

Annual Banquet at the Hotel Manhattan.

Fourth Day, Thursday, October 23d.

MORNING SESSION, 9:30 A. M.

34. "The Advantages of Nitrous Oxide in General Surgery; Exhibition and Description of a Stopcock for Its Administration with Varying Percentages of Oxygen." H. W. CARTER, New York.

35. "Suggestions Favoring a Standard Technique in Operative Surgery." EDWARD WALLACE LEE, New York.

36. "Points in the Control of Emergency Hemorrhage, Both Medical and Surgical." ROBERT H. M. DAWBARN, New York.

SYMPOSIUM ON PNEUMONIA.

37. "Pneumonia from the Bacteriological Standpoint." A. C. ABBOTT, Philadelphia, Pa.

38. "Leucocytosis in Pneumonia." ALEXANDER LAMBERT, New York.

39. "Treatment of Pneumonia." JOSEPH W. GROSVENOR, Buffalo.

LUNCHEON, 1 P. M.

Fourth Day, Thursday, October 23d.

AFTERNOON SESSION, 2 P. M.

40. "Unrecognized Toxic Insanities." T. D. CROTHERS, Hartford, Conn.

SYMPOSIUM ON THE ROENTGEN RAY.

41. "The Roentgen Ray: Its Mechanics, Physics, Physiology and Pathology." EDEN V. DELPHEY, New York.

42. "The Roentgen Ray in Surgery, Including Deep Neoplasms." CARL BECK, New York.

43. "The Roentgen Ray in Medicine."

44. "The Roentgen Ray in Dermatology, Including Superficial Neoplasms."

45. "The Roentgen Ray in Gynecology." EDEN V. DELPHEY, New York.

46. "The Roentgen Ray in Obstetrics." JOSEPH B. COOK, New York.

47. "The Finzen Ray." FRANCIS P. KINNICUT, New York.

48. "An Improved Ultra-violet Electrode for Actinic Therapy." WILLIAM S. GOTTHEIL, New York.

INSTALLATION OF OFFICERS.

ADJOURNMENT.

MEETING OF THE COUNCIL.

NOTICE.

The ANNUAL DINNER will be held Wednesday evening, October 22d, at the Hotel Manhattan, Madison avenue, 42d to 43d street.

A feature of the evening will be an entertainment by professional talent, to take the place of the usual after-dinner speeches.

Last year ladies were admitted to the dinner. The innovation gave such general satisfaction then that it will be followed this year.

Subscriptions to the "Entertainment Fund," which includes the dinner, are \$5 each. Those who have not secured tickets should remit at once to the chairman of the committee.

In the preliminary announcement it was stated that the committee intended to omit the usual Tuesday evening session. On making up the programme it has been found unwise to do this, as it would crowd the papers of the other days. The Association will hold a scientific session on Tuesday evening, as heretofore.

Members will please note that the Trunk Line Association has made a change in the method of validating the railroad certificates. On arrival at the Academy of Medicine the certificates should be surrendered to Dr. Brown, secretary of the committee, for his indorsement. The railroad agent will then validate the certificate, charging 25 cents each. The agent will be at the Academy Wednesday, October 22d, and Thursday, October 23d, for this purpose.

Luncheons will be provided for all at 1 P. M. every day, and on Monday and Tuesday evenings.

IRVING S. HAYNES, M. D.,

Chairman Committee on Arrangements.

THE REORGANIZATION OF THE AMERICAN MEDICAL ASSOCIATION.

Much has been said and written concerning the advantages of reorganization of the Association and the great benefits that are to accrue to the profession at large. Great stress has been laid upon the influence that the united profession is thereby enabled to exert, not only in the national body, but also in the State organizations. We do not wish to detract in the least from this, for it is all very true, but to a certain extent we have lost sight of the benefits that must certainly follow from the establishment of branch organizations in the smaller towns, villages and communities. One of the most notable features in the attitude of medical men toward each other in the smaller towns is the feeling of bitterness and jealousy. This arises from the fact that men do not know each other and through pure obliquity of human nature are prone to put the worst interpretation upon all professional acts of their brother practitioner, which can in any way be so construed.

This unfortunate condition can all be overcome by cultivating a friendly acquaintance with each other, by which not only is mutual respect for professional requirements engendered, but a more generous interpretation placed upon each other's conduct in all the relations of life. This was well exemplified in a little Western town where the writer sojourned for a short time during the past summer. The hostility existing between the various members of the profession had been known to him for some years; no friendly intercourse existed between them; indeed, they had no personal acquaintance with each other and seldom bowed recognition when passing upon the street. The change of attitude in this regard impressed the observer promptly after his arrival in the town. Dr. W., when called upon in his greatly improved quarters and anti-septic surroundings and complimented thereon, replied: "Yes, we are all improving here; you must call upon Dr. F., for he also has equally good offices. Business is improving all around, and you will find a great advance among all of us." When inquiry was made as to the cause of the new condition of things, he replied: "Well, we have organized a local society; the plan of reorganization of the American Medical Association appealed to us individually and we met one night in the office of Dr. P. and organized a little county society. This was shortly after the St. Paul meeting last year. Since then we have held meetings quite regularly, have got to know each other and appreciate each other's worth; we no longer find it necessary every time a consultation is required to send to Chicago for a consultant, but we call each other—at least, we are beginning to—with a feeling of confidence and trust that the other man will not steal the patient; and it is all working for our mutual advantage." Conversation with the other doctors of the town confirmed these statements, and four of the doc-

tors—one whose interest lay more especially in surgery, the second devoted to general medicine and the other two acquiring a reputation in diseases of children—had their offices on the same floor, with a common waiting-room.

There is no question about it, the organization of a local medical society means better effort on the part of the individual, it means union and it means progress. It gradually and insensibly lifts the profession of a town to a better and higher status.

THE FEEDING OF INFANTS.

One of the notable features of the recent meeting of the British Medical Association was the discussion before the Section on Diseases of Children in reference to infants' food. The discussion consisted largely in the presentation of what was called and is known as "The American Method of Modifying Milk." This was presented by Dr. Rotch, of Boston, in a very elaborate paper, and supported in the discussion by Dr. Northrup, of New York.

Dr. Rotch's paper was an exposition of the methods used and the results obtained in this country through the Walker-Gordon Farms and Laboratories in providing pure nutritious food. The success of these methods in Great Britain, France and Germany has not been as great as that obtained in this country. It was maintained that this was due to the fact that the same means had not been employed to accomplish the same end. The opportunities afforded for working out the various phases of the subject have not been the same, nor have the means been as satisfactory. The importance of exactness in all stages of experimenting in the preparation of infant food by modifying milk was insisted upon. This was a frequent cause for disagreement. One physician may believe in giving starch in the early weeks of life, while another may not. No proper deduction can be arrived at unless we know exactly how much starch each experimenter is giving and how much of the other elements of the food; only in this way can it be determined whether those who are in favor of giving starch are in the right or not.

Universally it is admitted that the food which nature has provided for young human beings—that is, milk—shows the lowest rate for infant mortality all over the world. If human milk cannot be obtained, the most perfect substitute for it is cow's milk, which should be scientifically modified to correspond as closely as possible not only with human milk in general, but with the human milk that is consumed by each individual child. A careful study of human breast milk demonstrates that it is a varying compound with the three essentials of food—namely, fat, sugar and proteids; that the percentages of these elements are far from constant, not only in different individuals, but also in the same individual under varying circumstances. Human breast milk, then, is a varying food. This fact should be

noted and due weight be given it in preparing a substitute food, so that the greatest variety of percentages of the different elements of the milk may be obtained, as well as a great variety of combinations of them, according to the judgment of the physician. The percentages and the ingredients should be determined not by any given standard of the average in mother's milk, but by the study of the needs of the individual infant. From this principle has arisen the system of milk laboratories, where the needs of individual patients can be met with exactness, and the different elements of the food may be prescribed with the same precision as a prescription for medicine. This, Dr. Rotch claims, has been accomplished in America by the Walker-Gordon system of laboratories.

Not only are ingredients of importance, but percentages of these ingredients are essential to the construction of the best food. In regard to mechanical diluents, it was maintained that there was no difference in the action of oats, barley, rice or wheat; other mechanical action is due mainly, if not wholly, to the amount of starch in the solution. Leaving out the question whether or not the starch is given for nutriment; the best results from starch as a diluent may be obtained by using a solution of seven-tenths per cent. It must be remembered, however, that starch is never found in the milk of any mammal, and, therefore, so far as nature is concerned, it would seem that starch is not a necessary element, but a foreign one. It must be remembered also that cane sugar, which is frequently added to milk used in infant feeding, is a foreign element, for it occurs in the milk of no mammal. The sugar in the milk of any animals that suckle their young is lactose, or milk sugar.

Lime water as a means of overcoming the acidity of cow's milk has been proved not to do any harm. It is important that it should be used, but it has been found that cow's milk can be rendered slightly alkaline by the character of the food supplied. A ration of ten pounds a day of sugar beets given to a cow will render her milk slightly alkaline. This would seem to be a more natural way of securing alkaline milk for infants than the process of adding lime water.

Other important facts and points brought out in the paper are as follows: It is better not to use the milk of one cow in procuring food for an infant, but of many cows; the larger the herd the better, provided the milk can properly be mixed together, as, in this way, any special condition which may be affecting an individual cow will be made practically inert when the milk of such cow is mixed with that of a herd.

The cream of the Holstein breed is a much finer emulsion than that of the Jersey cow; moreover, when broken down the emulsion is much more easily restored—that is, it emulsifies better and resists a destruction of its elements, such as

occurs when cream is produced—than the cream of the Jerseys and the Guernseys.

A temperature of 155° F. is the temperature now used for Pasteurization, as it is sufficiently high to kill practically all pathogenic germs found in milk, including the rennen enzyme, without producing any change which can be detected by taste or by the appearance of the milk. No preservatives are ever employed for the preparation of laboratory milk and almost no sterilization is practiced. Heating at from 150 to 167° F. carries modified milk across the ocean without any deterioration and unheated milk can be employed for food 1,000 miles away from the laboratories even in very hot weather. This is continually done in America between the Washington laboratories and the winter resorts in Florida. The alkalinity of this milk has been maintained by lime water, 5 per cent.

The primary essential of a modified milk for infants is that the milk originally should be as pure and as perfect as nature, assisted by the intelligence of man, can make it. This necessitates the most scrupulous attention to the care, the diet and health of the cow, as well as the scrupulous carefulness of all the details of the cowshed and the dairy.

A very elaborate exposition was made of the system adopted to accomplish all these acquirements at the Walker-Gordon farms. The paper of Dr. Rotch was discussed by such men as Henry Ashby, of Manchester, England; Jules Comby, of Paris; Adolph Baginsky, of Berlin; J. W. Byers, of Belfast, and others. The consensus of opinion, as expressed by these men, was great admiration for the theory and the careful attention to detail with which it was being practiced in America, although their limited experience did not justify them in giving it unqualified indorsement.

A MONTHLY JOURNAL VERSUS ANNUAL TRANSACTIONS.

It is gratifying to know that the Michigan State Medical Society has decided to replace the annual transactions by a monthly journal. The initial number (September issue) has just been issued. It bears the title of *The Journal of the Michigan State Medical Society*, and is an attractive and interesting number. It contains thirty-six pages of reading matter and twelve advertising pages; the size of a page is somewhat smaller than our own JOURNAL and the type is larger. *The Journal* makes its bow to its readers in the following editorial:

"It is not necessary to enumerate the many advantages of a monthly journal over the annual transactions for a place of record of the doings of the Society. One of the principal ones, however, will be the opportunity it affords to the officers of the Society to come into more intimate and frequent touch with the members to present their views, for we wish it understood that we invite to its columns all honestly ex-

pressed criticisms. *The Journal* is the official organ of the State and County Societies, and we expect soon to have it the record place for the proceedings of the component societies. We invite correspondence on any matter of common interest.

"The annual dues cover the subscription to *The Journal*.

"We enter the field of journalism simply as a better ground to plant the seeds of common interests and to reap the benefit of closer acquaintance. We enter with no feeling of rivalry or competition, and to those journals already here, which have in the past graciously recorded the doings of the Society, we express our sincere wishes for their continued success."

We extend the right hand of fellowship and most cordial good wishes.

RUDOLPH VIRCHOW.

During the past month the medical journals and the lay press throughout the world have been devoting their best efforts to the bestowal of encomiums upon this great man. He was great in what he accomplished for science, and equally great in what he did for humanity. He died on Friday afternoon, September 5th, and on Tuesday, September 9th, the Berlin municipality held a public and civic funeral, the following account of which appeared in the *British Medical Journal*:

"Beautiful greenery and palms lined the City Hall staircase, and the anterooms of the great hall were almost filled with dedicatory wreaths and floral arrangements. The hall itself was draped in black, the great bunches of electric lights shone out from black gauzes, and on a raised dais, banked by laurels and palm trees, stood a palled bier supporting the coffin. The hall was crowded, Ministers of State and State officials, the municipal officers with Oberbürgermeister Kirschner at their head, medical celebrities and other distinguished professors of the Berlin University, numbers of students in the curious official attire of their 'Vereinigungen,' with waving plumes and banners in their hands. A notable figure among many was Mommsen, the historian—almost the last one left of the generation of great men to which Virchow belonged. As the widow and children entered the hall a chorale was sung by an invisible choir, and this was followed by a funeral oration preached by the Rev. Dr. Kirmiss from a specially erected pulpit. Then came Waldeyer's speech. It was very calm and objective at first, comparing Virchow with Morgagni and Johannes Müller, dwelling on the homage done by the whole cultured world on the day of the 80th birthday last October, counting up the researches and labors which have made the name of Virchow immortal. But at the end he asked permission to add some personal words. He left the pulpit and came close to the bier, and standing there, in a voice vibrating with emotion, he addressed his departed friend: 'To be united

in friendship and in scientific work with thee who art here lying covered with flowers has been one of the chief blessings of my life, and the remembrance of it will never leave me until the day when I shall be taken where thou art to be taken this day.' A wave of sympathy passed over the audience as they witnessed this touching and spontaneous scene. Then followed a spirited speech by Albert Traeger, a well-known Liberal member of Parliament, who had long been Virchow's colleague in political work; and finally an address by Oberbürgermeister Kirschner, doing honor to Virchow, the 'Ehrenbürger' of the city, the town councillor of forty-three years' standing, to whom above all others Berlin owes its development into one of the healthiest cities of the world. The transformation of poor schools into parish schools, the municipal inspection of meat, the public disinfecting establishments, the municipal hospitals, asylums and sanatoria; last, not least, the drainage system he mentioned as due to Virchow's initiative and active cooperation. Choral singing terminated the ceremony, at the conclusion of which the coffin was borne out, and the enormous procession, in carriages and on foot, was formed to accompany the remains to their last resting place, the Matthæi-Kirchhof, in the far west of Berlin.

"It was a fine and noble life, and it is pleasant to think that the city of Berlin, on the occasion of his funeral, rendered all those formal honors which, while they cannot add to Virchow's fame, in reality do honor to the city and to the great nation who knew how to appreciate the immeasurable services which he rendered to his Fatherland and to humanity."

EYESTRAIN AND EPILEPSY.

In connection with the advanced steps that are being taken in New York State to improve the condition of epileptics, the careful, scientific experiments instituted by Dr. George M. Gould among the inhabitants of Craig Colony will be followed with great interest. This account is taken from *American Medicine*¹ September 13th:

For the purpose of making a test as to the possible influence of eyestrain upon the etiology and cure of epilepsy, Dr. Gould has requested of Dr. William P. Spratling, superintendent of Craig Colony, Sonyea, N. Y., the privilege of diagnosing the ametropia, etc., in a certain number of cases of patients of the colony, and of prescribing spectacles for such as seemed in need of them. Dr. Spratling and the trustees gladly accepted the offer, and the trustees voted \$100 toward defraying the expenses of the spectacles.² Dr. Bennett consented to associate himself with Dr. Gould in the tests and in drawing up the final reports.

¹Published with the kind consent of Dr. William P. Spratling, superintendent of Craig Colony.

²The Buffalo Optical Company, of Buffalo, offered to furnish the spectacles at cost, and besides this they sent a member of the firm twice to the colony to attend to the optician's work. Doctors Gould and Bennett gave their professional services gratis.

The examinations of the eyes were begun on August 18, 1902, and continued for five days.

This preliminary report is published in order to show those interested the object in view, the enormous proportion of epileptic patients suffering from morbid optical conditions of the eyes and if possible to incite similar tests by others.

We examined in all 78 patients, the youngest 10, the oldest 59 years of age, the majority being young or middle-aged adults. Of these 78, 2 were excluded because of organic diseases of the eyes which rendered them useless for the purposes of the tests in view. Five more were excluded because of the impossibility, due to psychic or ocular amblyopia, of diagnosing the ametropia. This left 71 cases. Of these 3 were excluded because the ametropia was of so low a degree that it was thought negligible. These patients needed no glasses, either for the relief of ocular conditions or of reflex results. Only about 4 per cent., therefore, 3 out of 71 cases, seemed to us to have eyes so near normality of optical conditions that they required no further attention.

Our tests, therefore, concern 68 cases, 35 men and 33 women. These were chosen for us by the superintendent regardless of all conditions of epilepsy, age, etc., except that we requested that only patients be given us who were sane and who could read.

The errors of refraction were estimated only after thorough paralysis of the accommodation by means of homatropin and cocain. Dr. Bennett diagnosed the muscle-imbalance, made the ophthalmoscopic examinations, and estimated the refractive errors objectively by means of the retinoscopic method. Dr. Gould made the subjective refraction and accommodation tests, and dictated the prescriptions. The subjective tests were in all cases those finally relied upon when the patients' answers could be trusted, and the results seemed the more accurate. Of the 68 cases there were:

- 13 cases, approximately 20 per cent., of myopic or compound myopic astigmatism.
- 54 cases, approximately 80 per cent., of hyperopic or compound hyperopic astigmatism.
- 33 cases, approximately 50 per cent., of unsymmetric astigmatism.
- 15 cases, approximately 22 per cent., with normal acuteness of vision (with correction).
- 23 cases, approximately 34 per cent., with moderately subnormal acuteness (with correction).
- 30 cases, approximately 44 per cent., with 20/40 vision or less (with correction.)
- 3 cases only had regular, isometric, compound astigmatism.
- 1 case only had simple regular astigmatism.
- 1 case only had simple hyperopia.
- 0 case had simple myopia.
- 9 cases were absolutely isometric, *i. e.*, about 77 per cent. had anisometropia.

The muscle-imbalance of any high or complicating significance were unexpectedly absent. Indeed, in but one case did we think them worth consideration, so far as final correction was concerned.

The astonishing fact, and one that we think deserves most serious attention, is the enormous

proportion among these patients of cases of injurious astigmatic and anisometric defects; 67 of 68 cases had astigmatism; and it is most noteworthy that about one-half of the entire number of patients had unsymmetric astigmatism, a defect which almost inevitably produces the most injurious results upon cerebral and assimilative function. This terrible incidence of unsymmetric astigmatism in epileptics is, we judge, 20 or more times as great as in ordinary patients. We do not say that these high and most injurious ametropic defects caused the epilepsies of these patients. That can only be determined in the future by the careful records of seizures to be kept and compared with those of the past. If none of the patients is cured by the relief of eyestrain it would still not disprove the theory that in a certain number the eyestrain might have been the initial cause. And even if this should ultimately be shown an error, the duty of the State and the philanthropic to relieve these patients of the other morbid effects of these atrocious optical defects is one that to longer defer becomes the greatest cruelty. We have no hesitancy in saying that sewing or other hand work, without proper glasses, with very high and irritating unsymmetric or other astigmatisms, and with anisometropia, is ruinous to health in one or several of many ways.

A NEW DEPARTURE IN MEDICAL JOURNALISM

We recently received from an enterprising publishing house a unique proposition and one which we are inclined to believe will be accepted by some of the journals to which it has been addressed. The proposition, which it has stated was being submitted to fifteen or twenty other journals, was in brief as follows: Original articles and abstracts of American and foreign medical literature were to be furnished us in the shape of electrotypes all ready for immediate printing and were to appear simultaneously in all the journals which accepted the proposition. For compensation we were asked to place a certain number of our advertising pages each month at the disposal of the aforesaid enterprising publishers. In short we were asked to adopt the plan common with many small country newspapers and to print the *St. Paul Medical Journal* largely from "patent insides." It is perhaps needless to say that the proposition was promptly and politely declined. We shall watch our exchanges with considerable interest for the next few months to see how many of our contemporaries have accepted this remarkable proposition, which will probably prove very tempting to some editors and which offers such an excellent opportunity for publicity to the authors of the papers, which the promoters of the scheme announce will be furnished by "the first-class men of the United States."—*St. Paul Med. Jour.*

THE ACQUISITION OF CLINICAL WISDOM.

In the course of a recent address before the Canadian Medical Association Dr. William Osler made the following pertinent comments: "Medicine is a most difficult art to acquire. All the college can do is to teach the student principles, based on facts in science, and give him good methods of work. These simply start him in the right direction, they do not make him a good practitioner—that is his own affair. To master the art requires sustained effort, like the bird's flight, which depends upon the incessant action of the wings, but this sustained effort is so hard that many give up the struggle in despair. And yet it is only by persistent, intelligent study of disease upon a methodical plan of examination that a man gradually learns to correlate his daily lessons with the facts of his previous experience and with that of his fellows, and so acquires clinical wisdom. Nowadays it is really not a hard matter for a well-trained man to keep abreast of the best work of the day. He need not be very scientific, so long as he has a true appreciation of the dependence of his 'art on science,' for, in a way, it is true that a good doctor may have practice and no theory, art and no science. To keep up a familiarity with the use of instruments of precision is an all-important help in his art, and I am profoundly convinced that as much space should be given to the clinical laboratory as to the dispensary. One great difficulty is that while waiting for the years to bring the inevitable yoke, a young fellow gets stale and loses that practiced familiarity with technique which gives confidence.

"I wish the older practitioners would remember how important it is to encourage and utilize the young men who settle near them. In every large practice there are a dozen or more cases requiring skilled aid in the diagnosis, and this the general practitioner can have at hand. It is his duty, and failing to do so he acts in a most illiberal and unjust way to himself and to the profession at large. Not only may the older man, if he has soft arteries in his gray cortex, pick up many points from the young fellow, but there is much clinical wisdom afloat in each parish which is now wasted or dies with the old doctor, because he and the young men have never been on friendly terms.

"In the fight which we have to wage incessantly against ignorance and quackery among the masses and follies of all sorts among the classes, *diagnosis*, not *drugging*, is our chief weapon of offense. Lack of systematic personal training in the methods of the recognition of disease leads to the misapplication of remedies, to long courses of treatment when treatment is useless, and so directly to that lack of confidence in our methods which is apt to place us in the eyes of the public on a level with empirics and quacks."

The Association.

The Orange County Association held its regular monthly meeting at the office of Dr. Conner, Middletown, N. Y., on Wednesday, September 17, 1902, at 2 P. M. There was a good attendance of the members from all parts of the county. On account of the Orange County Agricultural Fair several of the members who were to read papers were unavoidably detained, so that the meeting took the form of an informal discussion and presentation of interesting cases. Pneumonia in the aged was discussed, principally in regard to the frequent absence of decided fever and the other usual signs noticed in younger subjects. Foreign bodies in the ear was also brought up, with a specimen recently removed after a week's sojourn in the meatus.

Interesting cases of subnormal temperature were cited, in which no reasonable cause could be discovered.

The success of the dietetic and eliminative treatment of diarrhea in children, as outlined in a previous paper read before the Association early in the summer, was commented upon, and several fatal cases carefully analyzed.

Neuralgia associated with herpetic eruptions was reviewed, especially as regarded the treatment.

After some further discussion the meeting adjourned until the third Wednesday in October.

* * *

The Erie County Association held its quarterly meeting at the University Club, Buffalo, on September 8, 1902, the president, Dr. Grosvenor, in the chair. A specimen of an extremely large bursa of the kneejoint, the result of chronic bursitis, was presented by Dr. Hartwig.

Dr. Bloome presented a section of an eye showing a large steel object lodged in the inner coats.

Dr. William Mansperger read an interesting paper on "Tuberculosis of the Peritoneum." He reported eleven cases of his own. Simple laparotomies and flushing of the peritoneal sac with salt solution resulted in five complete recoveries. The paper was discussed by Drs. Eugene Smith, Herman E. Hayd and Marcel Hartwig.

A paper on "Postpartum Subinvolution" was read by Dr. James E. King.

The writer stated that the uterus should be practically normal in size in from eight to ten weeks after confinement. The involution is brought about by the retraction of the unstripped muscle fibers, causing a diminished blood supply to the organ, which is followed by a peptonization of the fibers. This solution is then carried away by the lymphatics.

Anything tending to prevent retraction or increasing the amount of blood will cause subinvolution; thus, fibroids, laceration of cervix, corporeal or cervical endometritis and getting up too early after confinement.

In discussing the paper Dr. Bernard Cohen added to the list of causes the following: Fear or interference with lactation, toxemia and infection through any of the tissues, particularly lacerated cervix, vagina and perineum. The paper was also discussed by Drs. Lothrop, Hayd and Taylor.

The president spoke of the prosperous condition of the Association, and with fitting remarks alluded to the great work of the late Professor Virchow.

A collation was served after the meeting adjourned.

VAGINAL VS. ABDOMINAL MYOMECTOMY.

Martin, of Greifswald, Germany, insists that since the indications for myomectomy have been so much extended it is important to select a method of operation which gives the best remote as well as immediate results. He is strongly in favor of the vaginal route. He insists that the size of the tumor is not in itself a contraindication, since growths of large size can readily be removed per vaginam by morcellation. On the other hand, in the presence of firm suprapelvic adhesions, especially intestinal, the abdominal route is preferable; but deep pelvic adhesions and intraligamentary tumors are best handled from below. The writer fears injuries to the bladder and ureter more than he does hemorrhage, especially the former. He has never injured the ureters during vaginal myomectomy, though this accident has frequently occurred in his abdominal operations. When it is possible he enucleates tumors without removing the uterus. In young women he tries to leave one ovary. The writer reports the results of his work during three years—87 vaginal and 31 abdominal myomectomies. The latter were all complicated, and 6 terminated fatally. Of the vaginal operations 35 were total hysterectomies, with no deaths, and 52 were enucleations, with 2 deaths.

Dystocia Following Ventrofixation.—Bloomhardt reports three cases seen within three years in which dystocia occurred as the result of ventrosuspension of the womb. In the first case the patient was placed upon the table for the Cesarean section, and in cleansing the vagina the breech of the child was felt presenting. A macerated fetus was shortly afterward delivered. Earlier in labor the cervix was drawn strongly backward and available with difficulty for examination. In the second case the cervix was high up, very small, and in a posterior position. No fetal part could be reached through the vagina. Celiohysterectomy was performed and a living child extracted. The mother recovered. In the third case a multipara was in labor for several days. The cervix could not be brought down. The patient was greatly exhausted and celiohysterectomy was performed. Mother and child died. The fundus was firmly adherent to the wall of the abdomen.

Book Reviews.

A TREATISE ON DISEASES OF THE ANUS, RECTUM AND PELVIC COLON—By James P. Tuttle, A.M., M.D., Professor of Rectal Surgery in the New York Poly-clinic Medical School and Hospital; Visiting Surgeon to the Almshouse and Workhouse Hospitals. New York: D. Appleton & Co., 1902.

Probably no book that has appeared this year has been looked forward to with so much anticipation as this work of Dr. Tuttle. Not only has the author gained an enviable national reputation as a specialist in his chosen field, but he is widely known also as a successful teacher in this comparatively new specialty.

Rectal diseases, being one of the latest specialized lines of work, during the last few years has naturally been greatly broadened and its methods changed through improved instruments, aseptic technique and a wider knowledge of pathology. It is therefore with no little interest that the latest treatise upon this subject, and that, too, by a new and rising author, has been awaited. As the author says, this book is practically the outcome of twelve years' conduct of one of the first and largest clinics in this specialty. The opinions expressed are based upon the clinical experience derived from a large number of actual cases. Such experience teaches that no one method succeeds always, and that the practitioner should be conversant with many, in order that he may have resources for all emergencies. The book is not only a presentation of the author's own practices and opinions, but also those of other workers in the same field. Much space is devoted to examinations, diagnosis and local treatment, especially the non-operative treatment. The subject is illuminated with eight colored plates and 338 illustrations in text.

There is no field of medicine in which the quack has had such unbounded sway as in that of rectal diseases. Every opportunity, therefore, that is afforded the general practitioner to familiarize himself with all the various conditions of disease in this part of human anatomy and to enable him to treat it rationally and scientifically is a boon not only to the profession but to humanity. The money necessary to procure this book and the time spent in acquiring and digesting the information therein contained cannot fail to prove one of the best investments that the general practitioner can make.

Great expectations are apt to meet with disappointment, but in this instance there is a marked exception. The book is almost encyclopedic in the amount of information it contains and yet the information is presented in a concise and attractive style. In the chapter on Methods of Examination we find a succinct narration of the evolution of the specialty, and in the perusal of this chapter the impression is unconsciously forced upon the reader that the development of this branch is entirely due to the progress in methods of diagnosis. Instruments of precision in diagnosis also afford means of treatment and the two department have advanced *pari passu*. One of the most interesting chapters is that on constipation. To this subject the author has devoted fifty pages, discussing the subject in all its phases, from the simple every-day "habit," to the extreme condition of impaction. Here will be found many valuable hints and suggestions. Pruritus ani and hemorrhoids follow constipation and require about 100 pages more for their consideration. The wisdom of the author is shown in the devotion of so much painstaking labor to these practical aspects of the subject.

It is impossible to speak *in extenso* of the many valuable features of the work in a brief review of this character, but we may mention a few. The author confines the term rectum to the immobile portion of the canal comprised between the points where the mesentery ceases above and the mucous membrane ceases below. The author insists that the sigmoid flexure of the colon joins the rectum from the right side of the pelvis instead of the left, as is held by most authors. In

discussing the normal condition of the rectum we find the following: "It is not true, as is frequently stated, that the rectum is always empty, except just before the period of defecation; it always contains more or less fecal matter." In regard to O'Beirn's doctrine of retro-peristaltic action, the author has never seen a case in which the fecal matter having once entered the rectum has been lifted back into the sigmoid. The rectal valves of Houston are described and pictured, but are not credited with being the cause of constipation or obstipation. The introduction of the hand into the rectum for examination is considered safe and legitimate and a valuable resource under certain circumstances, but no hand should be introduced which measures in circumference over 120 centimeters (7½ inches).

The author demurs to the rather extravagant statements that have been made by some investigators regarding the extent of the bowels that can be brought under direct observation by the protoscope or the sigmoidoscope. Experiments upon the cadaver have convinced him that the descending colon by such methods is beyond the reach of the all-seeing eye, even of the rectal specialist.

Regarding the treatment of tubercular ulcers and sinuses in the perirectal tissue, it is considered inadvisable to confine patients to bed by extensive operations in these regions. "Changes of climate, outdoor exercise, forced feeding with foods and dyro carbons, together with massage, and oil inunctions, will do more for this condition than local treatment or surgical operations; at the same time the latter need not be neglected."

The illustrations in the book are on a high plane of artistic merit; they are readily understood and are also instructive. The work is destined to become the authority on this subject for both the specialist and the general practitioner.

PRACTICAL DIAGNOSIS: THE USE OF SYMPTOMS AND PHYSICAL SIGNS IN THE DIAGNOSIS OF DISEASE. Fifth edition; revised and enlarged. By Hobart Amory Hare, M.D., B.Sc., Professor of Therapeutics in the Jefferson Medical College of Philadelphia; Professor of Diseases of Children in the University of Pennsylvania. Illustrated with 236 engravings and plates. Lea Bros. & Co., Philadelphia and New York, 1902.

A true lover of books holds them in sweet remembrance not only for their valued contents, but also for the elegance of the garments wherewith they are clothed. A beautiful binding appeals to him. It is a pleasure to hold such a book in his hands, to contemplate the symmetry and beauty and the harmonious coloring of its binding and covers. Such a book is this last edition of Hare's "Practical Diagnosis"; a beautiful sample of the bookmaker's art and a joy to him who is fortunate enough to possess it. This is no attempt at jugglery on the part of the publisher, for the contents are more than worthy of the binding.

The viewpoint from which a book is evolved largely determines its practical value. The elaborate and careful description of disease in all its details is invaluable to him who would know and practice medicine in its broadest application, but it is hard reading and far from entertaining. The elder Flint, in his "Clinical Medicine," introduced the method of presenting clinical pictures of diseases as they appear to the man at the bedside. This is the attitude of the author in the work before us, and his concise, graphic style is eminently fitted to produce a series of clinical pictures that are not only clean-cut and impressive, but extremely fascinating. In this last (fifth) edition the author has rewritten a very large part of what appeared in the previous edition, and, as he says in the preface, has endeavored, by the addition of much new material, to keep the book abreast of the advances of diagnostic technique throughout the entire range of clinical medicine. Here the student and practitioner will find discussed not only the symptoms of disease, but also the physical signs and clinical tests which experience has proved reliable. A

valuable system of double indexing, one of symptoms and the other of diseases, affords a great saving of time to one who wishes to consult the work.

The treatment of disease is not presented in this volume, but, as the author says in his preface, the design has been to make companion or supplementary volumes of this book and his text-book on "Practical Therapeutics," wherein is contained the treatment.

BOOKS RECEIVED.

A TREATISE ON DISEASES OF THE ANUS, RECTUM AND PELVIC COLON—By James P. Tuttle, A.M., M.D., Professor of Rectal Surgery, New York Polyclinic and Hospital; Visiting Surgeon to Almshouse and Workhouse Hospitals. Eight colored plates and 338 illustrations in text. D. Appleton & Co., New York, 1902.

DUDLEY'S GYNECOLOGY. A Treatise on the Principles and Practice of Gynecology. By E. C. Dudley, A.M., M.D., Professor of Gynecology in the Northwestern University Medical School, Chicago. New (third) edition; enlarged and thoroughly revised. In one very handsome octavo volume of 756 pages, with 474 engravings, of which 60 are in colors and 22 colored plates. Cloth, \$5 net; leather, \$6 net; half morocco, \$6.50 net. Lea Bros. & Co., Philadelphia and New York.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared articles on Medicine, Neurology, Surgery, Therapeutics, Obstetrics, Pediatrics, Pathology, Dermatology, Diseases of the Eye, Ear, Nose and Throat, and other topics 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., Philadelphia, U. S. A., with the collaboration of John B. Murphy, M.D., Chicago; Alexander D. Blackader, M.D., Montreal; H. C. Wood, M.D., Philadelphia; T. M. Rotch, M.D., Boston; E. Landolt, M.D., Paris; Thomas G. Morton, M.D., Philadelphia; James J. Walsh, M.D., New York; J. W. Ballantine, M.D., Edinburgh, and John Harold, M.D., London; with regular correspondents in Montreal, London, Paris, Leipsic and Vienna. Volume II; twelfth series, 1902. Philadelphia: J. B. Lippincott Company, 1902.

APPLIED SURGICAL ANATOMY. Regionally presented for the use of students and practitioners of medicine. By George Woolsey, A.B., M.D., Professor of Anatomy and Clinical Surgery in the Cornell University Medical College; Surgeon to Bellevue Hospital; Associate Surgeon to the Presbyterian Hospital; Fellow of the American Surgical Association and of the New York Academy of Medicine. With 125 illustrations, mostly colored. Lea Bros. & Co., New York and Philadelphia, 1902.

GIBSON AND RUSSELL'S PHYSICAL DIAGNOSIS. Third edition; revised and rewritten. By Francis D. Boyd, C.M.G., M.D., F.R.C.P., Ed.; Assistant Physician, Edinburgh Royal Infirmary; Physician to the Deaconess' Hospital; formerly Clinical Medicine Tutor, Royal Infirmary, Edinburgh. With 144 illustrations. New York: D. Appleton & Co.; Edinburgh and London: Young J. Pentland, 1902.

ATLAS AND EPITOME OF ABDOMINAL HERNIAS—By Dr. George Sultan, First Assistant in the Surgical Clinic in Gottingen, Prussia. Authorized translation from the German edited by William B. Coley, M.D., Clinical Lecturer on Surgery, Columbia University (College of Physicians and Surgeons); Surgeon to the General Memorial Hospital; Assistant Surgeon to the Hospital for Ruptured and Crippled, New York City. With 119 illustrations, 36 of them in colors. Philadelphia and London: W. B. Saunders & Co., 1902.

A MANUAL OF INSTRUCTION IN THE PRINCIPLES OF PROMPT AID TO THE INJURED. Including a chapter on hygiene and the drill regulations for the hospital corps, U. S. A. Designed for military and civil use. By Alvah H. Doty, M.D., Health Officer of the Port of New York; late Major and Surgeon Ninth Regiment, N. G.,

S. N. Y.; late Attending Surgeon to Bellevue Hospital Dispensary, New York. Fourth edition; revised and enlarged. New York: D. Appleton & Co.; London, 25 Bedford street, 1902.

DEVELOPMENT AND EVOLUTION. Including Psycho-physical Evolution, Evolution by Orthoplasia and the Theory of Genetic Modes. By James Mark Baldwin, Ph.D., Princeton, Hon. D. Sc. Oxon., LL.D.; Glasgow Stuart, Professor in Princeton University. The Macmillan Company; London: Macmillan & Co., Ltd.; New York, 1902.

THE DISEASES OF INFANCY AND CHILDHOOD. Designed for the use of students and practitioners of medicine. By Henry Koplik, M.D., Attending Physician to the Mount Sinai Hospital; formerly Attending Physician to the Good Samaritan Dispensary, New York; ex-President of the American Pediatric Society; Member of the Association of American Physicians and of the New York Academy of Medicine. Illustrated with 169 engravings and 30 plates in color and monochrome. Lea Bros. & Co., New York and Philadelphia, 1902.

ESSENTIALS OF HISTOLOGY—By Louis LeRoy, B.S., M.D., Professor of Histology and Pathology in Vanderbilt University, Medical and Dental Departments; Bacteriologist to the State of Tennessee; Pathologist to Nashville City Hospital; Associate Editor *Medical Examiner and Practitioner*, etc. Arranged with questions following each chapter; 92 illustrations. Second edition; revised and enlarged. Philadelphia and London: W. B. Saunders & Co., 1902.

ATLAS AND EPITOME OF TRAUMATIC FRACTURES AND DISLOCATIONS—By Prof. H. Helferich, Professor of Surgery at the Royal University, Greifswald, Prussia. Authorized translation from the German. Edited by Joseph C. Bloodgood, M.D., Associate in Surgery, Johns Hopkins University, Baltimore, Md. Fifth edition; revised and enlarged. With 216 colored illustrations on 64 lithographic plates and 190 figures in the text. Philadelphia and London: W. B. Saunders & Co., 1902.

THE INTERNATIONAL TEXT-BOOK OF SURGERY—By American and British authors. Edited by J. Collins Warren, M.D., LL.D., Hon. F.R.C.S., Eng.; Professor of Surgery in Harvard Medical School; Surgeon to the Massachusetts General Hospital, and A. Pearce Gould, M.S., F.R.C.S., Surgeon to Middlesex Hospital; Lecturer on Surgery, Middlesex Hospital Medical School; Member of the Council of the Court of Examiners of the Royal College of Surgeons, England. Second edition; thoroughly revised. With 499 illustrations in the text and 8 full-page plates in colors. Volume I, "General and Operative Surgery"; Volume II, "Regional Surgery." Philadelphia and London: W. B. Saunders & Co., 1902.

SURGICAL PRINCIPLES AND DISEASES OF THE FACE, MOUTH AND JAWS. A text-book of the surgical principles and surgical diseases of the face, mouth and jaws. For dental students. By H. Horace Grant, A.M., M.D., Professor of Surgery and of Clinical Surgery, Hospital College of Medicine; Professor of Oral Surgery, Louisville College of Dentistry, Louisville. Octavo volume of 231 pages, with 68 illustrations. Philadelphia and London: W. B. Saunders & Co., 1902. Cloth, \$2.50 net.

ESSENTIALS OF DISEASES OF THE EAR. Arranged in the form of questions and answers. Prepared especially for students of medicine and postgraduate students. By E. B. Gleason, S.B., M.D., Clinical Professor of Otolaryngology, Medico-Chirurgical College, Philadelphia; Surgeon in charge of the Nose, Throat and Ear Department of the Northern Dispensary, Philadelphia; one of the Laryngologists to the Philadelphia Hospital. Third edition; thoroughly revised. Philadelphia and London: W. B. Saunders & Co., 1902.

Original Articles.

A. REVIEW OF ECHINOCOCCUS DISEASE IN NORTH AMERICA.*

BY IRVING PHILLIPS LYON, M.D.,
Buffalo.

THE writer's intent in the present article is to present the statistics of hydatid (echinococcus) disease in the United States and Canada, based upon the cases and references collected from the literature and other sources to date—July 1, 1901—and to add thereto certain observations suggested by the facts shown, with the hope that such a study may contribute to the interest and knowledge of this rare disease in America, and make available for reference the cases that are scattered through the mass of medical literature.

Two previous reviews of hydatid disease in America have been published, the first by Osler,¹ in 1882, collecting 61 cases from the United States and Canada, and the second by Sommer,² in 1895 and 1896, bringing together 100 cases from the United States. Osler³ states also that Alfred Mann collected for him from the literature in the period—1882, to July, 1891—24 in addition to his previous 61 cases. Mann's summary of cases was not published, but Dr. Osler has informed us that all of Mann's cases were later included in Sommer's collection. The statistics of Osler and Sommer together include 110 cases. To these cases we have been able to add 135 other cases, so that our statistics embrace in all 241⁴ cases occurring in the United States and Canada.

Age.—The occurrence of the disease according to age is shown in Table I, by decades:

TABLE I—AGE.

0-9 years	..... 1 ⁵		
10-19 "	..... 7		
20-29 "	..... 35=26 per ct.	} 59 per ct.	} 74 per ct.
30-39 "	..... 45=33 "		
40-49 "	..... 21=15 "		
50-59 "	..... 16		
60-69 "	..... 5		
70-79 "	..... 3		
80-89 "	..... 2		
	..... 135		
Child	..... 1		
Lad	..... 1		
Young adult	..... 2		
Adult	..... 19		
Old	..... 4		
Unstated	..... 79		
	..... 106		
Total	..... 241		

A large majority (74 per cent.) of the cases

*Read at the eighteenth annual meeting of the New York State Medical Association, held at New York, October 21 to 24, 1901.

¹Osler. THE AMERICAN JOURNAL OF THE MEDICAL SCIENCES, October, 1882, N. S., vol. lxxxiv, pp. 475-490.

²Sommer. New York Medical Journal, November, 1895, vol. lxii, pp. 656-659, and August, 1896, vol. lxiv, pp. 262-265.

³Osler. Practice of Medicine, New York, 1895, second edition, p. 1102.

⁴We have omitted from our statistics four of Osler's and Sommer's cases, as they seemed of doubtful validity.

⁵Ferguson (vide infra) saw three cases in children under 8 years of age, who had been brought to Winnipeg by Icelandic immigrants. These cases were not described individually and have, therefore, been omitted from this enumeration.

whose ages were given occurred in young and middle-aged adults. In the age-period—20 to 39 years—59 per cent. of the cases occurred. Jonassen⁶ found 55 per cent., and Finsen⁷ 42 per cent. in Iceland in this period of life. Under the age of 10 years the disease is rare, in spite of the fact that young children are apparently more exposed than adults to infection. As shown by the table, no period of life is exempt.

Sex.—The cases were divided by sex, as follows:

TABLE II—SEX.

Males	..... 104=60 per cent.
Females	..... 69=40 "
	..... 173
Not stated	..... 68
	..... 241

The preponderance of males over females (3 to 2) in the American cases is about reversed in the statistics of most authorities. Neisser⁸ gives 34.8 per cent. in males and 65.2 per cent. in females; Finsen⁹ found 29.1 per cent. in males and 70.9 per cent. in females, and Jonassen's¹⁰ figures show 40.6 per cent. in males and 59.4 per cent. in females. According to Davaine,¹¹ the occurrence of the disease in the two sexes is equal. The fact that a large part of the American cases occurred among foreign immigrants, among whom young adult males predominate, may explain in part the peculiarly high proportion of males in these cases.

Nationality.—The representation of the cases by nationality or race is shown in Table III, as follows:

TABLE III—NATIONALITY OR RACE.

Birthplace.	
Iceland	..... 58
Germany	..... 23
Italy	..... 18
Sicily	..... 1
England	13
Wales	..... 1
Ireland	..... 3
France	..... 3
Poland	..... 2
Russia	..... 2
Syria	..... 2
Argentine Republic	..... 1
Azores	..... 1
Austria	..... 1
Denmark	..... 1
Japan	..... 1
Mexico	..... 1
Sweden	..... 1
Foreign (not specified)	..... 3
	..... 136
America	..... 1
Canada	..... 2
Negro	..... 6
" (U.S.)	..... 4
	..... 13
Total stated	..... 149
White	..... 4
Not stated	88
	..... 92
Total	..... 241

From this table it is seen that 136 cases were

⁶Jonassen. Echinokokkensydomen belyst ved Islandske Lægers Erfaring. Kjøbenhavn, 1882.

⁷Finsen. Jagttagelser angaaende sygdoms-fortsoldener, x, i, Island, Kjøbenhavn, 1874.

⁸Neisser. Die Echinococcen-Krankheit, Berlin, 1877.

⁹Finsen. Loc. cit.

¹⁰Jonassen. Loc. cit.

¹¹Davaine. Traité des Entozoaires, Paris, 1877, second edition.

stated to be among foreigners; in 92 cases the nationality was not stated, and the remaining 13 cases were distributed as follows: Negro, 10; Canadian, 2, and American, 1. Mention of American birth is conspicuously rare, though it may be inferred from the context of the reports of some cases that the subjects were native-born.

If the proportion of foreigners shown among the cases whose birthplace was stated be assumed to obtain also in the cases of unstated nationality, it is seen that 91 per cent. of the American cases occurred in foreigners. The negro has been assumed to be native-born, and, in fact, it was so stated in at least four instances. The disease seems to have been directly imported into America in the great majority of cases by immigrants from foreign countries. The relative immunity of Americans is seen even among the American-born children of the Icelandic immigrants of Manitoba, though among the latter the disease is very common. The disease prevails chiefly in the lower classes and particularly among the ignorant and slovenly, but not exclusively, for instances of the disease are recorded in persons of rank and culture.

The large representation of Germans in the table is explained by the large German immigration to America and the well-known fact that hydatid disease is very common in certain parts of Germany. The occurrence of 19 cases among Italians is not remarkable considering the habits of this people, and the disease is said to be not uncommon in England.

The following facts, quoted from Ferguson,¹² of Winnipeg, are of interest in reference to the large number of cases of hydatid disease in Icelanders shown by the table:

"First, in 1874, and at different times since, the hydatid disease was brought to Manitoba by the influx of Icelandic immigrants.

"So far as I have been able to ascertain, the disease is limited to the Icelandic population and to those of them born in Iceland.

"I have met with it in three children under 9 years of age, but upon inquiry it was found that they were born in Iceland.

"The total number of my cases has been 27, but this does not include several of doubtful diagnosis, in which objection was taken to aspiration or exploratory incision.

"From the reports of our hospitals, and from conversations with the city physicians, I have traced some 18 or 20¹³ other cases treated by different medical men.

"I think that I am justified in concluding that between 45 and 50 persons affected with the echinococcus disease have been treated in Winnipeg since 1874. I feel that this number is rather below the proper reckoning."

Ferguson gave the Icelandic population of Winnipeg as 3,000, and, accepting his estimate of 45 to 50 cases of hydatid disease seen in this

population, the relative frequency of occurrence is found to be about identical with that of the disease in Iceland, where, according to Jonassen, whose estimate is probably the most accurate, 1 out of every 61 persons (1.6 per cent.) is affected with hadatid disease. Ferguson's estimate, however, is probably too conservative, judging from the number of cases shown in our statistics.

It is interesting to note that Ferguson saw no cases of the disease in the Canadian-born offspring of Icelandic immigrants. Chown, however, observed one such case in a young woman of 23 years. This case, therefore, gives ground for the apprehension that an endemic focus of the disease has already been established in Winnipeg by the Icelandic colony, and that further cases may occur in the native-born children of Icelanders as they reach maturity, the period of life in which the disease is most commonly manifested.

Geographical Distribution.—The geographical distribution of the American cases is shown in Table IV, as follows:

TABLE IV.—GEOGRAPHICAL DISTRIBUTION.

New York.....	59	Connecticut.....	1
Manitoba.....	56	Louisiana.....	1
Pennsylvania.....	24	Michigan.....	1
Massachusetts.....	13	New Jersey.....	1
Ohio.....	9	Tennessee.....	1
Missouri.....	8	Vermont.....	1
Ontario.....	8	Washington.....	1
Quebec.....	7		
Texas.....	6		220
Illinois.....	5	Not specified ..	21 ¹⁴
California.....	4		
Minnesota.....	3	Total.....	241
District of Columbia.	3		
Alabama.....	2	United States.....	150
Indiana.....	2	Canada.....	71
Kentucky.....	2	Not stated.....	20
Virginia.....	2		241

There seems to be nothing noteworthy in the geographical distribution shown, except the fact that concentration of the disease in certain States is coincident with concentration of population, and especially immigrant population, in such States. Attention has already been called to the prevalence of the disease among the Icelandic immigrants of Manitoba. It noticeable that so few cases are furnished by the great grazing and cattle-raising States of the West, where it would seem, *a priori*, that the conditions favorable to the spread of the disease might prevail.

Anatomical Location. The distribution of the disease by organs in the body is shown in Table V, as follows:

TABLE V.—ANATOMICAL LOCATION.

Liver.....	177=73.7 per cent.
Omentum.....	8
Peritoneal cavity	8
Peritoneum.....	5
Mesentery.....	5
Lung.....	11= 4.5 "
Spleen.....	9= 3.7 "
Kidney.....	9= 3.7 "
Bladder.....	8= 3.3 "

¹⁴Includes one case from a "Western town" in the United States.

¹²Ferguson, Northwestern Lancet, St. Paul, 1893, vol. xiii, page 41-48.

¹³These 18 or 20 cases have not been included in our tables because they were merely estimated and no details were given.

Pelvis	5	} 7= 2.9 per cent.
Walls of pelvis	1	
Connective tissue of pelvis	1	
Pleura	5= 2.0	"
Brain	4= 1.6	"
Breast	4= 1.6	"
Abdominal wall	4= 1.6	"
Stomach	2= 0.8	"
Common bile-duct	2= 0.8	"
Neck	2= 0.8	"
Arm	1= 0.4	"
Humerus	1= 0.4	"
Pancreas	1= 0.4	"
Eye ("bulbus of")	1= 0.4	"
Diaphragm	1= 0.4	"
Subdiaphragmatic	1= 0.4	"
Intestine	1= 0.4	"
Muscles of back	1= 0.4	"
Ovary	1= 0.4	"
Pericardium	1= 0.4	"
Prostate	1= 0.4	"
Sac of inguinal hernia	1= 0.4	"
Testicle	1= 0.4	"
Uterus	1= 0.4	"
Psoas muscle	1= 0.4	"
Muscles of thigh	1= 0.4	"
Nasal septum	1= 0.4	"

287 organs in 240 cases.

Not stated 1 case.

241 cases.

Cysts passed per rectum	10	} 11= 4.5 per cent.
Cyst membrane passed per rectum	1	
Cysts expectorated	6	} 7= 2.9 "
Hooklets expectorated	1	
Cysts vomited	3	} 4= 1.6 "
Cyst membrane vomited	1	
Cysts passed per urethra	2	2= 0.8 "

The liver is seen to be the seat of election of the parasite, being involved in 73.7 per cent. of the cases, a high rate compared with other statistics. Davaine¹⁵ gives for the liver 44 per cent., Neisser¹⁶ 50 per cent. and Finsen¹⁷ 69 per cent. Next to the liver the order of frequency of the organs involved by the disease is as follows: Omentum, peritoneal cavity, peritoneum and mesentery (combined), 10.8 per cent.; lung, 4.5 per cent.; spleen and kidney, each, 3.7 per cent.; bladder, 3.3 per cent., etc. Very unusual sites of the parasite are shown in our statistics in the sac of an inguinal hernia, nasal septum, pericardium, head of the humerus, brain, eye, prostate, testicle, pancreas and pleura (primary), in one case each. The multilocular type of cysts (*echinococcus multilocularis*) is mentioned in four cases, three times in the liver and once in the female breast. Two of these cases were in negroes, in the breast and in the liver. Rupture of cysts into the following organs is mentioned: Intestine, stomach, bile-ducts, bladder, peritoneal cavity and lung. Rupture through the chest wall externally took place in one case. Discharge of cysts, cyst-membrane, or hooklets, by the various natural outlets of the body was mentioned as follows: Passed per rectum, 11 cases (4.5 per cent.); expectorated, 7 cases (2.9 per cent.); vomited, 4 cases (1.6 per cent.), and passed per urethram, 2 cases (0.8 per cent.).

Diagnosis.—The diagnosis of *echinococcus*

disease in the American cases seems to have been based on the gross appearance of the cysts, the presence of daughter cysts, the site of the cysts, etc., in a majority of the cases. However, in a fair proportion of the more recently reported cases, such characteristic microscopical elements as broad capsules, scolices, hooklets, calcareous corpuscles, lamellated cyst membrane, etc., were mentioned in support of the diagnosis. The chemical tests of the cyst fluid for the absence of albumin and the presence of grape sugar were commonly applied, and the specific gravity was tested in many cases. Succinic acid, said by Leuckart to be "found in hardly any other living organism," and pathognomonic of hydatid fluid, was looked for in only a few cases. The physical characteristic of the outward curling of the elastic cyst wall, when incised, was only rarely mentioned. In doubtful cases none of these points of diagnosis should be neglected, though any or all of them may be wanting in atypical or degenerated cysts.¹⁸

It has been a difficult matter, in reviewing the literature, to decide what cases ought to be excluded because of insufficient evidence of the true cestode nature of the cysts, and perhaps an occasional case has been included in our summary of cases that might better have been omitted. Without being hypercritical, we have tried to be conservative in judging of cases. It is possible, also, that an occasional case may have been reported independently by different observers and thus included more than once in our summary, though we have been on our guard against this source of error.

Is the Disease Increasing?—This important question, we believe, cannot be answered authoritatively at present. It is true that the great majority of cases in our statistics are accredited to recent years. This fact, however, cannot be accepted as evidence that the disease is more common now than formerly. It is only within recent years that the habit of reporting rare and interesting cases in the medical journals has become general. Probably more cases of pneumonia, typhoid fever, or any other disease that might be mentioned, have been reported in the medical literature in the last quarter-century than in all previous time. This fact plainly does not argue that these diseases are increasing in prevalence, but merely that they are being better recognized, studied and discussed than formerly. So we are not able to affirm that hydatid disease is increasing in America. Still, one of the best authorities, Dr. C. W. Stiles,^{19, 20} zoologist of the Bureau of Animal Industry, has stated that the disease in the domesticated animals in the United States is

¹⁸Cary and Lyon, American Journal of the Medical Sciences, October, 1900, cxx, 402-413; and Transactions of the Association of American Physicians, 1900, xv, 367-379.

¹⁹Stiles, C. W. Bull., No. 19, United States Department of Agriculture, Bureau of Animal Industry, Washington, 1898, p. 122.

²⁰Doctor Stiles in a personal communication, writes as follows: "It is largely on the basis of our unpublished statistics that I have insisted so frequently upon the necessity of guarding against hydatid disease, which is undoubtedly on the increase among the domesticated animals."

¹⁵Davaine. Loc. cit.

¹⁶Neisser. Loc. cit.

¹⁷Finsen. Loc. cit.

undoubtedly on the increase. If this be true, it is probably also true that the disease in man is also on the increase in this country. Probably only a small portion of the cases occurring in the country are recognized and reported. However, the disease is still a rarity and is considered a curiosity in medical circles.

*Hydatids in Animals.*²¹—Except for the records of the United States meat inspection service, published by Dr. D. E. Salmon, chief of the Bureau of Animal Industry, the evidence seems to indicate that hydatid cysts in our domesticated animals are not uncommon, different observers finding them in from 1 to 10 per cent. of animals examined. It is difficult to reconcile these various observations with the enormous statistics of the Government meat inspection service, which indicate that the disease is a great rarity in the livestock of the United States. In the two years ending June 30, 1899, only 6 out of 8,831,927 cattle were condemned in whole or in part on account of hydatid disease, or 1 in 1,471,987; 209 out of 11,110,776 sheep, or 1 in 53,161, and 1,994 out of 44,841,779 hogs, or 1 in 22,488. The official authority of these figures, as well as their enormous scope, support them against the evidence of the other scattered observations, and we are therefore bound to assume that at present echinococcus disease is a very rare affection in the natives herds and flocks of this country, as it is also among the native population.

The United States meat inspection service, however, gives only the aggregate for the whole country, and furnishes no facts on the special distribution of the disease in different parts of the country. It is quite likely that the disease is not evenly distributed throughout the country, but prevails in certain districts in greater proportion than in other districts, and that endemic foci of the disease exist, perhaps, here and there. Such a presumption is favored by the known facts of the distribution of the disease in Germany and other countries, and would help to explain the greater frequency of the disease in animals reported from certain parts of the country by various individual observers.

Occurrence of the Adult Tapeworm (Tenia Echinococcus) in Dogs.—It would, therefore, appear, *a priori*, that the adult *Tenia echinococcus*, from whose eggs, when introduced into the gastro-intestinal tract, are developed the larval hydatid cysts, must be an exceedingly rare tapeworm in the dogs of North America. And this is shown to be the case by the fact that this tapeworm in dogs has been discovered and confirmed by competent authority²² in only a single instance in the United States, by Curtice,²³ in Washington, D. C. Osler²⁴ failed to find it in "some scores

of dogs" examined in Canada, from 1867 to 1882. Osler and Clement,²⁵ in 1883, from Montreal, wrote: "We have never met with a specimen in numerous dissections." Sommer²⁶ examined 50 dogs in Washington, D. C., in 1896, without finding it. Ward²⁷ did not discover it among 20 dogs examined in Lincoln, Neb., in 1897. Stiles²⁸ and Hassall,²⁹ of the Bureau of Animal Industry, Washington, D. C., have never in their large experience seen it from any American source, except the single specimen discovered by Curtice. Sommer, in 1900, wrote³⁰: "In numerous dogs examined since 1896 at Blackwell's Island, New York, and in the State of New York, I have never succeeded in finding the *Tenia echinococcus*." More extensive investigations than heretofore made, however, are required for determining the distribution and rate of occurrence of this parasite in dogs on this continent. The minute size of the tapeworm makes its detection difficult and throws the burden of investigating its occurrence on the few scientific zoologists, veterinarians and physicians who have given special attention to the much-neglected study of helminthology.

Prophylaxis.—Echinococcus disease in man and animals is one and the same disease, derived from a common source—namely, the ingestion with food or drink of the eggs of the *Tenia echinococcus*, a tiny tapeworm inhabiting the intestinal tract of dogs and wolves. The dog or wolf represents the determinate host of the parasite, and man and various animals the intermediary host, in which the larval or bladder stage of the parasite in its cycle of development is undergone. For human beings or animals to become infected with the larval stage, or hydatid cysts, they must in some way receive the eggs of the adult tapeworm of dogs into their stomach, where the capsule or shell of the egg is digested and the embryo is released and enabled to penetrate the wall of the stomach or intestine and be carried to its destination in the liver or elsewhere in the body, where it undergoes its metamorphosis into a bladder or hydatid cyst. For dogs to become infected with the adult tapeworm it is necessary that they ingest the live scoleces contained in hydatid cysts; in other words, that they eat the cysts or cyst-contents of animals infected with the disease. The full cycle of development in the life history of the parasite is thus established.

This leads us to a consideration of the means

²¹Herff (Texas Medical Journal, 1894, ix, 613-616), who claims to have found the *Tenia echinococcus* in his district (San Antonio, Tex.) in all dogs dissected, was probably dealing with some other variety of tapeworm, as already suggested by Sommer (loc. cit.).

²²Curtice. Records of the Bureau of Animal Industry, Washington, D. C.

²³Osler. American Journal of Medical Sciences, 1882, lxxxiv, 475.

²⁴Osler and Clement. Canada Medical and Surgical Journal, 1883, xi, 325.

²⁵Sommer. Veterinary Magazine, August, 1896.

²⁶Ward. Report of Nebraska State Board of Agriculture for 1896, p. 173.

²⁷Stiles. Personal communication.

²⁸Hassall. Bull. No. 19, United States Department of Agriculture, Bureau of Animal Industry, Washington, D. C., 1898.

²⁹Sommer. Personal communication.

³⁰The cysts described in the muscles of prairie jack-rabbits by Herff (Texas Medical Journal, 1894, ix, 613-616) and by Menger (Texas Medical Journal, 1899, xv, 237-245; and do. 1900, xvi, 415-420; and American Journal of Dermatology and Genitourinary Diseases, St. Louis, 1900, iv, 155-163), although containing booklets, cannot be accepted as *Echinococcus polymorphus*. They were probably *Cenurus serialis*, the larval cysts of *Tenia serialis*, a well-known bladder-worm of rabbits in this country. The writer has occasionally encountered these cysts in white rabbits, in Buffalo, in making autopsies on experimental rabbits dead of various infections.

of controlling the spread of the disease, which can be effected in two ways, viz.: First by carefully destroying by burning the larval cysts in slaughtered animals, and thus preventing the infection of dogs; and, second, by guarding ourselves against infection from dogs by "recalling that the dog is not a human being and should not be treated as one. Too intimate association with dogs is sure to breed the disease in man" (Stiles). Stray and ownerless dogs should be killed. But though we can in large measure protect ourselves against infection from dogs, we cannot equally guard our domesticated animals against such infection, except by first protecting our dogs against infection from diseased cattle, sheep and swine. And this is the *key to the whole problem. We can exterminate the disease by enforcing proper sanitary regulations at the slaughterhouses.* Compel the destruction by burning of hydatid cysts found in slaughtered animals, and the infection of dogs and the subsequent infection of man or animals from dogs are prevented, except by remote possibilities hardly worthy of consideration. The practice of throwing out the offal of slaughtered animals should be interdicted by law, and dogs should be prohibited from entering the premises of slaughterhouses. The worst offender against these plain rules of public hygiene is the *country slaughterhouse*, and against it our first and chief efforts for reform must be directed, as already insisted upon by Stiles³¹:

"Hydatid disease is at present comparatively rare in this country, and now is the time to attack it. By proper precautions at the abattoirs and slaughterhouses this dangerous parasite can be totally eradicated from the country. If these precautions are not carried out it will be only a question of time when this country will take its place with Germany and Australia in respect to the number of human lives sacrificed to a disease which has not yet gained much ground with us and can now be easily controlled."³²

Commercial Considerations.—Finally, it may not be amiss to mention the possible commercial importance that this disease in our live stock may in the future assume if it is now neglected and allowed to gain a permanent place on this continent. In view of our past experiences in the matter of international commercial jealousies and reprisals against American cattle by certain European nations under the pretense of sanitary safeguards, the United States Government may well give serious heed to the possibility of furnishing to countries commercially hostile to us a plausible pretext for the exclusion of American animals, if by its present negligence it allows hydatid disease to become endemic and widespread in this country, as it is in Germany, Australia,

³¹Stiles, C. W. The Country Slaughterhouse as a Factor in the Spread of Disease. Year book of the Department of Agriculture for 1896, pp. 155-166.

³²Stiles, C. W. Bull. No. 19, United States Department of Agriculture, Bureau of Animal Industry, Washington, D. C., 1898, p. 4.

the Argentine Republic and many other parts of the civilized world.

In conclusion, we wish to acknowledge our indebtedness for notes of unpublished cases to various gentlemen mentioned in the summary of cases, and, in particular, to Dr. H. H. Chown, of Winnipeg, for his private notes of a large number of cases in Icelanders, and to Dr. Frederick A. Packard, of Philadelphia, for his generosity in placing at our disposal his references to cases which he had been systematically collecting from the literature with a view to ultimate publication.

531 Franklin street.

THE PRACTICE OF SUBSTITUTION.

Even the enactment of stringent laws does not seem to check the evil of substitution. The human element of greed is intimately connected with it; a druggist, in order to save a few cents, will substitute a different and impure article; or he concocts a mixture which some formulary gives as the exact ingredients of the preparation prescribed. Perhaps few physicians have a correct conception of the prevalence of this practice. As in the commercial world efforts at cheapening products result in adulteration and substitution, so certain unscrupulous druggists, in order to gain a little more, will adulterate or substitute one preparation for another.

This practice is not limited merely to the retail druggist, but it is found also in the wholesale dealer, or even manufacturer of pharmaceutical preparations. No sooner is a valuable medicine on the market than hosts of imitations are offered. The more valuable the drug the more often is substitution practiced.

The remedy lies principally in the hands of the practicing physician. If a certain druggist is known to be scrupulously honest, the prescriptions should be sent to him if at all convenient. We are glad to see this practice is carried out to some extent. On the other hand, a pharmacist who wilfully substitutes one preparation for another deserves the contempt of the profession and should be given no support.

The enactment of laws placing heavy penalties on the practice of substitution may also have a salutary effect. In several States such laws have been enacted.

Finally, the medical and pharmaceutical societies should give vigorous expression on the injustice of this dastard practice.—*Courier of Medicine.*

Nurses Demand Recognition.—The New York State Nurses' Association demands legislation recognizing nursing as a profession. Legislation will prevent the probationer or pupil dismissed for unfitness from donning a uniform and calling herself a trained nurse, thus imposing on the public and endangering the lives of the patients.

CONGENITAL NARROWNESS OF THE AORTIC SYSTEM.

BY JOSEPH BURKE, M.Sc., M.D.,
Buffalo, N. Y.

Visiting Physician to the Emergency Hospital of the Sisters of Charity; Attending Physician to the St. Francis Asylum for the Aged.

A GENERAL diffuse narrowness of the entire branches of the aortic system must excite the greatest attention of the observer, even from the standpoint of a pathological finding alone. We therefore find at a very early date, already at a time when the pathological anatomist and the clinician together, through comparison of their respective discoveries, endeavored to solve the question of the etiology of disease, such observations described, which reflect the imposing impression that this abnormality made upon the observer. The occurrence of phenomena with this finding, which cannot be otherwise considered than as circulatory disturbances, as well as the discovery made by the early authors that this affection often leads to hypertrophy of the left heart, must bring us to the conclusion, though contrary to the reported views of other authors, that through a general narrowness of the aorta a series of resulting circulatory phenomena, particularly in the heart, are caused.

Later there have been a series of cases collected which prove to us that cases in which the autopsy gave narrowness of the vessels, could not only run their course under the picture of heart insufficiency, but that also a series of other pictures confront the clinicians, for which the pathological anatomist finds narrowness of the vessels as either the only explanatory cause, or only as a coexisting cooperative one. Perhaps, after a careful perusal of the literature, we can obtain an understanding of these changes, as well as the conditions under which they can occur or fail, and with this end in view the cases in the literature are collected.

We have thus far used the expression "Narrowness of the vessels" without an attempt to define it; particularly without determining the limits within which we can speak of such a pathological finding.

In a series of cases, which are not of extreme grade, it must therefore be left to the individual observer whether in a case in question the vessels were narrow or not. Certain pathological anatomists, as Benecke (39), J. Thoma (40) and others, wished to determine the circumference of the aorta under definite figures, 7 cen., 6 cen., etc., as speaking for narrowness of the vessels. Whether every case which is cited in this paper corresponds to the present ideas of narrowness of the vessels, is on account of lack of definite figures, especially in the older cases, not to be decided, yet I wish to mention that since Virchow has drawn attention to this con-

dition as an etiological working moment in certain definite diseases more frequent observations of this character have been made. This circumstance may be due to this fact, that in diseases where narrowness of the vessels is found post-mortem examiners have looked systematically for this condition. The above-quoted circumstance that as we do not possess in all cases the definite measurements makes it impossible to say that this case showed a narrowness of the vessels and the other not—*i. e.*, to analyze the cases critically.

We are equally not able to determine the lower limit by which the narrowness of the vessels begins. In the majority of cases which are reported here the narrowness was of such a degree that we are obliged to accept the finding as solidly established. For our own cases we have given exact measurements.

The first-mentioned accessible case of congenital narrowness of the aortic system was published by Morgagni (1) in his *Epist.* 30, Art. 12, in which he reported the clinical history of a 33-year-old monk, who had died from dropsy, in whom the autopsy revealed an aorta hardly of the circumference of a finger, and whose branches were also of small diameter. On the aorta he found a beginning atheroma. In his work we find besides this one two other cases of narrowness of the aorta, which ran a course under the picture of heart insufficiency. At the same time he mentioned the dilatation of the right ventricle, which demonstrates the accuracy of his observations.

In the year 1768 John Meckel (2), of Avignon, traced the riddlesome case of a 17-year-old girl who had never menstruated, had frequent attacks of heart palpitation, and great anxiety, and finally died in a fainting spell, to a hypertrophy and dilatation of the heart, consequent upon a congenital narrowness of the aortic system.

Meckel was the first, according to Fraentzel, who saw a reason in the abnormal narrowness of the aorta for the hypertrophy of the heart. Since the publication of those cases, almost a century went by before the fifth was observed. The fifteenth clinical history of Dr. J. Hope (3), of London, in his work upon diseases of the heart, published in the year 1837, described a 28-year-old servant of robust build, and pale and tender complexion, who suffered from heart palpitation, which was increased upon every exertion, as well as from orthopnea cough and slight edema of the feet. Although he had suffered repeatedly from rheumatism, yet, after having contracted a cold, he first experienced pain in the cardiac region, and cough, five weeks before his entrance into hospital ten weeks after the beginning of the first symptom under the typical picture of heart insufficiency. The autopsy revealed a dilatation of both ventricles without hypertrophy of their walls, enormous dilatation of the left auricle, and insufficiency of the mitral valves. The aortic valves were healthy, but the aorta itself was remarkably narrow in its

whole course, in many places uneven and wrinkled.

Hope explained that the smallness of the pulse observed in the clinical course was due to the mitral insufficiency and narrow aorta; the hindrance of the blood current produced by this caused a dilatation of the left auricle and the right heart chambers; he made the rheumatism responsible for the uneven wrinkled character of the aorta. Hope, the second author in this province, brings an explanation for the dilatation of the right ventricle, already mentioned by Morgagni.

Audral (4) published three cases in the year 1836, one of which is interesting clinically as well as pathologically. The patient was a man 22 years of age, who, since his 12th year had done more than ordinary work, and during the whole time had suffered from heart palpitation and dyspnea. In his 22d year he died, under the symptoms of heart insufficiency. At the autopsy Audral found the heart threefold enlarged, its walls thickened as well as dilated, and the whole aortic system remarkably narrowed.

Thus, since the publication of the first case by Morgagni, until Rokitansky, in the year 1838, drew particular attention of the profession to this important and previously little-known condition, there appeared individual cases only in intervals of years. His cases excited forensic as well as pathological interest. In his later work he maintained that a certain casual connection existed between lack of development of the genital and congenital narrowness of the blood vessels, and advanced the theory that the condition is a congenital defect in the formation of development of the organism.

In the year 1841 T. Wilkinson King regretted the fact that so little attention was given to abnormal narrowness of the aorta as a factor in the etiology of the heart diseases, and described four more cases showing the defect. All of his cases were young men, ranging from 22 to 24 years, in whom he found a congenital narrowness of the aortic system. In three cases the left auricles were dilated and the pulmonary artery two-fold distended; in all four emphysema was constant. At the same time King cited the case of Baulard (7) that referred to a 16-year-old leukophlegmatic girl, who died under the clinical picture of heart insufficiency, and where the autopsy revealed enlargement of the heart, which exceeded the size of a girl's fist, and was the result of a congenital narrowness of the aortic system.

In the year 1857 Lempe (8), a pupil of Virchow, found at the autopsy of a case of hemophilia an abnormally narrow and delicate aortic system, and traced hemorrhages to the rupture of the too narrow vessels and to the too high blood pressure under which the delicate tissue must have functionated.

Geigel's (9) observation in the year 1861 concerned a 14-year-old previously healthy boy, who suddenly experienced severe pains in the abdomen, and died within half an hour after the beginning

of the first symptoms. In this case they found the heart hypertrophied; the aorta was uniformly narrowed, hardly wide enough for the passage of the little finger. As the cause of death, a rupture at the beginning of the subclavian artery with formation of dissecting aneurism was found.

In the same year Finger (10) called attention to the occasional finding of an angusta, and quoted two more cases, in one of which the autopsy demonstrated the hypertrophy of the heart and a lack of development of the genitals.

Bruberger (11) in 1870 observed a case clinically very similar to Geigel's in a strong, well-built, well-nourished 23-year-old Hussar.

In 1872 Virchow supported the idea of Rokitansky in so far that the condition is a congenital malformation, and that an intimate casual connection exists between lack of development of the genitals and a too narrow aortic system. He asserted further that the lack of development of the arterial system is an essential factor in the etiology of many cases of incurable or obstinate chlorosis, and explained at the same time that the chlorosis was not due exclusively to a lack of development of the blood elements, but above all to a narrowness of the entire arterial system and an abnormal congenital narrowness of the heart itself.

In the course of the same year, and the one following, Riegel (13), Kulenkaumpff (14) and Stoll-Kratowsky (15) reported cases of narrowness of the aorta in which the observers portrayed clinical pictures, in which, as they assert, heart insufficiency, the result of congenital narrowness of the aortic system, was present.

In 1870 Wykam Legg (16) traced a remarkable hypertrophy of the left ventricle in the case of mitral insufficiency to a congenital narrowness of the aortic system which he could demonstrate at the autopsy.

In 1878 a case similar to Riegel's, from Knovenagel (17), and the year following two from Küssner (19), one from Lewinski (20), and a fourth from James Hutchinson (18), of Philadelphia, appeared. The last-named observer remarked in his conclusion that no doubt could exist concerning the aortic narrowing as a cause of the heart disease. Whether that was congenital or not, it could not be maintained with absolute certainty, yet the fact that a hypospadias, an incomplete closure of the inguinal rings, and still other signs of incomplete development were present, speaks for a congenital origin of the same. Without question it caused the hypertrophy and dilatation of the left ventricle and the consecutive insufficiency of the mitral valves.

Lewinski explains matters from another standpoint. He presumes that the narrow aorta of the cadaver, *intra vitam*, thanks to the distension through the blood pressure, was sufficiently wide; that the great distensibility afforded advantages for the circulation, since by rhythmically working pressure a soft, elastic tube offers more favorable conditions for the circulation than a stiff one.

He sees in a narrow, but very dilatable aortic system an advantage for the circulation, and assumes that small hearts, as they occur in chlorotic patients, owe their smallness not to an insufficient development, but have remained small, because they have had easy work in a wide, elastic, dilatable vessel system.

In 1880 Dejerine (22) observed the case of a 23-year-old girl who died from an interstitial myocarditis, in which the autopsy demonstrated a general too narrow aorta.

One year later Pel reported the case of a 22-year-old carpenter, in which the autopsy revealed a high degree of heart dilatation due to narrowness of the vessels.

In 1882 Grimm (23) undertook a collection and analysis of the cases of heart insufficiency due to narrowness of the aorta published up to his time, and added two of his own personal observations to the sparse literature. He endeavored to limit the cardiac insufficiency caused by the too narrow aorta as a typical, complete, sharply defined, clinical picture, whose fundamental characteristics consisted, according to the author, of the following: "Mostly generally weak bodily framework, congenital narrowness of the entire aorta and its branches in the form of hypoplasia of its walls, or a result of this, produced hindrance to the circulation, sometimes earlier, sometimes later, mostly, however, in years of bloom, often enormous dilatation of both ventricles of the heart, according to the general condition of nourishment, with or without hypertrophy of the walls, so that the condition manifests itself at first under the picture of a heart disease; under increasing insufficiency of the whole heart death occurred in all cases."

In 1883 appeared a case from v. Leyden (24), and contemporaneously two from Hiller (25). The last concerned two sudden deaths in the convalescence from typhoid fever, in which the autopsy revealed in every instance a remarkable aorta.

Fraentzel (26) was the first who, in the year 1888, diagnosed such a case *intra vitam* and found his diagnosis supported by the post-mortem examination.

In the following year Diamant (27) mentioned two cases, one of which went to autopsy.

In 1890 Runneberg (28) cited a case of idiopathic heart hypertrophy with sudden death through paralysis of the heart, whose autopsy revealed a considerable hypertrophy of the heart, the result of too narrow aorta.

The case Schubert (29) published in the same year, a 20-year-old instrument-maker, who, though he had suffered from heart palpitation since his childhood, yet was taken suddenly ill in his 20th year with severe heart symptoms. The autopsy showed dilatation of the heart due to a too narrow aorta, and a pericardial adhesion about the size of a dollar.

Ortner, in 1891, observed three cases similar to those of Hiller, and after analysis of the literature drew particular attention to the pathological

forensic side of the matter. He was the first who made note of the frequency of hypertrophy of the right side of the heart, and ascribed to the failure of the pulsation in jugulo in persons who possess a high position of heart's basis a pathognomonic significance for the diagnosis of an abnormal narrowness of the aorta.

Zehntner's (31) case, published in 1896, demonstrated an open Foramen ovale and a ventricle septum defect, unquestionable congenital errors, which support the idea of the embryological origin of this affection.

In 1897 four cases appeared, one from Morgagni (32), two from Spitzer (33), and a fourth from Hanneman (34). In the year following there appeared one from Dehio (35).

Two years ago Cohn (36), in Berlin, demonstrated an interesting case in which a positive venous pulsation in the neck and exquisite liver pulsation were present. In this case the autopsy revealed, instead of *intra vitam* diagnosed, tricuspid insufficiency, a wide-open Foramen ovale and a dilatation of the left ventricle, with relative mitral insufficiency, the result of a congenital narrowness of the aortic system.

During the past year two cases only were published—one by Strauss (37), in Berlin, in which the post-mortem revealed, instead of an *intra vitam* diagnosed mitral stenosis, a cardiac insufficiency, the result of a congenital, too narrow aorta; the other by Hirsch (38) concerned a 33-year-old laborer, who previously had been always healthy, and who had died from the sudden rupture of the abdominal aorta, with the formation of dissecting aneurism. The autopsy revealed narrowness of the aortic system and hypertrophy of the *right* heart. We are sorry that we are unable to quote the symptoms which this case offered *intra vitam*, because the author failed to mention them, which is the more regrettable because the case is the first in which the use of the weighing method was made to determine the hypertrophy of the right heart.

Etiology.—Concerning the etiology of abnormal narrowness of the aorta, presumptions only have been made; some pathologists assert the congenital origin of the affection, while others are of the opinion that it is in all probability an arrest of growth. As the last possibility of origin it could be pointed out that the condition could originate through an atrophy of the whole vessel apparatus, as we sometimes find, *e. g.*, as a participating factor of the cachexia and emaciation in tuberculosis. Such an atrophy of the vessels could be thought of in cases of long existing aortic stenosis of high degree. Yet such atrophic changes may play a rôle very seldom only for the possible explanation of a similar defect, as in the above-described, and these for cases only of slight degree. That the process is of congenital origin was presumed by the elder Meckel, yet it remained for Rokitansky to create a more solid and better established basis for this assumption. Rokitansky doubtless rightly drew attention to

the many cases of narrowness of the aorta in which, in some cases, were found coexisting undoubted congenital heart defects, in others undeniable proof of faulty embryological development.

Virchow supported Rokitansky's idea, and mentioned the causal connection between the general narrowness of the aorta and lack of development of the genitals, especially in women. That the process is of congenital origin in many cases there is not the slightest doubt. In our careful collection of the previously published cases there occurs in many the simultaneous presence of other malformations in the embryological development of the organism. I need only to point to Rokitansky's cases, in which ventricular defect and signs of degeneration in the development of the genitals were present; to Virchow, with his many cases of infantile uterus, deficiency of vagina, hypoplasia of the brain, phenomena which he traced back to faulty development in embryo; to the classical case of Hutchinson in Philadelphia, in which hypospadias, faulty development of the inguinal rings, and still other defects in the embryological development were present; to Sympton's case, with a superfluous pulmonary valve; to that of Wilkinson King, where a lesion of the pulmonary valves was evident; to the persistence of the Foramen ovale in Cohn's case; to the open Foramen ovale and defect in ventricular septum in Zehntner's case, and to a case we have seen where there was a remarkable dislocation and congenital malformation of the right kidney. All these cases are to be classified under the category of congenital defects.

Further, the occurrence of such cases in childhood, as in the cases cited by Rokitansky and Geigel, where death due to congenital narrowness of the aorta suddenly occurred, speaks decidedly for the correctness of this view.

In contradistinction to these, cases have been observed without other discoverable congenital defects or deviation in any way from the normal development, cases in which the patients have been outwardly robust, well nourished and musculature well developed, and the genitals healthy; patients who, up to the time of puberty, have been apparently normal in every respect, and shortly after this period manifested a weakness which, according to the opinion of the authors, is said to be due to an arrest in the growth of the whole arterial system, in proportion to the remaining development of the individual. To trace back all cases to a congenital origin would be going too far, since we do not possess indisputable, unobjectionable evidence of the support of so wide an assertion; on the other hand, one can, as we believe, for many cases of abnormal narrowness of the aorta accept with certainty as the cause an error in the embryological development, while we cannot exclude in the other cases the theory that it is due to an arrest in the growth of the individual from unknown reasons.

As it will not always be possible in every spe-

cial case to determine which of these possibilities of origin could explain the given case, we will not be able to establish in general the possibility of the occurrence of narrowness of the aorta through post embryological arrest in development with absolute certainty. At any rate, we are convinced that two possibilities only can exist for the origin of such cases of narrowness of the aorta, as will be discussed in the following, respectively—in the first place, congenital origin, and, secondly, the arrest in growth. What concerns the other above-mentioned possibilities we can assume after perusal of the literature; that because such a casual connection cannot be demonstrated, these possibilities of origin can hardly be drawn into consideration. In the whole literature of this subject, in cases where cardiac insufficiency has occurred, we find one assertion only which speaks in favor of the view of secondary development of the narrowness of the aorta, particularly an atrophy, and this comes from v. Leyden in Berlin. Leyden's case was a 28-year-old, pale, poorly developed servant girl who had regularly and copiously menstruated, and never, up to one year before her death, had had heart symptoms. She was obliged, three months before her death, on account of great dyspnea and coughing of blood, to enter a hospital, where she died in an unconscious state, with the signs of the greatest dyspnea and stasis edema. The autopsy revealed a dilatation of the left, a hypertrophy of the right, ventricle, valves intact, myocarditis, narrowness of the aorta. In opposition to this we wish to point to the conditions advanced in the first lines of this section, for the origin of such a secondary atrophy of the blood vessels, where we have discussed that that condition could occur in long continuation of a mechanical hindrance for the flowing of blood from the heart, as in early acquired aortic stenosis. In this case of v. Leyden, on the contrary, where severe symptoms of disturbances of the circulation first occurred three months before death, while the patient up to that time could always accomplish heavy work, we cannot assume in the short course of the circulatory disturbance, which always demands a longer time for its development, a secondary change of the vessels system. By an etiology of this nature narrowness of the aorta must be met with much more frequently as, *e. g.*, in all mitral and aortic stenosis of high degree.

We have made a careful and exhaustive collection of the previously published cases of congenital narrowness of the aorta, and from the publication of the first case up to the present—those from Sutor (12) not counted—found nearly 100. After an accurate analysis of these cases, we find ourselves justified in grouping and dividing the accompanying phenomena of this defect as follows:

1.—Congenital narrowness of the aorta, with the so-called blood diseases:

(a) Chlorosis, according to Virchow.

- (b) Pernicious anemia.
- (c) Hemophilia.
- (d) Purpura hemorrhagica.

2.—Narrowness of the aorta in connection with the infectious diseases:

- (a) As predisposing factor.
- (b) As an exciting factor in the fatal results.

3.—Narrowness of the aorta with the general dystrophies:

- (a) Acromegaly.
- (b) Dwarfism.

4.—Narrowness of the aorta having its course under the picture of the heart disease:

(a) Narrowness of the aorta with smallness of the heart.

(b) Narrowness of the aorta with enlargement of the heart, particularly hypertrophy of the left ventricle.

(c) Narrowness of the aorta with enlargement of the heart and rupture of the aorta.

(d) Narrowness of the aorta with enlargement of the heart and consecutive dilatation with muscle insufficiency.

That a certain causal connection exists between narrow aorta and chlorosis was first mentioned by Bamberger (43), in the year 1855, when he asserted that a faulty formation of the heart and larger arteries was a regular accompanying phenomenon of this affection. This idea was further developed by Virchow in a considerable number of communications that, according to his experience, not only a faulty formation of the essential blood elements, but above all a hypoplasia, a lack of development of the heart and general vessel system exists; an assertion which the autopsies of a large series of chlorotics supported. Since the publication of Virchow, individual cases of pernicious anemia—Quincke (41), Eichorst (45), Neusser (46)—were known, where autopsies revealed narrowness of the aorta, which appears to strengthen the theory of Virchow. What causal connection exists between narrowness of the vessels and pernicious anemia we cannot say from the present data of our knowledge of the anemias. It appears proven, however, from a number of prominent authors in a series of cases that a certain connection between these blood diseases, so-called, and narrowness of the vessels exists.

Virchow and his pupil, Lempe (47), mentioned cases of hemophilia; Virchow some of purpura hemorrhagica. The latter traced this morbid condition to an abnormal narrow and too permeable arterial system, so that in an otherwise normal individual the whole blood quantity must circulate through a narrow space as a result of which the blood pressure is much higher, and can cause by a slight injury a considerable, almost uncontrollable hemorrhage.

In the etiology of infectious diseases we find narrowness of the aorta mentioned, and it is said to act, according to the opinion of the authors, as well as the predisposing cause for the origin of infectious diseases, as also under certain cir-

cumstances to assist materially toward the fatal ending.

For the first point, namely, the predisposing action of the narrowness of the aorta in infectious diseases, the very frequently advanced findings of narrowness of the vessels in tuberculosis by Benecke and his pupils were quoted. In exact opposition to this, Sutor, in 1897, endeavored, as a result of his investigations in over 300 autopsies, to attack Benecke's conclusion, and to prove that "predominately individuals with narrowness of the aorta do not die from phthisis. Differences which occur in the aortic circumference in these diseases are due to age or sex of the person dying."

The determination of the question whether a congenital narrowness of the aorta plays a predisposing rôle in the origin of tuberculosis lies with the future investigations of the pathological anatomists. An analysis of the aortic measurements of several thousand cadavers of those dead from *hereditary* tuberculosis, with the knowledge of the size and age of the individuals, would bring us nearer to the question of predisposition. On the contrary, we can assert with full certainty that individuals whose blood nourishment or circulation is deficient show a tendency to infection. If, therefore, narrowness of the vessels leads to such a deficiency, and this will certainly be gleaned from the communicated clinical histories, so must it also cause an increased tendency to infection. As an appendage to the above-quoted, I would like, therefore to mention that there exists the possibility of such a working of narrowness of the aorta. The second point, namely, that the narrow aorta plays an active rôle in infectious diseases with inexplicable fatal result, particularly in typhoid cases, was advanced by Benecke, Hiller and Ortner, and, on the contrary, denied by Sutor. In many unfavorable cases of typhoid, particularly in the sudden, inexplicable deaths in the convalescence, an abnormal narrowness of the aorta was found, and a decided unfavorable influence upon the course of the disease was ascribed to this abnormal narrowness by the clinician as well as by the pathological anatomist. I wish to emphasize here that in these cases no hypertrophy of the left ventricle was demonstrable.

Concerning the narrowness of the aorta in individuals dying from typhoid we must follow the repeatedly advanced observations of the clinician and the assertions of the pathological anatomists. Hiller endeavored to give an explanation of the causal connection in the following words: "There comes into consideration with the general exhaustion and the nervous depression still the deficient blood supply of the whole body and the small systolic power of the heart."

In a case of dwarfism, described by Hödelmoser (49), a narrowness of the vessels is said to have existed. This case would be one of the

very few cases diagnosticated *intra vitam*, but, as the autopsy findings are not published, we can in this leave such a combination out of the question.

It would be interesting to mention that by other dystrophies also congenital narrowness of the aorta was found, as, for instance, in the cases of acromegaly observed by Freund (50), Seginini and Corporasco (51) and Verga (52).

A fourth result which a pathological anatomical analysis of these cases gives is the fact advanced by Virchow, that the heart in congenital narrowness of the aorta has a predisposition toward inflammation of the serous membranes, especially a predisposition toward malignant diseases of the endocardium.

We come now to the category of cases where, during life, phenomena on the part of the circulation existed and the post-mortem revealed narrowness of the aortic system.

For cases of this category a causal connection between the symptoms *intra vitam* and the post-mortem results lies so near that in the explanation of this connection the possibility of such an injurious influence of the narrowness of the vessels upon the heart must not only be mentioned, but there must be given the explanation why narrowness of the aortic system does not in every case run its course under this picture. Before we come up to this requirement it must be decided what the pathological changes on the heart are which are found as a result of the narrowness of the vessels. If we look through this category of cases in this manner, it will be necessary to separate the pure cases of this nature where narrowness of the vessels is found.

After an analysis of these tables we find that in the greater majority of pure cases of cardiac insufficiency as a result of narrowness of the vessel system, the most constant autopsy finding was dilatation and hypertrophy of both ventricles, predominantly the left; that further, the hypertrophy of the left ventricle must have been the first result and the dilatation had hidden the previous hypertrophy in many cases. In many cases of pure dilatation the trabeculæ of the ventricles were at least found hypertrophic. It appears, therefore, that the pure picture of the resulting phenomena on these hearts, *i. e.*, before the occurrence of the cardiac insufficiency, was that of a pure hypertrophy of the left ventricle, as the case of Geigel particularly proves. In this case death occurred suddenly through rupture of the aorta in a boy who was apparently healthy; dilatation of the left ventricle was not present here, but a hypertrophy only was revealed at the autopsy.

We learn further that in many cases relative mitral insufficiency occurred, and that the degree of hypertrophy of the right ventricle depended not on the occurrence of a mitral insufficiency, but on the weakness of the left ventricle, and the stasis of the blood in the lungs the result of it. When we see that in pure cases where otherwise no cause can be found for the hypertrophy

—the number of observations of this nature amounts to 20—we must admit the fact that the narrowness of the vessels has an influence upon the circulation. All theoretical considerations, such as Sutor advanced, that the narrowness of the vessels has no influence, or Lewinski, that the narrowness offers advantages for the circulation, or v. Leyden, that the narrowness is a result of the weakened condition of the heart, must, in opposition to facts, remain silent. As such a fact the occurrence of resulting phenomena on the heart must be assumed for a great number of cases, at least, of narrowness of the aortic system.

The first point which could have an influence upon the resulting conditions would be the degree of narrowness. If we consider the few measurements given, it appears that the degree of narrowness has no influence upon the degree of cardiac changes. The case of Küssner, *e. g.*, shows an aortic circumference of 4 cen.; the one from Knovenagel, 6 cen., and in both cases the autopsy revealed a dilatation of both ventricles. Further hypertrophy and dilatation of both ventricles were found in the autopsy in the case of Grimm, where the aortic circumference measured 4 cen., and in the one from Strauss where it measured 6.5 cen. And in those from Reigel, Diamant and ourselves, where the circumference measured 5.5 cen., a dilatation and hypertrophy of both ventricles were found. If we therefore consider these comparisons, we must conclude that the degree of cardiac changes does not stand in direct proportion to the degree of aortic narrowness.

Further duration of the final cardiac symptoms could have an influence upon the anatomical results—namely, the dilatation could preponderate in longer duration.

But when we consider the anatomical findings we learn that, as far as the autopsy results can give us a certainty, the duration of the final phenomena had apparently no influence upon the degree of heart changes. If we compare the case of Hope, for instance, where the duration was nine weeks, and that of Knovenagel, where it was one year, no demonstrable difference exists, since in both cases dilatation of both ventricles was found at the autopsy. Further, the same autopsy results manifested themselves in our case where the duration was eight weeks only, and in that of Grimm, although here the duration was a year. It appears, nevertheless, that the dilatation of the left ventricle preponderates in the case of long duration. This incongruity in behavior can be explained through the action of external circumstances upon the heart, as difficult work and other injurious agents to the heart. Besides, an individual difference in functional strength of the heart could play the rôle.

It would be important here to mention that in favor of these above-cited cases typhoid fever was gone through without resulting injury to the heart or proved influence upon the duration

of the equilibrium of the circulatory organs. In one case only (Grimm, No. 1) one could make typhoid responsible for heart symptoms, but here the anamnesis mentioned expressly that a year had passed after the convalescence, as an endeavor of his physician to send him to the height of about 3,500 feet for recovery did not succeed, for the patient was obliged to descend from such a height on account of constriction and palpitation. Since that time the patient was not healthy, and traced his manifest disease back to his mountain residence in 1875. In this case the excessive mountain height appears to have exercised an injurious influence upon the heart. From this consideration we believe that we can show the certain conclusion that the prognosis in all cases of individuals who suffer from typhoid, who possess an abnormal narrowness of the aorta, must not necessarily be fatal, but that one is justified in assuming, at least, after the perusal of the literature, that in cases where compensation has taken place the course and termination of the typhoid do not deviate essentially from that of a healthy individual. Besides these resulting phenomena on the heart there occurs a change which is demonstrable in many cases where cardiac hypertrophy is found, which is a further, surer, more supporting proof for the significance of narrowness of the vessels. It is a sclerosis of the vessels, particularly the great vessels of the aorta, which in youthful individuals is surely a significant phenomenon. It is a sure sign of an existing high pressure which has led to degenerated changes in the vessel wall. The premature occurrence of the arteriosclerosis speaks against the admission which Sutor and Lewinski wish to make that the narrowness of the vessels forms an unimportant factor.

There are few cases from Hiller and Spitzer which show an exception to this apparently regular occurrence of the heart changes in the narrowness of the vessels, in this, that in them no enlargement, but a smallness, of the heart was found. The first thought that would suggest itself in these cases would be that the heart, as well as the vessels, was hypoplastic from birth. This idea is supported by a series of similar findings in other organs and systems of organs. The second possibility would be that during life a series of phenomena could act compensatorily. In order to discuss the possibility of compensation of that nature, as well as all conditions which could work in this manner, we must consider the conditions on which the circulation depends.

In order that in a normal man the circulation be complete, three factors must work in harmony—a constant blood quantity, a centrally situated force and a system of active, irritable, muscular tubes whose caliber can be modified by a variety of influences. In its flow through these small arteries and capillaries the blood meets with great peripheral resistance, and is dammed back, as it were, upon the larger ar-

teries, which by virtue of the elasticity of their coats are constantly distended and exert an equal and opposite pressure on the blood. The intermittent action of the heart is thus converted into continuous force the arterial blood pressure which urges the blood forward in a stream.

The heart, the centrally situated motor power, performs its work by virtue of its being a nerve muscular organ that adapts its work to the demands. The vigor of the systole is in direct proportion to the quantity of blood from the auricle, and to the greatest part to the resistance in the periphery. This resistance is found in its highest degree in the capillaries and can be raised by muscular contraction of the larger arteries as a result of the contraction of their walls. Given that the elasticity of the arteries is constant, the controlling blood pressure within the arterial system will at any given time depend on the total quantity of the circulating blood, the capability of the heart and the unobstructed flow of venous blood. Therefore, since the total blood quantity is one of the most important factors, with every change this quantity must be increased or decreased; the first elevates the pressure, the second lessens it.

In consideration of these physiological principles it will be easier to understand what compensatory changes occur in those cases of congenital narrowness where the walls are thin and easily dilatable, and the lumina through which the constant blood quantity must pass are constricted to about two-thirds their normal size, as a result of which their resistance in these vessels correspondingly increases.

A perusal of the literature proves to us that in some cases the heart remains small and the patients were, as a rule, anemic, as Virchow and others observed. In these cases the arteries were narrow and very elastic, the heart corresponding to the size of the body. The condition of the heart, in spite of a too narrow aorta, was the result of less resistance, which was due to the great dilatability of the walls and a diminution of the blood quantity. This perception helps us to explain the connection between the anemia and the congenital narrowness of the aorta.

In another series of cases, and to this belong the cases of Bruberger and Geigel, compensation took place through hypertrophy of the left ventricle. The total blood quantity remained normal, the arterial system, one-third smaller than it ought to have been, stretched itself out to its utmost limits, and the heart muscle, particularly the walls of the left ventricle, became hypertrophied; the individuals could accomplish their work without any particular difficulties. Nature met the changed conditions to the extremest limit, and only when sudden extraordinary demands were made was she incapable of further increase of power; the heart accomplished its work, the blood remained the same, the increased muscular strain diminished re-

flexly still more the lumina of the capillaries, as a result of which the thin arterial walls, stretched out to their fullest extent, formed the point of least resistance, saw themselves forced to give, and thus rupture of the aorta occurred.

In this category perhaps belong the cases of Spitzer, Runneberg and Morganti. In none of them rupture of the walls occurred, but after overexertion in connection with great psychical excitement, as in the case of Spitzer, death occurred. Morganti explained the sudden heart standstill as due to ischemia of the brain, an explanation which appears to us very plausible.

In cases of narrowness of the aorta, where no changes had taken place in the blood quantity, where the arteries had not ruptured, where no ischemia of the cardiac center or of the heart muscle occurred, the only phenomenon that compensated this congenital abnormality was hypertrophy of the cardiac walls. And this occurrence is the usual one in men, in opposition to the anemia found in women.

In the cases which outgrew childhood—which is the rule—the first disturbance of compensation took place at the critical time of puberty, or at a time when extraordinary demands, *e. g.*, great muscular or mental exertion, were made upon the already weakened circulation. Nature obviated a serious disturbance up to a certain time; in this way she utilized every advantage in her power in the compensation of the faulty arterial development, then finally manifested her exhaustion upon new demands through the development of secondary dilatation of the ventricle, with consecutive heart muscle insufficiency.

Concerning the nature of the resulting phenomena, the sex appears to exercise a dominant influence. In women the anemias play an important rôle, while in men heart changes command the situation.

In the analysis of those cases where heart muscle insufficiency has taken place I find that the predominant majority of the same show so remarkable a similarity in the anamnestic data, in the manner of beginning of the compensatory disturbances, in the clinical course and in the complications and pathological anatomical findings that we, as I believe, are justified in portraying it as a clinical picture whose chief characteristics are so typical that one may stamp it as a particular, isolated, independent disease.

It appears that in nearly all these cases the blood quantity remained unchanged and the cardiac function grew in proportion to the demands placed upon it; that at a certain time, either as a result of a direct injurious influence of a toxic agent upon its muscular structure, or as a result of a sudden, too powerful overexertion, the heart, already driven to the extremest limits of its working power, becoming incapacitated to correspond to the increased demands, manifested its weakness through overdilatation and consecutive insufficiency. With two ex-

ceptions all these cases occurred in men from 19 to 29 years of age, in whom the pathological condition remained latent mostly to and during the time of puberty, and the organism up to about a year before death had overcome the resistance due to the too narrow aortic system through hypertrophy of the cardiac walls. Up to the time of the beginning of the compensatory disturbances the constantly increasing resistance caused by narrow arteries was corresponded to partly by the easy expansibility of the abnormally thin arterial walls and partly by the compensatory hypertrophy of the heart. But at this time an important change in the behavior of the individual occurred. Ignorant of his developmental anomaly, he overestimated his strength, put sudden extraordinary demands upon his organism, under these influences contracted the already too narrow arterioles still more, caused an increase of the already too great resistance in the arteries, and raised the tension which oppressed the overirritated and overworked left ventricle; in other words, he elevated the pressure in the aorta above the compensatory force of the heart, which gave rise to an insufficiency of that organ. The left ventricle, as a result of weakness, aspirated less from its reservoir, the left auricle, on account of which the pressure in the left auricle and in the pulmonary veins increased. The left ventricle dilated, the left auricle became distended, the lungs became larger and more resistant—that is, *lungenblähung* and *lungenstarrheit* occurred, the first due to increased fulness of blood, the second to increased pressure. As the insufficiency of the left ventricle became greater, the increased pressure extended itself to the pulmonary artery, to the right ventricle and right auricle (53).

An accurate consideration of the autopsy results in our analysis teaches us that these identical changes always played an important rôle; in fact, in some of them the stasis in the left auricle became so great that consecutive dilatation of its walls occurred in such a degree that it pressed upon the left recurrent nerve and caused paralysis of the vocal cord, and through this gave rise to the physical signs of aneurism diagnosed in these cases; the autopsy revealed, as a rule, hypertrophy of the left ventricle, with dilatation of its walls; enormous dilatation of the left auricle, enlargement of the lungs. Ortner called attention to the constant participation of the right ventricle, a hypertrophy of the same, an observation confirmed in the majority of cases.

In many cases dilatation of the left ventricle became so great that relative mitral insufficiency occurred, while in others dilatation of the right ventricle predominated. In all cases stasis in the highest degree existed in the remaining organs. It might be appropriate here to add to the not too voluminous literature a further case that belongs to the category of pure heart in-

sufficiency due to congenital narrowness of the aortic system.

Case.—T. F., 23 years old, single, fireman. Accepted August 22, 1900; died October 14, 1900. Anamnesis: The father of the patient lives and enjoys good health; the mother died from uterine disease. Four brothers live; all are healthy. As a child patient had scarlet fever. Since then, until two months ago, he enjoyed perfect health. At the end of June of present year he claims to have taken cold after severe muscular exertion. Immediately after, pharyngeal and bronchial catarrh, with severe cough and mucous expectoration, occurred. At the same time he noticed shortness of breath and heart palpitation, particularly at night. At this time he came under observation. After the administration of strophanthus and ipecacuanha the difficulties ceased essentially, so that the patient was able, after two weeks, to attend to his duties as fireman. Fourteen days ago the patient is said to have inhaled much strong smoke at a fire, and to have accomplished great muscular exertion. Shortly afterward he experienced a peculiar feeling of oppression, but no pains in the cardiac region. In the region of the sternum, between the processus xiphoideus and the jugulum, he feels a periodical burning pain, a sensation which he ascribes to the bronchitis. He asserts further that he experiences pressure, swelling and pains in the epigastrium upon walking, particularly upon ascending stairs. He has not had fever, headache or rheumatic sensations in the joints. The appetite has diminished. The bowels are regular, sleep disturbed.

Five years ago he was employed as a carpenter. He is said to have accomplished work that required great muscular exertion; three years ago he participated in a severe military maneuver, and during the whole time he was healthy; never had cardiac symptoms. Patient was a drinker; venereal disease denied.

The patient is of medium size, of moderately developed frame, moderate musculature and little fatty tissue. He assumes the recumbent posture. The expression of the patient is pale, anxious, "puffy," with a trace of cyanotic redness. The visible mucous membranes are slightly red. Both pupils are wide, equal, react promptly to light, accommodation and convergence. The movements of the eyes are free. The mucous membranes of the mouth and throat are slightly anemic, moist. The tongue is clean, moist, easily protruded, shows no tremor. In the ears, nose and mouth nothing abnormal demonstrable. The neck is moderately long and blood shows no pulsation of the jugular veins. Carotids pulsate distinctly. The thorax is moderately long, broad, well developed, symmetrical. The breathing is costo-abdominal, is equal upon sides. The percussion gives clear note over both apices. On the right side anteriorly the note extends in the parasternal line to the upper border of the seventh rib, in the axilla to the ninth, and posteriorly to more than a hand-

breadth below the angle of the scapula. The lung borders mobile. The breathing over the whole of both lungs sharp, downward, rough, but is vesicular all over. On the left side anteriorly the clear note extends to the second rib, posteriorly to more than a hand-breadth below scapula. Heart: In the fourth and fifth intercostal spaces is a visible pulsation; in the epigastrium a diffuse shaking. The apex beat lies above the sixth rib, one finger-breadth outward from the mammilla displaced, strong; over it one feels a distinct systolic purring. The relative heart dulness begins above on the second rib, the absolute on the third rib; the absolute dulness extends to the left as far as the outer limits of the apex beat. To the right the relative dulness extends beyond the right sternal border. The absolute dulness extends to the left sternal border.

Auscultation: At the apex a long-drawn-out systolic murmur, the second sound split; toward the heart's base the systolic murmur becomes softer. Over the pulmonalis the second sound is very strongly accentuated, split. Over the aorta and tricuspid, weak first and second sounds. Over the sternum a weak systolic murmur. Abdomen on same level as thorax. Nowhere painful upon pressure. The liver extends downward one finger-breadth below the right border of ribs; not sensitive to pressure. The spleen is not enlarged, not palpable. Patella reflex increased. Urobilin strongly positive, otherwise normal urine. Quantity in 24 hours, 500cc. Catarrhal sputum. Heart lesion cells very numerous. Blood examination shows v. Fleischel 70 per cent., otherwise nothing in particular.

August 23, 1900.—During the night the patient had an attack of dyspnea, heart palpitation and feeling of oppression in the cardiac region, and feeling of anxiety. Pulse 80, tension good. Respiration, 20. Temperature, 98°. Urine quantity, 600cc.

August 24th.—To-day at 4.30 p. m. the patient had an attack of dyspnea and feeling of severe pressure in the epigastrium, without cause. Pulse slow, intermittent, 42 in a minute; urine quantity, 700cc.

August 25th.—During past night patient slept well. He assumes the lateral position in bed; the dyspnea has become less. Patient feels considerably easier. The heart palpitation is not so severe as formerly. The feeling of oppression in the cardiac region diminished. General feeling better. Cough very slight; not so embarrassing.

August 26th.—Patient received tr. strophanthi. The dyspnea has disappeared. The heart palpitation has become easier. General condition good. Urine, 900cc. Urobilin still present.

August 27th.—Heart: Apex lies in the fifth intercostal space, one finger-breadth outward from the mammilla, heaving. The relative heart dulness extends upward to the lower bor-

der of the second rib, the absolute to the lower border of the third rib. The absolute dulness begins on the left at the apex. The relative dulness extends to the right to one finger-breadth over the right border of the sternum, the absolute to the middle of the sternum.

At the apex one hears a loud first sound, split second sound. Over the pulmonalis first tone, second accentuated, split. Over the aorta and tricuspid, two sounds. The expression of the patient still very pale.

On the 30th of August the patient found his condition so good that he could leave the bed and exercise a little. From this time on the heart's action was quiet, the breathing normal. The pulse goes between 88 in the minute and normal. Temperature, subnormal. Urine quantity has increased to 1,200cc. Patient sleeps and eats well. Bowels regular.

On the 13th of September, after smoking cigarettes, exercise and climbing of stairs, severe symptoms arose. The patient became dyspneic, complained of severe heart palpitation, feeling of oppression and anxiety, constriction, pressure in the epigastrium. The heart dulness shows an enlargement to the left and right.

September 20th.—Severe cough, with profuse catarrhal mucous expectoration. Temperature, 101° F.

September 21st.—Temperature, 100°. Cough very severe.

October 9th.—During the night the sputum became suddenly blood. Over the lungs rales; on the right, posteriorly in isolated places, bronchial breathing, with medium-sized rales. Temperature, 102°; pulse, 140; respiration, 44. Urine, 400cc. The liver enlarged two finger-breadths; sensitive to pressure.

October 12th.—Heart enlarged very much to right and left. First tone at apex hardly audible. Fine rales in the right axilla. Temperature, 101°; pulse, 122; respiration, 32.

October 14th.—Increasing cardiac insufficiency; death at 4 P. M. Slight edema of lower extremities.

Post-mortem.—Fibroid changes in myocardium of both ventricles, slight atheroma of aorta and coronary arteries. *Hypoplasia of aorta*. Eccentric hypertrophy of whole heart, high degree. Thrombi in both ventricles and in the auricles; chronic passive hyperemia of lungs, with multiple infarcts in right lung; emphysema, diffuse suppurative bronchitis. Stasis in all the internal organs, with induration of same; general edema of moderate degree.

Heart.—In pericardium one-quarter liter clear fluid. The inner surface of the pericardium flat and glistening. The heart in toto greatly enlarged. The walls of the left ventricle more relaxed than the right. The epicardium surrounding the right ventricle moderately rich in fat. The valvular apparatus of the heart delicate and sufficient. Both ventricles greatly dilated and hypertrophic, predominantly the right. The myocardium gray brown, more

easily torn than the epicardium. The walls of the aorta are quite thin, smooth. The arch and descending portion, showing large and small yellowish-white plaques just above the valves measures 5½cm.; at the arch, 4½cm., and immediately above the division of the iliacs, 3cm. in diameter. The right crural, immediately above the beginning of the profunda, 1½cm. The coronary arteries show atheromatous changes.

An accurate consideration of our case makes it appear classical in many points. The patient, a pale individual of moderate frame, moderately developed musculature, and little fatty tissue, went through puberty without having manifested one symptom of his latent congenital abnormality until his 16th year, five years before the occurrence of cardiac insufficiency. During the last five years of his life drank great quantities of beer, etc., followed an occupation that demanded great muscular exertion, as carpenter and soldier, and finally put extraordinary demands upon his heart. Every one of these factors sufficed in itself to produce a temporary cardiac insufficiency in a normal individual; combined, they disturbed the complete compensation permanently, made the already narrow arteries smaller, increased the quantity of fluid which had to circulate through them and injured directly the heart muscle, and gave rise to a dilatation with consecutive insufficiency of the heart muscle. Treatment restored the compensation again so far that the patient was able, after two weeks, to return to his occupation as fireman. In the accomplishment of his duties he overexerted himself again, at the same time inhaled smoke and gas, which naturally irritated him; the one factor increased the resistance for the left ventricle still more, the other, the bronchitis, the work of the right; they both caused an insufficiency of the heart muscle. Nature came once more to his assistance, but carelessness on the part of the patient, as well as too much confidence in his strength, brought about a third and last disturbance of compensation, from which the patient could not recover; he died under the picture of a typical heart insufficiency. The autopsy revealed in this case an enormous dilatation of both ventricles, as well as a remarkable dilatation of the auricles, indurated lungs, with suppurative bronchitis, multiple infarcts and stasis of high degree in the other organs.

Narrowness of the aorta is found in the majority of cases in small, weakly, gracile individuals. (Some authors, as Fraentzel, Lewinski, Knovenagel, Tuzcek, Spitzer, Kulenkampf and others mentioned cases where the bony framework is said to have been powerful.) As a rule these cases showed, during compensation, a small but tense pulse, and an anemic color. At the development of ventricle weakness they became remarkably paler, anxious, showed a puffy countenance, and complained of a feeling of constriction and oppression in the chest and dyspnea, when cough with catarrhal expectoration occurred. While in many cases this phenomenon assumed so

harassing a form that it formed the chief difficulty of the patient, in a certain series edema of the legs became more evident, and this in direct proportion to the weakness of the right heart, and in still others where the right ventricle came up to the demands, only traces of edema were present. All these symptoms were the expression of pathological changes which had taken place in the deficient circulation. As soon as the left ventricle became insufficient the pressure increased in the left auricle and in the pulmonary veins, lungenschwellung and lungenstarrheit occurred and dyspnea was caused, with the further progress of insufficiency—stasis in the other organs.

The constant clinical symptoms appear to have been the expression of a hypertrophy with dilatation of the left ventricle and consecutive insufficiency of the same. In the greatest majority of cases the countenance was pale, anxious and puffy; concerning the neck there is nothing particular mentioned. Concerning the heart, the apex-beat was broader, stronger, more resistant than normal, always outward, and in many cases downward, displaced, sometimes heaving, sometimes producing a systolic purring; the precordial region somewhat prominent; the limits of dullness at first upward and toward the left enlarged, but later also toward the right; the auscultatory signs were dependent on the presence of a mitral insufficiency; in one case a systolic murmur was present, in another a loud or split, or muffled first tone. Over the pulmonalis an accentuated second tone occurred in *all* cases, in contradistinction to the character of the second aortic tone, which, since the later stages came under observation, was not accentuated. There occurred enlargements of the limits of the lungs, described falsely as emphysema in youthful individuals, and signs of a stasis bronchitis. With the progressing weakness of the right ventricles enlargement of the liver, albuminuria and edema kept equal pace.

It appears that in the cases of Riegel and others the diagnosis of aneurism could have been avoided by a consideration of the paleness instead of the expected cyanosis of the individual, the smallness and tension of the pulse, and, above all, the absence of the phenomenon of the pulsation in the jugulars, in individuals who possessed a high position of the heart. In some cases where at the same time the Foramen ovale remained open, a systolic murmur at the apex, the loudness of the secondary pulmonary tone, the enlargement to the right, a positive venous pulsation in the neck, an exquisite liver pulsation, caused the mistaken diagnosis of organic mitral insufficiency, with relative tricuspid insufficiency, where on the contrary the autopsy revealed an enlargement of the heart, with relative mitral insufficiency, due to congenital narrowness of the aorta, and an open Foramen ovale. To avoid such a mistake in diagnosis is hardly possible, on account of the ex-

ceptional rarity of the occurrence of such cases. Still, the slight degree of cyanosis, the paleness of the individual, the remarkable loudness instead of the expected weakness of the second pulmonary tone, the want of a systolic murmur, over the tricuspid, in gracile, weak, poorly developed individuals—all these signs must, theoretically at least, bring us upon the right way.

To diagnosticate with precision a cardiac insufficiency due to congenital narrowness of the aorta *intra vitam* is one of the most difficult tasks in heart diagnosis. One may make the diagnosis when, in a young, pale, gracile individual, in whom the signs of faulty development, as hypo-hyperspadias, etc., absence of pubic hair, poorly developed genitals, are demonstrable, after slight muscular exertion or physical excitement, disturbances in the circulation, dyspnea and heart palpitation, manifest themselves, while at the same time by an exclusion of a valvular lesion, hypertrophy, especially dilatation of the left auricle and tense pulse exist, the pulsation in jugulo fails, and the second pulmonary tone appears accentuated.

We have endeavored in the foregoing effort to discuss the idea of narrowness of the aorta in a detailed manner, and to distinguish the condition as a complete clinical picture. We have, as far as the literature of the subject was accessible, looked through the same exhaustively and critically, and discussed the subject in the most varied directions. We wish to bring together our results in the following.

First.—Contrary to the assertion of many authors, as from Sutor, we must arrive at the conclusion that there is such a thing as narrowness of the aortic system as a cause of disease.

As resulting phenomena we have learned to know:

1. Upon the heart: Left-sided hypertrophy, by which, when the power of the left ventricle is exhausted, dilatation of the left ventricle, of the left auricle, stasis phenomena in the lungs, hypertrophy of the right ventricle, and, when the course lasts sufficiently long and the resisting power of the right ventricle becomes exhausted, through this or other intercurrent circumstances, also dilatation of the right ventricle occurs.

2. In the arteries: Arteriosclerosis in youthful individuals, as an expression of an elevated blood pressure existing for a long time.

As clinical phenomena we found paleness of the countenance, a feeling of constriction and oppression in the chest and dyspnea, with cough and catarrhal expectoration, signs of hypertrophy, with dilatation of the left ventricle and resulting insufficiency of the same, enlargement of the pulmonary limits and signs of stasis bronchitis, with increasing weakness of the right ventricle, enlargement of the liver, albuminuria and edema. Whether these symptoms occur, depends upon a series of circumstances, as on sex, occupation and manner of living, duration of the whole affection. In women the anemias occur and the

disturbance has its course under the picture of a primary anemia, chlorosis, or pernicious anemia, while secondary changes on the heart, as a rule, are not present. Probably the diminution of the blood quantity forms a compensatory element for the elevation of the resistance, as it is given in narrowness of the aorta. In men the compensatory moment falls away, because here the picture of the heart disease appears.

Second.—Etiologically two possibilities are present. The one is a congenital condition, the other an arrest in growth of the vessel apparatus.

Third.—The significance of narrowness of the vessels as a predisposing cause for infectious diseases must be admitted theoretically, in so far as it leads to a weakness of the body of the afflicted individual.

Fourth.—The narrowness of the vessels appears, as Virchow has already mentioned, to act as a predisposing factor.

A DURHAM TUBE IN THE RIGHT BRONCHUS.

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

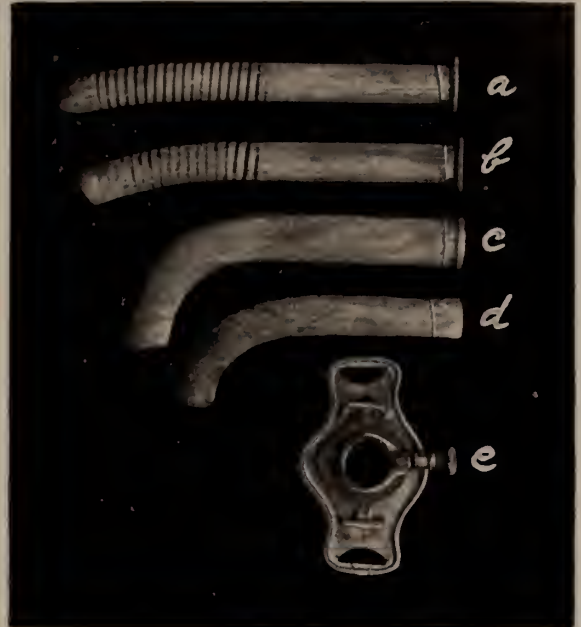
THE main purpose of this communication is to call attention to a fault in the construction of some of the Durham tracheotomy tubes as made by even our best instrument makers. The principles underlying this tube render it, in my judgment, the best available for those who do not have access to a large collection of tubes, for the movable collar allows adjustment to tracheæ of varying depth, so that the curved extremity shall have its opening directly into the lumen of the windpipe without pressure on the anterior or posterior mucous coat of the trachea.

Such pressure is often unavoidable where the windpipe is deep and the hard-rubber tubes that must be the regular segment of a circle are used.

The patient, a woman 42 years of age, was admitted to the Samaritan Hospital in the service of Dr. W. W. Seymour, on August 2, 1900, for laryngeal obstruction. The local and general conditions rendered the case very grave, but a tracheotomy by Dr. Seymour under cocain, and careful subsequent treatment, resulted in relief, so that when she came under my care in my service, beginning on October 1st, she was making rapid progress toward recovery, which favorable course continued under the care of Dr. F. K. Roarke, who has charge of the nose and throat work of the hospital, and in whose care I placed her for local treatment of the laryngeal trouble. On October 29th Dr. Roarke informed me that he regarded the improvement so great that it would be safe to remove the tube, which we concluded to do on the following day, but on the morning of the 30th I was notified that the outer tube could not be found and that there was much cough and disturbed respiration. A careful examination of the patient and her surroundings led to the conclusion that the outer tube had passed into the trachea, and at the re-

quest of Dr. Roarke we proceeded promptly to operation.

After the induction of anesthesia she was placed in extreme Trendelenberg position to favor gravitation of blood from the bronchi, and the tissues were incised from the site of the tracheal opening to the sternum and the trachea laid bare, before opening it, to a point well be-



hind the sternum. In doing this the isthmus of the thyroid was incised between two ligatures, but some difficulty was found in locating the trachea, owing to former inflammation in the locality; and, in fact, in the effort to expose the windpipe, which was deflected to one side, considerable hemorrhage was encountered that could only be readily controlled by gauze packing, which was left in the wound for a few days after. The trachea being opened below the original site of tracheotomy the lost tube could not be seen, hence the incision was extended well down toward the vicinity of the bifurcation, the edges of the wound held apart, when, with a finger, the missing tube was felt in the right bronchus, the upper extremity of the tube being well within the bronchus. By holding the incised edges of the trachea well apart, Dr. Roarke was able, by means of a head mirror, to see the upper edge of the tube, and dextrously grasping it with forceps, one leg of which was placed within the tube, he promptly delivered it. The condition of the patient was such as to create anxiety for several days, both from the shock of the operation and the threatening broncho-pneumonia, but she finally began to improve, and a few days ago she greeted me in the hallway of the hospital during a visit thereto, and presented the appearance of splendid physical womanhood.

Attention to the principles on which the Durham tube is constructed shows its advantages

and the defect by which this accident was possible. There are four parts belonging to the complete apparatus as now used by me, noted in the cut a, b, c and e. At c is seen the outer tube that fits into the collar e. This collar can be fixed by means of a set screw at any point on the tube c, according to the thickness of the cervical tissues in front of the trachea, and by securing the shield by tapes around the neck the extremity of the tube is thus adjusted to rest properly within the trachea.

For facility of introduction a pilot with a spiral to allow of ready adjustment within the outer tube is shown at a, which, during use, gives place to the inner tube, also constructed with a spiral, to allow of easy introduction and withdrawal for cleansing. You will observe that the outer tube figured at c has a flange to prevent its escape through the collar and into the trachea. It was the want of this collar that permitted the tube shown at d to escape from the shield, the set screw presumably having become loosened, and find its way into the bronchus. The tube shown at d was the one that was the offender in the case related, and is placed in contrast with tube c to illustrate the fault in construction.

TUBERCULOSIS AND LIFE INSURANCE.

The proposed work of life insurance companies in preventing tuberculosis demonstrates the principle of the monetary value of human lives, and also a new one—that pure selfishness, the saving of that value from loss by death, may be made a method of combating disease and death. One industrial insurance company, for instance, loses annually over \$800,000 in deaths from tuberculosis, and the losses of all companies combined would foot up many millions. A good business man seeks to stop unnecessary expenses and losses, and that the insurance companies have not lifted a finger to save such losses from preventable diseases is a strange commentary on the universal barbarism of our views of the value of life and the cost of death. Frederick L. Hoffman, statistician of the Prudential Insurance Company, realizes the fact that a large part of the losses to his company from tuberculosis may be saved by instructing policy-holders in the nature of the disease, methods of prevention, of cure, etc. The acceptance of substandard risks may also be postponed until the patient is instructed how to regain health, etc. It is chiefly by the distribution of good scientific, popularly expressed literature that he would work, and his plan is worthy of the most emphatic commendation. It is evident that life insurance is a profitable business. In the past the companies have unconsciously relied on the physicians, hygienists, philanthropists and taxpayers to reduce the mortality and thus increase their profits. Why should they not share this duty in the future? Especially since it is their self-interest as well as duty.—*American Medicine.*

Rheumatism of Single Joints.—Rheumatism, as we know, is often a refuge for the destitute in the matter of diagnosis, and this fact may serve to explain the frequency with which inflammation of a single joint is ascribed to rheumatism. There are very good reasons in favor of the view that there is no such thing as single rheumatic joint disease. If joint disease be due to rheumatism, more than one joint will be involved, but multiple joint affections are not on that account necessarily rheumatic; witness the polyarthritis met with in gonorrhoea, syphilis and sepsis. Disease of a single joint is either purulent, tuberculous, gonorrhoeal, or is due to some central nerve lesion. If the disease commences in one joint and subsequently spreads to others it is presumptive evidence that the affection of the other joints is due to secondary infection. The distinction is not merely of interest from the point of view of scientific accuracy, for it may have, and often has, a very important bearing on treatment and prognosis.—*Medical Press and Circular.*

Rheumatism.—Layne (*Cincinnati Lancet Clinic*) has been experimenting with salol, colchicum, the iodides and salicylates and has given them all up in favor of the prescription which he considers a specific:

℞ Ext. xanthoxylini.	ʒi.-ii.	30.00-60.00
Ext. asclepiadis cornuti.		
Ext. solani dulcamara.	ʒss.	15.00
Ext. taraxaci densleonis.	ʒii.	60.00
Spir. Frumenti, q. s. ad.	ʒviii.	240.00

Mix. Dose—Four teaspoonfuls after each meal.

Infantile Bronchitis.—The *St. Louis Courier of Medicine* gives the following for infantile bronchitis:

℞ Tinct. nucis vomica.gtt. xvj
 Tinct. digitalis.gtt. xvj
 Liq. peptonoides cum creos.ʒiv
 Aquæ gaultheria.q. s. ad ʒij
 M. Sig.—ʒj every four hours (for six months' child).

For cyanosis and cardiac inadequacy of infantile bronchitis: Mustard paste, 1 part mustard to 5 parts flour, warm water q. s. to make a paste; over entire chest until well irritated.

Also, internally:

℞ Spir. glonoini.	gtt. iiij
Spir. frumenti.	ʒij
Aqua menth. pip.	ʒij
Aqua.	q. s. ad ʒj

M. Sig.—One-half teaspoonful p. r. n.

For infantile bronchitis, with symptoms of suffocation: Place child under tent and "steam" with beechwood creosote 5 to 20 drops to a quart of water. Keep under for twenty minutes every hour or two until marked improvement.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. NO. 11.

NOVEMBER, 1902.

\$1.00 PER ANNUM.

SALUTATORY.

The Committee on Publication begs to call the attention of the members of the New York State Medical Association to a few of the details requisite to the successful performance of their duties. It will be a part of their duty to see that the JOURNAL comes out regularly and that the Directory is issued at the proper time.

In regard to the JOURNAL, it is their aim to make it crisp, clear, clean and of as much value as a journal of this kind can be. They are not in the field to compete with other medical journals, but merely to present the news of importance to the members of the Association, the doings of the Council, reports from time to time of the Counsel and such other matters as may prove valuable.

They realize that the undertaking is by no means a small one and would like to have every member consider himself in part responsible for the contents of the JOURNAL. To this end they invite their cordial cooperation and their fearless criticism, as they believe in the motto that "it is best for us to see ourselves as others see us."

As regards the Directory, the aid of the members is especially solicited in correcting any errors or omissions. If it is noted that practitioners in their vicinity have not sent the proper information to this office they should find out the reason and advise this committee. If any new matter should, in their opinion, be added, or any old matter be omitted, they would be glad to know of it.

If members will read the JOURNAL with critical minds and give the Committee the benefit of their views it will greatly facilitate the work and help toward the desired end. The Committee will thus be enabled to hand over the JOURNAL to their successors in the best form possible.

A limited number of full sets of the transactions of the New York State Medical Association, consisting of sixteen volumes, can be had by paying freight charges by any member of the New York State Medical Association or of the American Medical Association, or any library, upon application at this office.

The Association.

The Nineteenth Annual Meeting of the Association, which closed on October 24th, was particularly successful. The total registration was 281, a number somewhat smaller than that of the meeting a year ago, yet the average attendance at each session was larger, the members remaining while every paper was read and discussed—testimony of their extraordinary interest.

The most important business was transacted at the meeting of the Fellows and Council on Monday. The list of newly elected officers will be found on the title page of the JOURNAL. Several amendments to the by-laws were passed, those of the most importance being in relation to the payment of dues, and they are here appended:

ARTICLE X.—DUES.

Section 1. All applications for membership shall be accompanied by five (5) dollars annual dues for the current year, but if the application be made on or after the first day of October, such dues will be credited as of the next year.

Sec. 2. The annual dues of resident and non-resident members shall be six (6) dollars, but if such dues be paid within three months of the date of submitting the bill a rebate of one (1) dollar may be deducted. Corresponding and honorary members shall be exempt from the payment of dues.

Sec. 3. All dues shall be payable on the first day of January of each year. Resident members shall transmit their dues to the treasurer of their County Association or of their District Branch Association when no county association exists. Non-resident members shall transmit their dues to the treasurer of the State Association.

COLLECTION OF DUES.

Sec. 4. On the first day of July in each year the names of all those members who have failed

to pay their indebtedness to the Association shall be dropped from the forthcoming list of members to appear in the Medical Directory for that year, and if those members still further fail to pay their indebtedness by the close of the annual meeting of the Association of that year without satisfactory excuse, their names shall be dropped from the official roll of membership.

Sec. 5. On every bill for dues sent to members the treasurer shall cause to be printed sections 1, 2, 3 and 4 of this article.

DISTRIBUTION OF DUES.

Sec. 6. The treasurer of each county association and district branch association shall pay to the treasurer of the State Association the sum of \$5 or \$6 (in accordance with paragraph 2 of this article) for each and every member who has paid his dues for the year. Remittances should pass to the State treasurer at such intervals as may be determined by the amount of accumulated collections on hand, but by the first day of October in each year all the funds properly coming to the State Association shall be in the State treasurer's hands, to be included in his forthcoming annual statement.

In addition, the committee appointed by the Council to confer with a similar committee of the New York State Society presented its report, which is to be found in another part of this number, and resolutions relative to that report are also to be noted.

The first of the scientific sessions was held on Tuesday morning and was devoted to the subject of gynecology. The discussion awakened was of absorbing interest and of a highly scientific value, which did not abate or lessen during any of the succeeding sessions. The papers presented by guests at the meeting were: "The Newer Relation of the Pancreas to General Medicine," by Dr. Alfred Stengel, of Philadelphia; "Surgery of the Stomach," by Drs. William J. Mayo, of Rochester, Minn., and A. J. Ochsner, of Chicago, and the discussion on "Arteritis and Arterial Thrombosis in Typhoid Fever," by Dr. W. S. Thayer, of Baltimore.

The annual banquet, on Wednesday evening, at the Hotel Manhattan, was very enjoyable, the president making the address of welcome, followed by witty remarks from Drs. Richard H. Gibbons, of Scranton, Pa., and William J. Mayo, of Rochester, Minn., and A. J. Ochsner, of Chicago. The address of the president will be found printed in another column.

* * *

Sullivan County Association held its semi-annual meeting in the parlors of the New Liberty House, Liberty, N. Y., Wednesday, October 8, 1902. It was one of the largest and most interesting sessions held since the organization of the Association. The members and invited guests, with their wives, were served with an elaborate luncheon at 1 o'clock. At 2 o'clock the meeting was called to order in

scientific session by the president, Dr. C. S. Payne, with the following program:

(1) Report of Cases—"Pistol-shot Wound of the Abdomen," "Fracture of Patella." Exhibition of Cases. By Dr. Frank Howser, Bloomingburg, N. Y.

(2) Paper—"The Climacteric Period in Man." By Dr. R. C. Paine, Bethel, N. Y.

(3) Paper—"Early Diagnosis and Treatment of Pulmonary Tuberculosis." By Dr. H. P. Deady, Liberty, N. Y.

(4) Paper—"The Value of Microscopic Examination of Urine as an Aid in Diagnosis." By Dr. M. Milspaugh, Liberty, N. Y.

The papers were all of the highest order and brought out much discussion.

The "Physicians' Wives' Club" was entertained at the home of Mrs. J. L. C. Whitcomb, and all reported an enjoyable time. The next meeting of the Association will be held the second Wednesday in April, 1903.

The Association is growing rapidly, having more than doubled its membership in the past year.

* * *

Orange County Association held its regular monthly meeting at the office of Dr. Conner, Middletown, N. Y., on Wednesday, October 15, 1902, at 2 P. M. There were present Drs. Dennis, Unionville; Distler, Westtown; Wise, Turner, Conner, Douglas, Redfield and Preston, Middletown.

Dr. Douglas, Middletown, presented as the subject for discussion, "Acute and Chronic Diabetes." The writer carefully reviewed a number of interesting cases of this disease as he had had opportunity to observe them in his own practice. He also gave in detail the various lines of dietetic and medicinal measures which he had found most useful and from which the patient derived the most benefit. A fatal case of acute diabetes was cited in which the patient had been in apparent health up to within a few days of the fatal termination.

Dr. Dennis, of Unionville, gave a review of a case of chronic diabetes at present under his care, dwelling mainly on the good results achieved by strict dietetic regimen. Dr. Dennis also reported an interesting case of fracture of the bones of the forearm in which the main interest was that the boy somehow managed to displace all the splints and dressings in such a way as to leave the fracture in a worse condition than ever. To complicate the matter still further, the boy's mother refused to have the fracture reduced again on the ground that it should have been done once for all in the first dressing, although she admitted that it was the fault of her son that the deformity occurred; but by a little coaxing the boy consented to have his arm straightened, and he succeeded in replacing the splints and dressings.

Dr. Conner cited several interesting diabetic cases, as did also Drs. Redfield and Distler.

A spirited discussion of the ordinary symptoms, diagnosis and especially the treatment of these serious cases of diabetes was then engaged in by all those present, and many valuable points were thus brought out.

At the business session following the scientific meeting, the minutes of the previous meeting were approved as read. Plans for the November meeting were discussed, and it was decided to hold a large gathering of all the physicians of Orange County at Middletown, also to extend an invitation to the members of the Rockland County Medical Association to meet with the Orange County Medical Association in a joint session.

The application of Dr. Dennis, of Goshen, was received and placed on file. Adjournment was taken until the third Wednesday in November.

* * *

Kings County Association held its first Fall meeting at 315 Washington street, Brooklyn, on Tuesday evening, October 14th, the president, Dr. Arrowsmith, in the chair. About thirty-five members were present. The scientific session consisted of a paper on "Rheumatism and Pseudo-rheumatism," by Dr. Jos. J. Walsh, of Manhattan, discussed by Drs. Bierwirth, Fuhs and H. H. Morton. The paper is published in full elsewhere in the JOURNAL.

In opening the discussion Dr. Bierwirth said that this was a subject of particular interest because it comes home to us every day. The paper was of peculiar value in calling attention to the many fallacies in regard to so-called rheumatic conditions. But he took exception to the classification of acute and chronic rheumatism. He believed that the sub-acute cases deserved mention. While rheumatism may be an acute infectious disease, the fact is not yet proved, and at present the study of the chemistry of the condition is of more interest. In this class of cases laboratory results can undoubtedly be depended upon as a guide to treatment. Rheumatism is a diseased condition, due to an improper elimination of waste products, and the treatment must be based on this fact. The idea of six weeks and red flannel was wrong. He had yet to see a typical case of acute rheumatism that would not yield to proper treatment within forty-eight hours. Of course, the severe anemia that is always present requires full, continued treatment afterward; that is, iron, eliminatives and full diet.

The disability in chronic rheumatism is due to changes in the fibrous tissue, particularly about the joints, and requires different treatment; namely, massage, local applications and heat. Arthritis deformans is a totally different condition and consists in progressive changes in all joints, probably due to faulty chemical reactions.

The term uric-acid diathesis is misleading. We are not dealing with uric acid in these cases,

but with various urates on account of faulty elimination.

In diagnosis, scoliosis, as well as occupation neuroses, must be taken into consideration. Also the dividing lines between rheumatism, rheumatic gout and gout are very obscure.

Treatment.—In his experience the most useful drug is oil of wintergreen in full doses. Twenty minims in capsule every two hours is not too much, but the patient must be seen before the fourth dose is taken. Frequently three doses are sufficient to clear up the acute symptoms completely. After this the dose should be rapidly reduced and the complete elimination of waste products assured by Rochelle salts in doses of $\bar{3}$ ss— $\bar{3}$ i. After that the anemia requires vigorous treatment. The sub-acute cases are best treated by lithium salicylate, gr. x—xx at a dose. Salophen is very useful in throat symptoms. Asparin seems to have serious depressing effects in some cases. This fact has also been noticed by Dr. Delafield.

Dr. Fuhs was the next speaker. He said that when we do not know the cause of a disease we are in a bad position, and that this is true in a case of rheumatism. The facts that rheumatism is an acute, self-limited disease; that the frequent complications are anginas, inflammations of heart, kidneys, meninges, etc., and that suppurative conditions are rare—all these facts suggest that rheumatism is an infectious disease. Moreover, the specific treatment of rheumatism, as in malaria and syphilis, implies a specific infection. The importance of thorough examination of the feces and stomach contents is not yet realized by most men. The formation of B-oxybutyric acid in the intestines is a point to be borne in mind as suggesting thorough eliminative treatment. Some of the xanthin bodies, sulphuretted hydrogen and indican are also more or less poisonous. For their neutralization creosote in some form is valuable.

Dr. Morton confined his remarks to gonorrheal rheumatism, which he defined as an arthritis due to the direct action of the gonococcus on the joint structures, producing hydrarthrosis and thickening of tendons and bursæ. Suppuration is always due to a mixed infection. The disease takes three forms: Simple hydrarthrosis, most frequently found in the left knee; multiple arthritis with fever, and inflammation of muscles, bursæ and tendons.

In the treatment of the second class of cases sodium salicylate acts well; later, potassium iodide. In hydrarthrosis the local treatment is most important, splint, icebag, blistering or 50 per cent. ichthyol ointment; in moderate cases the rubber bandage. If there is suppuration, drain the joint, otherwise do not. In all forms the gonorrhœa itself must be properly treated.

Dr. Walsh in closing suggested that many of the so-called sub-acute cases may be gout or hysterical joint, and that gout was much more

common in this country than is ordinarily supposed. It was his personal belief that acute articular rheumatism was just as much an infectious disease as scarlatina.

The executive session consisted of reading the minutes of the previous meeting and of the executive committee, after which the meeting adjourned by limitation and the usual refreshments were served.

* * *

Chautauqua County Association held its quarterly meeting at Westfield, Tuesday, October 7th. The meeting was called to order at 11 o'clock in the morning in the parlors of the hotel. After a short business session Dr. DeLancey Rochester, of Buffalo, read a paper and presented a pathological specimen of great interest to the Association. Before adjourning to dinner, Dr. Bozovsky, of Dunkirk, in well-chosen words, presented to Dr. Thomas D. Strong, of Westfield, who has been faithful and loyal to his profession for fifty years, a gold-headed cane, after which Dr. Strong responded feelingly, expressing his appreciation of the gift.

After dinner the scientific program was completed and then carriages took the members around the town and to the vineyards, where all enjoyed eating some delicious grapes.

The meeting was the most enjoyable and largest attended since the organization.

Four applications for membership were received. The physicians present were: William M. Bemus, J. W. Morris, A. L. Livingston, Jane L. Greeley, A. A. Becker, M. N. Bemus, H. A. Eastman, Jamestown; Thomas D. Strong, Edgar Rood, Walter Stuart, H. W. Wilson, Westfield; A. T. Heard, W. H. Heard, James Putnam, North East; William C. Duke, O. C. Kingsley, Ripley; V. D. Bozovsky, Weidman, Dunkirk; E. A. Scofield, Bemus Point; B. S. Swetland, Brocton; H. F. Hunt, Dewittville; Guy Granger, Sherman; O. C. Shaw, Cassadaga; DeLancey Rochester, Buffalo. The program was as follows:

"An Interesting Case of Eight Years' Standing." Dr. O. C. Shaw, Cassadaga.

"Angina Pectoris." Dr. DeLancey Rochester, Buffalo.

"Appendicitis." Dr. M. N. Bemus, Jamestown.

"Herpes Zoster." Dr. B. S. Swetland, Brocton.
Report of cases by members.

The annual meeting of the Association will be held in Jamestown in January.

* * *

Rockland County Association.—The regular autumn meeting of this Association was held in Haverstraw, on Wednesday, October 15th. Dr. G. T. Blauvelt, of Nyack, chairman; present, Drs. Van Wagenen, N. B. Bayley, S. S. Toms, C. D. Kline, G. A. Leitner, J. H. Crosby and F. Levasser. The committee to investigate the water supply of the several villages in the

county reported that chemical examinations had been made, with the result that all were satisfactory potable waters, no sewerage or other contaminations being discovered. Dr. J. H. Crosby, of Haverstraw, read a paper on "Jaundice," detailing a case, the diagnosis of which was made exceedingly difficult. At first the condition was believed to be due to malignancy, but the eventual result was very gratifying.

Dr. C. D. Kline read an extremely interesting paper on "Ectopic Pregnancy." He gave the history of three cases, with operations upon two of the patients and presentation of the specimens from them. The first case showed the history of only a two weeks' pregnancy; the operation disclosed the rupture of the right tube nearly at its junction with the uterus, with free bleeding; the tube was removed and the patient made an uneventful recovery. The second case was a pregnancy of several weeks' duration; there had been several hemorrhages, but not until the patient was almost exsanguinated and pulseless was an operation accepted. The patient was removed to the Nyack Hospital, where the operation was performed, but in spite of cardiac stimulants, transfusions of salt solutions and all the resources of the hospital the patient succumbed on the following day from shock and exsanguination. The third case is a recent occurrence and is under careful observation.

Dr. N. B. Bayley read a paper on "Melena Neonatorum," giving the history of two cases that had occurred under his observation. The first case was fatal; the second case recovered after the internal administration of suprarenal gland. All three of the papers elicited much discussion.

The next meeting will be held at St. George's Hotel, Nyack, on the third Wednesday in January, 1903.

* * *

Saratoga County Association.—The regular semi-annual meeting of the Saratoga County Medical Association was held at the Worden Hotel, Saratoga Springs, September 26, 1902, with twenty-five members present. The scientific program was as follows: Symposium on Cystitis.—Etiology and pathology, Dr. G. T. Church, Saratoga Springs; symptoms, Dr. A. W. Johnson, Mechanicsville; treatment, Dr. William Van Doren, Mechanicsville.

Infantile Convulsions.—Etiology and treatment, Dr. F. J. Sherman, Ballston Spa.

Symposium on Intestinal Catarrh of Infancy and Early Childhood.—Etiology and pathology, Dr. P. C. Curtis, Round Lake; symptoms and diagnosis, Dr. Edgar Zeh, Waterford; treatment and diet, Dr. Frank Garbutt, Mechanicsville.

Treatment of Pneumonia and Its Complications, Dr. W. C. Crombie, Mechanicsville.

OFFICERS ELECT, 1902-3.

President, Dr. Frederick Holme Wiggin, of New York.

Vice-president, Dr. William H. Thornton, of Buffalo.

Secretary, Dr. Guy Davenport Lombard, of New York.

Treasurer, Dr. E. H. Squibb, of Brooklyn.

For Chairman of Committee on Arrangements, Dr. Samuel A. Brown, of New York.

Library, Dr. John Shradly, of New York.

Legislation, Dr. E. Eliot Harris, of New York.

Public Health, Dr. John Scott Wood, of Brooklyn.

Publications, Dr. Emil Mayer, of New York.

Nominations, Dr. Charles E. Quimby, of New York.

For Delegates to the American Medical Association for two years, Dr. Joseph D. Bryant, of New York; Dr. Elias Lester, of Seneca Falls.

Alternates, Dr. Parker Syms, of New York; Dr. L. D. Farnham, of Binghamton.

Original Articles.

PRESIDENT'S ADDRESS.¹

Reflections on Some of the Purposes and Work of the New York State Medical Association.

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

BEFORE proceeding to present to you the few thoughts which I have deemed opportune for this occasion, allow me to express the deep sense of honor which I feel in being called to this chair. No man, in the history of this Association, has been made its president, so far as I know, who has "pulled," as the saying is, for the position. Coming to myself, therefore, unsought, I regard it as a great compliment. I shall cherish the event in pleasant memory the rest of my life.

The addresses of my distinguished predecessors have varied greatly in theme and scope. Some have been on general subjects, some on special. Some have been broad in their application, some have been limited. None has taken stock of our own affairs. In view, therefore, of the fulness of our program with scientific subjects, and in view also of what has happened during the past year and of what may happen in the future in our State Association and in the American Medical Association, it seems to me appropriate to speak somewhat of ourselves, as to what we have stood for in the past and what we should stand for in the future.

The New York State Medical Association came into existence from necessity. In another address, published in our JOURNAL for 1901, and which, no doubt, many of you have read, I have described what the need was that created it. When, in 1882, the then organized

body of the profession of this State ceased to abide by the rules of the American Medical Association, and was denied representation therein, it was imperative that those who were opposed to that action and were loyal to the American Medical Association should seek another channel through which to restore representation in, and to maintain sympathetic and cordial relations with, the national body, and hence this organization was founded.

For nearly twenty years the New York State Medical Association has championed in many ways the following principles:

1st. The cultivation and advancement of the science of medicine.

2d. The promotion of public health.

3d. The maintenance of the honor and character of the medical profession.

4th. The establishment and furtherance of cordial professional relations and fellowship between the medical profession of the State of New York and the profession of other States of the United States and of foreign countries.

5th. The protection of its members against unjust legal procedures.

6th. The provision of beneficiary aid to members and their families who, by misfortune, are worthily entitled to it.

7th. The enforcement of the laws of the State prohibiting the illegal practice of medicine.

In the cultivation and advancement of the science of medicine its members can justly feel proud of what has been done. In the promotion of public health and the suppression of illegal medical practice an alertness has been manifested and a labor performed, as shown by the records of legislation and of the courts, which deserve warm approbation. Unceasingly, it has held before its members lofty ideals of professional honor and character. Fraternity has been so diligently fostered among its members and fraternal sympathies so generously extended to those who were outside its fold that its cordiality has become noteworthy. Every opportunity has been used to encourage peaceful relations with organizations of other States, and active support has been given to the principles of the American Medical Association. Plans are now under consideration by which assistance may be rendered to its members in defense of unjust legal procedures.

To carry forward more effectively the purposes of this Association it has recently substituted for the annual volume of transactions a monthly official journal containing its proceedings and other literature of professional interest. It issues a directory, annually, showing the professional status and relations of every legal practitioner of this State and of New Jersey and Connecticut, so far as can be ascertained, besides giving much other useful information in regard to medical institutions and societies. While all has not been accomplished that could be desired, yet no one can

¹Presented to the Nineteenth Annual Meeting of the New York State Medical Association, October, 1902.

deny that our Association has powerfully contributed toward the advancement of the medical profession of this State.

One of the most notable movements of the last two decades is that pertaining to medical education. In 1884 the two-year repetition course of lectures, without entrance requirements, was then principally in vogue. In this State the medical school of Syracuse University had established a graded course of study, and Albany Medical College was urging it and had made provision for it. The medical school of Niagara University had just been founded and was entering upon its second year of work. This school began its career in 1883 by at once making an entrance qualification obligatory upon its pupils and enforcing a thoroughly graded course of study of three years, and recommending that the course be extended to four years. Its first faculty was manned largely by members of this Association, of whom I may mention Drs. John Cronyn, Wm. S. Tremaine, Charles C. F. Gay, Charles G. Stockton, Henry D. Ingraham, Wm. H. Heath, George E. Fell, Clayton M. Daniels and myself. This school was, I believe, the pioneer in this State in making *both* a graded course of study and an entrance examination compulsory. It courageously, during the whole of its existence, maintained the position it had taken at the time of its organization. On all suitable occasions it advocated and supported the establishment of the higher standards of medical education. When the cause for which it had been organized had been won, and circumstances had made it practicable and even advisable to join hands with the University of Buffalo in carrying forward a common work, its faculty united with that institution. This was in June, 1898. Its fifteen years of existence fulfilled a significant purpose in the cause of higher medical education. The struggle was maintained at great personal sacrifice to its faculty, but the reward was ample, and it lived to see the establishment in this State of that standard for which it had persistently labored. The humbler efforts of the smaller medical schools of Syracuse and Niagara Universities to establish a graded system of medical instruction were not cordially supported, and their example had not, in 1884, been hastily imitated. In that year our first president, Dr. Henry D. Didama, of Syracuse, in his presidential address forcibly portrayed the unnatural and inferior methods of instruction then pursued by most of the medical colleges of this country, and particularly by those of this State, and clearly set forth their disadvantages, together with the advantages of the methods which his Syracuse school, as well as that of the Niagara University, had introduced. Understanding these, might he not well have asked, as he did ask: "Would not the adoption by all the schools of

this country, certainly by those of this State, and especially by the three prominent ones in the metropolis (meaning the College of Physicians and Surgeons, the Medical School of the University of the City of New York and the Bellevue Hospital Medical College), of the improved system, with the honest and vigorous enforcement of its entire demands, secure a practical elevation of the medical standards, so much yearned for, deserve the support of the profession, and restore a confidence which has been seriously impaired? Would not this adoption protect the community to the greatest possible extent from incompetence?"

Through its first president, then, this Association began its career by uttering an appeal for a higher standard of medical education—one of the most potent forces for the exaltation of the profession. Others were making the same appeal. It was responded to. While the specific measures which led to our present State system did not originate in this body, and, although it at first desired a modification of certain of their features, yet among its members have been those who were the most diligent in furthering their enactment. While not in any way an exponent of sectarianism in medicine, while even wishing that such sectarianism might be wiped out, yet it feels secure in a State law which imposes a uniformity of requirements upon its applicants for license to practice medicine, in regard to preliminary qualifications, and in a knowledge of those subjects which form the solid foundations of all correct medical and surgical practice, *viz.*, anatomy, physiology, chemistry, *materia medica* and pathology, together with medical diagnosis, jurisprudence, toxicology, hygiene and practical surgery. In fact, such knowledge is the surest antidote to medical sectarianism, and forcibly tends to unite the whole profession into a single body of practitioners having only the one common purpose in view—the scientific advancement of medicine.

Since this Association was first organized great strides have been made in elevating medical standards throughout the whole country, both for the student and the practitioner. The ill-equipped private school, conducted primarily for the benefit of its faculty, is rapidly becoming a thing of the past, and the university, with its elaborate methods of medical teaching, is taking its place. Laboratory work and bedside studies have been made to supplement recitative instruction, and the audiences of the didactic amphitheater are becoming less and less. The medical curriculum is carefully graded and the time of study is much extended. State boards have been established in most of the States, and have set those requirements for entrance into the profession, affecting, also, entrance into medical schools, which are giving to our country, practitioners of far better training and of much higher standard. Much

more can be done, much more needs to be done, of which want of time forbids me to speak. We are thankful for our gains, and trust that the advancement will continue till the university methods of medical teaching become universal, and a national system of examining boards for license to practice is established.

Not only has this Association taken part in the revolutionary change in medical education, but it has no less been active in those scientific movements which, during its existence, have also revolutionized medical theories and medical practice. Witness, for example, the results of the investigations and advances in bacteriology as bearing upon the prevention and cure of disease, and as enlarging the domain of operative surgery and minimizing its fatalities. See what has been done in determining the nature of cholera, typhoid fever, malarial fever, yellow fever, pneumonia, diphtheria, tetanus, gonorrhoea, myxedema, acute rheumatism and other diseases. Witness also the wonderful progress made in therapeutics, as in organotherapy and serumtherapy, and in the application of X-rays and the Finzen light. The advancement in all directions is truly marvelous, and many of the conclusions of twenty years ago, especially in pathology and surgical practice, have to-day scarcely more than historical interest. These achievements in the last twenty years have been greater and more brilliant than any that have been accomplished during the same length of time since the history of medicine began.

This Association has not only labored to promote public health, to encourage fraternity, to raise the standards of medical education and to advance the science of medicine in all its departments, but it has stood loyally and consistently for that formulated statement of rules governing the relations of physicians to each other, to their patients and to the public at large, which the American Medical Association adopted in 1847, under the title of "Code of Medical Ethics." This code, which had been the ethical guide of the profession from the time that the American Medical Association was first organized, was, in 1881 and 1882, being assailed in this State, and the New York State Medical Association came into existence especially to support and defend it. It has never flinched in this duty. Finding again that the *whole* code was being misapprehended, and even misconstrued, simply because of the differences of opinion arising in reference to the *single* clause concerning the proprieties of consultations, and that some were disposed to eliminate it entirely from the by-laws and rules of the national association and its affiliated bodies, our Association once more came to the rescue at Saratoga, last June, and proposed that it be reenacted by the American Medical Association, but in a more condensed form, and adapted to certain requirements of the various

State laws. This action reopens the code question again, and between now and the meeting of the American Medical Association, at New Orleans, next May, it should be widely and fairly discussed. The committee to which the revision is referred should weigh well all the arguments that may be presented, and should then report, in accordance with the best conclusions at which it can arrive, such a body of rules as will meet the ethical demands of the profession for many years to come.

It is because this discussion is imminent, and has indeed already been begun, that I venture to offer a few words in defense of the preservation of the principles of this document. I know the subject is an old one, but it is not stale. I do not expect to say anything especially new, but it is well, sometimes, to revive old ideas lest we forget them, and to arouse dormant impulses lest we become lethargic and careless. I shall limit myself to the general subject of medical ethics and not enter into any details of its formulation.

Through all the ages of Christian civilization the offices of the physician have been regarded as well-nigh sacred. Nothing in this world is so precious to man as life and health, and any trifling or trafficking with them is looked upon as the height of dishonor and the worst of wrongdoing. The relations of the physician to the sick are so intimate, the trusts imposed upon him are so weighty, the confidences reposed in him are so inviolable, and the issues of his ministrations are so important, even momentous at times, that the most exacting honor and fidelity are ever demanded of him. It is no wonder that morals and conscience, both in and out of the profession, have ever forbidden that the commercial spirit shall gain the ascendancy over the genuine rights of the sick and the afflicted. But human nature is weak and commercialism does tend to dominate the motives of men. It has done so in the past, it does so in the present, and it undoubtedly will do so in the future. As long as this continues to be true, some counterbalancing influence should be brought to weigh heavily on the minds of physicians, and there should be an unceasing indoctrination of the maxims and principles of professional duties and obligations.

It is conceded by all that intelligence is deepened and broadened by education. Wipe out schools and intellectual pursuits and the intellect would soon become impoverished and knowledge would fade and die out. The best intelligence and the best intellects are outcomes, other things being equal, of the best scientific and literary culture, and to be kept alive and vigorous, this culture must persist day after day, year after year and generation after generation. So it is with morals. Nothing but the constant inculcation of moral precepts, the perpetual enlightenment of the conscience in regard to obligations and duties, both private

and public, the incessant teaching of the principles of right and wrong, can sustain those ideals of morality, honor and character which are the aims of our civilization. Take away from our race the enlightenment of conscience and the culture of our moral nature, and how soon would it sink to the lowest depths of degradation? Happily, hour by hour and day by day, in religious bodies and in domestic and social circles of various kinds, moral culture in some phase or other is kept up. It reaches out to all of the common relations of life, and with a force that binds the consciences of men to a method of thinking and a line of action which make for honor and justice. While the general affairs of life are thus affected, the particular callings need more than this. Each of them develops special relations and individual obligations and duties which are not found elsewhere, and each, therefore, requires a corresponding specific enlightenment in regard to those moral principles which are applicable to it and should govern it. This is given to the theologian and his professional conduct is regulated by it. The attorney is taught the rights and wrongs of his calling, and is bound to certain lines of action beyond which he must not go. Shall the medical man receive none of those moral teachings so peculiarly applicable, helpful, yes, needful, to him in his professional relations? A recent writer has said: "We can only expect from an individual (physician) what he has been taught, and if no one from the commencement of his career has pointed out to him the higher and nobler characteristics of his profession, he may, perhaps, be held excusable for growing to regard it in the light of a business and nothing more."* The practice of medicine is more than a business, and much will be lost to the profession, if the physician is taught none of those moral obligations that are due to the patient and to his fellow-practitioners.

It was a glad day for the medical profession when, 100 years ago, Thomas Percival, of Manchester, England, meditating on his own experience and that of the "faculty" of his time, summarized in specific statements the consensus of professional opinion on the duties of physicians, in a book entitled, "Medical Ethics." For decade after decade it was the authority for correct medical conduct. Other "codes" were afterward written, but they simply varied the applications of the principles, evolved by Percival, to suit the changed conditions of life and practice. The profession has been made better by having placed before its members such ethical teachings.

The need of rules and standards of medical conduct is felt throughout the civilized world. It is doubtful if there is any large, organized medical body in any country that has not some

formulated rules of this kind to guide its members. In Great Britain, while the British Medical Association itself publishes no rules of conduct, yet an ethical censorship is exercised by the Medical Council and the licensing corporations of England, Scotland and Ireland, which is more or less rigid and often leads to the revocation of license to practice. During the present year, in answer to English demand, and in the absence of any recent compact statement, Dr. Robert Saundby, of Birmingham, England, has published an excellent "Guide to Professional Conduct" in a work entitled, "Medical Ethics." The profession of France has its rules of conduct, and gives a semi-official recognition to courses of lectures delivered in the Paris Medical School on "Medical Deontology." In Germany, it is said that "Medical Courts of Honor" are established, before which medical men may be tried for violation of rules of medical ethics, and which have the power of imposing fines and other punishments. The profession of Canada and that of the United States each has a code of ethics.

There is no doubt that the code of ethics of the American Medical Association has been a tremendous moral power in the profession of our own country. Some would characterize it as an effete product of the past, but its principles are as virile and sustaining as when Hippocrates issued his immortal oath. Some would cut it off as a useless excrescence of our "body politic," and a hindrance to the moral freedom and inherent liberties of our profession, but it does not in the least cripple or obstruct any right action, and it must be remembered that there are those among us, who have not attained to that moral stature which places them above the need of restraints, formulated in rules and statutes, but who are selfish and mercenary, and if left to their own inclinations, without check or guidance, would overreach the bounds of honor and dignity, and would trespass on the rights of patients and colleagues. There are those who, apparently, would let State laws dominate the ethics of the profession, and do away with the code, but State laws give rights and privileges to individuals and classes in certain directions and under certain conditions, irrespective of moral duties and obligations. Legalizing a thing does not, by so doing, justify it ethically. Legislation, too often, is simply an expression of the influence behind it, and it remains for a higher court to determine the right or the wrong of it. Legislation legalizes many objectionable phases and methods of medical practice, such as commercial advertising, the patenting of medical formulæ and the sale of secret nostrums, and it may yet legalize the osteopath and the "Christian Science" healer, but such legalization cannot be held as voicing the proper ethics of scientific medicine. It may be

*Mark Wardle, *British Medical Journal*, September 27, 1902, page 972.

necessary to respect the law so far as it pertains to medical practice, but obligations of honor and duty remain and are made more potent by being otherwise taught and expressed.

Again, there are those who would substitute for the written code an unwritten one—the unwritten code of a “gentleman”; but it must not be forgotten that all physicians are not gentlemen, even in the most common acceptance of the term, though they be versed in the science of medicine. Moreover, the etiquette of a gentleman is not always the ethics of a physician. Dr. Robert Saundby has truthfully said: “It is not sufficient to say, as some people do, that medical ethics may be summed up in the Golden Rule, or that a man has only to behave like a gentleman; these are, doubtless, excellent principles, but there are numerous instances in which some definite guidance in their application is needed.” No, let me add, the enunciation of general principles, alone, is insufficient for the regulation of conduct as society and human nature, even in the medical profession, exist to-day. Principles should be more or less elaborated and made to apply definitely to definite duties, in harmony with the conclusions which the experience of the past and of to-day have firmly established.

It is fortunate for our American profession that the code of ethics has not yet been lost to it and consigned to the past as a “fossilized antique,” as some would have it, but that it continues to exist. And in the revised form in which it will appear in 1903, after passing through the hands of the excellent committee to which it has been referred, I trust it will be pointed to with pride as the best exponent of the principles of professional honor, dignity and character, as the Golden-Rule guide to both young and old in their relations to each other, and as the standard of judgment by which to check and to censure those who may be derelict in duty and inconsiderate of the rights of others. Not only should the code of ethics be preserved and promulgated by medical organizations, but every medical school should give a systematic course of lectures on right conduct and correct etiquette in all professional relations. With our better methods of teaching the facts and principles of medicine, let there go hand in hand better and more impressive methods of teaching the ethics of the profession. The ideal physician must not only possess a well-trained and judicial intellect, but he must have an enlightened and active medical conscience.

Another subject which has deeply concerned this Association is organization.

One of the problems which has been seeking solution for many years, both in this country and abroad, is that of the complete organization of the medical profession. There has been given to this Association the honor of assisting to solve this problem, at least in a great measure.

Its leaders and those who have its interests most closely at heart have carefully studied the conditions and needs of the profession, and have suggested the scheme of organization which the Association has adopted and under which it is successfully working. As you know, its essentials consist, first, in centering the membership in what may be called the primaries of the profession, namely, in the County Associations, or in the District Branch Associations when the numbers are not sufficient in any county to form a County Association; and, second, in reposing the legislative and business functions of the State organization in a smaller delegate body composed of representatives selected by the members. By this plan every member of a primary organization is a full member of the State organization, and may directly participate in all of its scientific work and social privileges. In matters of business, and in legislation devolving upon the State organization, his interests are duly looked after by his representatives. The ordinary daily affairs and management of the Association are further delegated to the Council, which is constituted of the officers of the Association, the Presidents of the Branches and the Chairmen of the various standing committees—another representative body which further safeguards the direct interests of the members, besides attending to the multiplicity of details which the management of the Association and the enterprises to which it is committed involve. This plan thus reaches out to every remote corner of the State and gives every reputable physician an opportunity to participate in all of the privileges of both the primary and State bodies, and to receive all of the benefits which such a copartnership with every other member implies and guarantees. The whole organization rests in the primary units, and each unit is coequal in rights with every other unit. It is truly American in its principles, and typifies those on which our republican form of government is founded. It ought to commend itself to every physician of the State by reason of its democracy, by reason of the justice it secures to every member and by reason of those advantages which perfect organization offers to the profession both individually and collectively, as so ably set forth in the *Journal of the American Medical Association* in various articles published during the past year.

Prof. George Trumbull Ladd, in his “*Philosophy of Conduct*,”¹ has epitomized ethical sentiment in the motto, which may be regarded as the highest motive of action of the twentieth century: “All for each one, and each one for all.” Every organization that is to work in harmony with the twentieth-century spirit must be so constituted as to exemplify this sentiment in all its aims and actions. The scheme of our Association is so perfectly

¹Page 528.

laid out on lines of reciprocal benefits that we may well appropriate this motto to our own work and make it the insignia of our craft.

Already has the plan which we have elaborated been considered by other bodies, but most notably by the American Medical Association. That body in 1901, at St. Paul, adopted it in all its essentials, modifying it only to suit the needs of a national organization. This adoption was materially aided by this Association, and it was first put into successful operation last June, at Saratoga, under the auspices of this Association and under the leadership of one of its presidents, my distinguished predecessor. This plan promises to do all that its projectors and promoters have hoped for it, and it is destined to revolutionize the spirit of the Association, and to extend its influence and benefits into regions heretofore untouched and unknown.

Persistently, then, should our State Association go forward in its progressive march until every reputable physician within its bounds is enrolled in its membership. When this is done there will be no project for the elevation of the profession or for the good of the community so great that it cannot be accomplished. Give us 10,000 physicians in this State organized under one banner, with "All for each, and each for all" the stimulus of action, and what may not be done! How soon would incompetence disappear! How soon would medical impostors and charlatans be suppressed! How rapidly would teaching ideals be realized! Public sentiment would be aroused to the importance of researches bearing upon the preservation of health and the cure of disease to such a degree that our millionaires would be persuaded that the endowment of medical schools and research laboratories of various kinds would be a greater good to the present age than erecting libraries and building university dormitories. The profession itself would be made to feel more keenly its peculiar trust and responsibility in its relations to the sick and the public, and it would guard more cautiously its portals, so that none should enter who seeks it for purely commercial purposes, who has not an inborn love for the profession, who is not "divinely" called to it.

An organized profession is a tremendous power. This Association has the correct principles of organization, which, if not handicapped by some extraneous burden, will, I trust, ultimately be the means of uniting the profession of this State into one harmonious whole, with all of the accruing advantages and power. Let us, then, with zeal defend the purposes for which it was created and for which it has thus far labored, and let us seek to apply wisely and without hindrance its principles of organization to the end that the greatest good may come to the greatest number, and that its motive may be realized in the motto, "All for each, and each for all."

REPORT OF THE COMMITTEE ON CONFERENCE.

To the Council and Fellows of the New York State Medical Association:

The committee appointed to confer with a committee from the Medical Society of the State of New York, with a view to a union of the two organizations, respectfully submits the following report:

Copy of communication received by the president and dated,

ALBANY, N. Y., Feb. 5, 1902.

DR. ALVIN A. HUBBELL, President of the New York State Medical Association, Buffalo, N. Y.:

Dear Sir—At a recent meeting of the Medical Society of the State of New York, held in Albany, January 28th to 30th, the following recommendation contained in the inaugural address of the then president, Dr. Henry L. Elsner, of Syracuse, and indorsed by the Committee Upon Recommendations in the Inaugural Address, was adopted:

"That the Medical Society of the State of New York appoint a committee of five to confer with an equal number representing the New York State Medical Association for the purpose of formulating a plan which shall have for its object the reorganization of the regular medical profession of this State, which body shall be in affiliation with the American Medical Association, and that the committee report the result of its labors at the next meeting of the Medical Society of the State of New York."

I trust that the purport of this action of our Society is clear, and that it may meet with a response from the Association of which you are president. I am, dear sir,

Yours very respectfully,

(Signed) F. C. CURTIS, Secretary.

To which a supplement was added, dated,

ALBANY, N. Y., Feb. 7, 1902.

DR. A. A. HUBBELL, President of the New York State Medical Association, Buffalo:

Dear Doctor—I would add to my letter of the 5th inst., reporting to you the action of the Medical Society of the State of New York in proposing to appoint a committee of conference with one to be appointed by the Association of which you are president, that the following committee has been appointed:

Dr. Henry L. Elsner, of Syracuse.

Dr. A. Jacobi, of New York.

Dr. A. Van der Veer, of Albany.

Dr. A. M. Phelps, of New York.

Dr. George Ryerson Fowler, of Brooklyn.

Yours very truly,

(Signed) F. C. CURTIS, Secretary.

The following resolution was adopted at the Council meeting of February 7, 1902:

"Moved by Dr. Ferguson that,

"WHEREAS, The Medical Society of the State

of New York appointed a committee to confer with a similar committee from the New York State Medical Association, with the view to a union of the two organizations, and notice of such creation of a committee having been officially given to our president, together with the request that a corresponding committee be appointed by us; therefore, be it

“*Resolved*, That this Council (being the Executive Board of the Association) appoint for the purpose of conference in question a committee of five, consisting of Dr. E. Eliot Harris, as chairman, and Drs. William H. Biggam, Emil Mayer, Parker Syms and Frederick Holme Wiggin, to which committee the president is added as a member *ex-officio*.” Seconded by Dr. Gouley, and carried unanimously.”

GUY D. LOMBARD, Secretary.

To Dr. E. Eliot Harris, Chairman.

The following communication was received from the president of the New York State Medical Association:

212 FRANKLIN STREET, BUFFALO, N. Y.,
Feb. 9, 1902.

Dear Doctor Harris—I have sent a communication to Dr. F. C. Curtis, secretary Medical Society of the State of New York, of which the enclosed is a copy. I wish to withdraw my name from our committee. It will be impracticable for me to meet with you. In the meantime, I shall support all of its conclusions officially.

Cordially yours,

ALVIN A. HUBBELL.

“FEB. 8, 1902.

“FREDERICK C. CURTIS, Secretary, etc.:

“Dear Doctor—The action of the Medical Society of the State of New York, as set forth in your communication of the 5th inst., has been referred by me to the Council of the New York State Medical Association, and it has appointed the following Committee of Conference:

“E. Eliot Harris, chairman, 33 West 93d street, New York City.

“Frederick Holme Wiggin, 55 West 36th street, New York City.

“Emil Mayer, 25 East 77th street, New York City.

“Parker Syms, 50 West 47th street, New York City.

“William H. Biggam, 1197 Dean street, Brooklyn, N. Y.

“You will kindly inform your committee of this appointment, and state that our committee is now ready to act in accordance with the purposes proposed, and may be addressed through the chairman, Dr. E. Eliot Harris.

“Yours of the 7th, announcing the committee of the State Society, is received, and I have sent the names to Dr. Harris.

“Yours truly,

“(Signed) ALVIN A. HUBBELL,

“President New York State Medical Association.”

The chairman of your committee received this letter from the chairman of the Society's committee, dated

SYRACUSE, N. Y., Feb. 21, 1902.

To DR. E. ELIOT HARRIS, 33 West 93d street,
New York City:

My Dear Doctor—Dr. Curtis, the secretary of the Medical Society of the State of New York, advises me of your appointment as chairman of a committee to represent the State Association at a conference with a committee composed of State Society men.

As I have the honor to be chairman of that committee, I thought it wise to write to you concerning the time of our meeting. Beginning on the 13th of March our medical college closes for twelve days, during which time it would be convenient for me to give the required time for this work.

I note that your entire committee is composed of New York men, and as a majority of our men live either in New York or near that city, the meetings in all probability had better be held there.

Will you kindly let me know at your earliest convenience whether the dates included above would be agreeable to you and to the others of your committee?

With many kind regards, I am,

Sincerely yours,

(Signed) HENRY L. ELSNER.

The following answer was sent:

FEBRUARY 24th, 1902.

To DR. HENRY ELSNER, Chairman Committee on Conference, Medical Society of the State of New York:

My Dear Doctor—Your letter of the 21st of February was this day received. Our committee had already considered favorably the question that all communications between the two committees should be in writing, addressed to the respective chairmen, and that each committee could meet by itself to discuss all subjects pertaining to the work in hand, and its written views sent to the chairman of the other committee.

It seems to me that this manner of proceeding will not only be time-saving, but will surely be much more desirable in every other particular than by the transactions of these affairs in joint session.

Therefore permit me to suggest that your committee, through you, send to me the propositions which our committee is to consider.

Yours very respectfully,

(Signed) E. ELIOT HARRIS, Chairman.

The chairman of the Society's committee replied in a letter, dated

SYRACUSE, N. Y., March 5, 1902.

DR. E. ELIOT HARRIS, Chairman, Committee on Conference, Medical Association State of New York:

My Dear Doctor—In reply to your letter, bearing date February 24th, addressed to me as

chairman of the Committee on Conference of the Medical Society of the State of New York, in which you make the statement that your "committee had already considered favorably the question that all communications between the two societies should be in writing," and that each committee should "meet by itself to discuss all subjects pertaining to the work in hand, and that its written views" should be "sent to the chairman of the other committee," and in which you lead the committee of the Medical Society of the State of New York to conclude that there shall be no conference, but simply correspondence between the two committees through the respective chairmen, I would say that the committee representing the Medical Society of the State of New York was appointed to *confer, not to correspond*, with a similar committee representing the Medical Association of the State of New York. The committee which I represent feels that the methods of deliberation can only be settled by a joint meeting of both committees in conference, where both sides may be permitted to express themselves freely, and where each side may take into consideration the views of the other, and where both, prompted by a liberal spirit, shall be willing to reach such conclusions as may result from such deliberation. Under no other conditions can the purposes for which we were appointed be accomplished, and the committee which I represent must refuse to act in any other way.

Awaiting an early reply, I am, for the committee,

Yours very respectfully,

(Signed) HENRY L. ELSNER, Chairman.

To which the following answer was sent:

MARCH 8, 1902.

HENRY ELSNER, M.D., Chairman of the Conference Committee of the Medical Society of the State of New York:

My Dear Doctor—I have the honor to acknowledge the receipt of your letter of March 5th, in which you say "that the committee representing the Medical Society of the State of New York was appointed to confer and not to correspond, and the committee which I represent must refuse to act in any other way."

While the committee of the New York State Medical Association believes the method of proceeding already suggested by this committee will not only be time-saving, but will surely be desirable in every other particular, nevertheless this committee, in the interest of a united profession in one State medical body, will be glad to meet the committee of the Medical Society of the State of New York at such time and place as may be agreed upon by the two chairmen.

I am, for the committee,

Yours very respectfully,

(Signed) E. ELIOT HARRIS, Chairman.

This letter was received, dated

SYRACUSE, N. Y., March 13, 1902.

E. ELIOT HARRIS, M. D., Chairman of the Conference Committee of the New York State Medical Association:

My Dear Doctor—How would Wednesday, March 19th, suit you and your committee for our conference? Our medical college will be closed next week, as I wrote you in my first letter, and for that reason I can be away from home with greater comfort at that time.

Will you also kindly let me know whether your president is to be present at our conferences? If so, we shall be pleased to have Dr. Hopkins, our newly elected president, present as a member of our committee ex-officio.

With great consideration, and expecting, if possible, an immediate reply that affairs may be arranged accordingly, I am,

Very truly yours, for the committee,

(Signed) HENRY L. ELSNER, Chairman.

Answered by the following telegram:

MARCH 16, 1902.

To DR. HENRY L. ELSNER, Fayette Park, Syracuse, N. Y.:

Wednesday, March 19th, is satisfactory. Will 3 P. M. at Academy of Medicine suit your committee?

E. ELIOT HARRIS.

Then this telegram was received:

SYRACUSE, N. Y., March 16, 1902.

DR. E. ELIOT HARRIS, 33 West 93d street, New York:

Three-thirty Wednesday suits better on account of Jacobi's clinic academy.

HENRY L. ELSNER.

This is the last letter prior to the first joint conference:

SYRACUSE, N. Y., March 17, 1902.

E. ELIOT HARRIS, M. D., Chairman Committee on Conference of the New York State Medical Association:

My Dear Doctor—In accordance with your telegram received to-day I have called a meeting of our committee at the Academy of Medicine for Wednesday afternoon, the 19th inst., at 3.30 o'clock, when we shall be pleased to meet your committee, and I hope lay the foundation for an amicable amalgamation of our societies.

I am, for the committee,

Respectfully yours,

(Signed) HENRY L. ELSNER, Chairman.

At the meeting of the joint conference on March 19, 1902, the first business was the reading of the proposition submitted in writing by your committee.

Proposition of the Committee on Conference of the New York State Medical Association to the Committee on Conference of the Medical Society of the State of New York, for union of the two State bodies, presented March 19, 1902.

Two years ago the New York State Medical Association, founded in 1884, was reorganized

under a charter granted by the Legislature. Its plan of reorganization is based upon those of several other State medical associations, and has been regarded by the Committee on Reorganization of the American Medical Association as a proper basis for the organization of the American medical profession in the different States.

The Medical Society of the State of New York, formed under a law of 1806, was changed materially in 1813, after which nearly all the important privileges granted have been repealed by many subsequent acts of the Legislature, so that the basis of its existence is, to-day, so involved as to be little understood.

Therefore, in the spirit of meeting what we believe to be an honest desire to unite the regular medical profession in this State, we propose that the New York State Medical Association and the Medical Society of the State of New York be reconstituted, by an act of the Legislature, into a State medical body to be known as the New York State Medical Society, of which all members in good standing in both bodies shall be charter members. The reconstituted State medical body shall be the representative in this State of the American Medical Association, by virtue of acceptance of the constitution and by-laws of the American Medical Association.

(Signed) E. ELIOT HARRIS, Chairman.
WILLIAM H. BIGGAM.
EMIL MAYER.
PARKER SYMS.
FREDERICK HOLME WIGGIN.

To which the following answer was made:

The Committee of the Medical Society of the State of New York acknowledges the receipt of the communication from the Committee on Conference of the New York State Medical Association, and begs to reply as follows:

Proposition of the Committee on Conference of the Medical Society of the State of New York to the Committee on Conference of the New York State Medical Association for union of the two State bodies, presented March 19, 1902.

In the spirit of meeting what we believe to be an honest desire to unite the regular medical profession in this State, we propose that the New York State Medical Association and the Medical Society of the State of New York, be reorganized by legal union into a single State medical body, to be known as the Medical Society of the State of New York, of which all members in good standing in both bodies shall be charter members. The reconstituted State medical body shall be the representative in this State of the American Medical Association by virtue of acceptance of the Constitution and By-Laws of the American Medical Association, adopted in 1901.

(Signed) HENRY L. ELSNER, Chairman.
A. JACOBI.
A. VAN DER VEER.
A. M. PHELPS.
G. R. FOWLER.

Your committee submitted in writing the following:

To the Committee on Conference of the Medical Society of the State of New York, acknowledging the receipt of and in response to its reply to the proposition submitted by the Committee on Conference of the New York State Medical Association.

The plan of organization of the New York State Medical Association being acceptable to your committee, we will recommend that the reorganized State medical body be known as the Medical Society of the State of New York, and the term legal union be understood to mean applying to the Legislature for a new charter.

(Signed) E. ELIOT HARRIS, Chairman.
WILLIAM H. BIGGAM.
EMIL MAYER.
PARKER SYMS.
FREDERICK HOLME WIGGIN.

After your committee reviewed the several acts of the Legislature relating to the medical profession of the State of New York since 1797, and showed that the privileges granted to the Medical Society of the State of New York in 1806, and in 1813, were curtailed by many subsequent acts of the Legislature, so that to-day the basis of the Medical Society of the State of New York is so involved as to be little understood; then the committee representing the Medical Society of the State of New York agreed with the committee of the New York State Medical Association that it would be desirable to ask the Legislature for a new charter for the purpose of reorganizing by legal means the medical profession of this State.

After the communications signed by the full committee were presented, your chairman was asked by a member of the Society's committee if Chapter XV of the By-Laws of the American Medical Association included the Code of Medical Ethics. The answer being in the affirmative, the Society's committee asked that its exception be noted to Chapter XV of the By-Laws of the American Medical Association, on Society's signed proposition. Adjourned to meet April 11, 1902.

Communication changing day of joint meeting:

MARCH 31, 1902.

DR. HENRY L. ELSNER, Chairman of the Committee on Conference of the Medical Society of the State of New York:

My Dear Doctor—I have received the official notice of the meeting of the National Committee on Legislation, which is to be held in Washington, D. C., on April 10th and 11th next. Will it be convenient for your committee to meet our committee in joint session one week later, on account of my being absent from the city on the second Friday in April?

I am, for the committee,

Yours very truly,

(Signed) E. ELIOT HARRIS, Chairman.

SYRACUSE, N. Y., April 1, 1902.

DR. E. ELIOT HARRIS, Chairman Committee on Conference, New York State Medical Association:

My Dear Doctor—In answer to your communication received this morning, I would say that it will be convenient for our committee to meet your committee in joint session on the 18th of this month instead of the 11th. Had we better make this an afternoon or an evening session? Kindly let me know, as the time of my departure depends entirely upon the hour of our meeting.

I am, for the committee,

Very respectfully yours,

(Signed) HENRY L. ELSNER, Chairman.

DR. HENRY ELSNER, Chairman of the Committee on Conference of the Medical Society of the State of New York:

My Dear Doctor—In answer to your letter naming April 18th as the day for the next joint session, it will be more convenient for our committee to meet your committee in the afternoon after 3 o'clock. Very respectfully yours,

(Signed) E. ELIOT HARRIS, Chairman.

New York, April, 1902.

SYRACUSE, N. Y., April 7, 1902.

DR. E. ELIOT HARRIS, Chairman Committee on Conference New York State Medical Association:

My Dear Doctor—I have sent notices to the members of our committee of the time appointed for our next meeting, April 18th, at 3 o'clock.

Very respectfully yours,

(Signed) HENRY L. ELSNER, Chairman.

Meeting of both committees held April 18, 1902, at 3 P. M., at the Academy of Medicine. Present were, Drs. Biggam, Elsner, Fowler, Harris, Jacobi, Mayer, Phelps, Syms, Van der Veer and Wiggin.

The question of the manner of preparing the charter for a new organization was then taken up, the preamble of which was to read as follows:

For the purpose of union, the Medical Society of the State of New York, organized in eighteen hundred and six, under chapter one hundred and thirty-eight of the laws of eighteen hundred and six, and the New York State Medical Association, incorporated in eighteen hundred and eighty-four, and chartered in nineteen hundred, under chapter four hundred and fifty-two of the laws of nineteen hundred, ask to be reorganized into a society to be known as "The Medical Society of the State of New York."

AN ACT

To charter the "Medical Society of the State of New York" 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.

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 named in section six of this act an organization styled "The Medical Society of the State of New York," 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 Medical Society of the State of New York" 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 society.

Sec. 3. "The Medical Society of the State of New York" may purchase, receive, hold and convey personal or real property, and receive bequests and devises of personal or real property by will for amounts not exceeding the constitutional limit.

DEATH BENEFIT FUND.

Sec. 4. "The Medical Society of the State of New York," reorganized 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 societies in the State of New York.

GOVERNING BODY.

Sec. 5. The superintendence and management of "The Medical Society of the State of New York," reorganized by virtue of this act, shall be vested in a body known and styled "the council and fellows" of "The Medical Society of the State of New York," 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, dismissal 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 "Medical Society of the State of New York," and in general to make such by-laws, rules and regulations for the proper government of the society and of its branches

and subordinate county societies 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 Medical Society of the State of New York," reorganized by virtue of this act, shall be the following-named physicians residing in the State of New York: William H. Biggam, Henry L. Elsner, George R. Fowler, E. Eliot Harris, Henry R. Hopkins, Alvin A. Hubbell, Abraham Jacobi, Emil Mayer, A. M. Phelps, Parker Syms, Albert E. Van der Veer and Frederick Holme Wiggin and their associates, consisting of all members in good standing in the Medical Society of the State of New York, founded in eighteen hundred and six, under the laws of chapter one hundred and thirty-eight of the year eighteen hundred and six, and the New York State Medical Association, incorporated in eighteen hundred and eighty-four, and chartered in nineteen hundred, according to the laws of Chapter four hundred and fifty-two of the year nineteen hundred.

PRIMARY ORGANIZATION.

Sec. 7. The following-named physicians: William H. Biggam, Henry L. Elsner, George R. Fowler, E. Eliot Harris, Henry R. Hopkins, Alvin A. Hubbell, Abraham Jacobi, Emil Mayer, A. M. Phelps, Parker Syms, Albert E. Van der Veer and Frederick Holme Wiggin shall select the officers, council, committees and delegates of "The Medical Society of the State of New York," who shall serve as such officers, members of council, committees and as delegates until the close of the annual meeting, to be held in the city of Albany, in the county of Albany, on the last Tuesday of January next following. There shall be a meeting of said society held in the city of New York on the third Tuesday in October of each year.

QUALIFICATION OF MEMBERS.

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

ASSESSMENTS AND DUES.

Sec. 9. The several district branches and subordinate county societies shall pay to the treasurer of "The Medical Society of the State of New York" all such dues and assessments as from time to time shall be laid by the council and fellows of "The Medical Society of the State of New York."

Sec. 10. All acts and parts of acts inconsistent with the provisions of this act are hereby repealed.

Sec. 11. This act shall take effect immediately.

Signed by E. Eliot Harris, Chairman of the Committee on Conference, New York State Medical Association, and Henry L. Elsner, Chairman Committee on Conference, Medical Society of the State of New York.

Meeting of joint conference held at the Academy of Medicine, October 3, 1902; after full discussion of the question, "That the committee of the Society rescind their exception to Chapter XV of the By-Laws of the American Medical Association," the members representing the Committee of the Medical Society of the State of New York stated that they could not recommend the acceptance by the State Society of the By-Laws of the American Medical Association containing Chapter XV. Meeting adjourned.

(Signed) E. ELIOT HARRIS, Chairman.

WILLIAM H. BIGGAM.

EMIL MAYER.

PARKER SYMS.

FREDERICK HOLME WIGGIN.

Dr. E. D. Ferguson, of Troy, presented the following resolutions, seconded and carried unanimously:

Resolved, That the report of the committee appointed to confer with a committee representing the Medical Society of the State of New York for the purpose of devising a plan for the union of the New York State Medical Association and the Medical Society of the State of New York is hereby approved.

Resolved, That the plan presented at the joint sessions of the two committees by the committee representing this Association, whereby "the New York State Medical Association and the Medical Society of the State of New York be reconstituted by an act of the Legislature into a State medical body to be known as the Medical Society of the State of New York, of which all members in good standing in both bodies shall be charter members, and the reconstituted State medical body shall be the representative in this State of the American Medical Association by virtue of its acceptance of the Constitution and By-Laws of the American Medical Association" is hereby accepted by the New York State Medical Association as an expression of our sincere desire for a union of the medical profession in this State.

Resolved, That the committee is hereby continued for the purpose of cooperating with any committee from the Medical Society of the State of New York to secure a charter from the Legislature at its next session in 1903, which charter shall reconstitute the two State organizations into one State body, as set forth in the preceding resolution, but if the Medical Society of the State of New York shall fail to approve of such plan of union by a charter to be secured at the approaching session of the Legislature in 1903, then this committee shall be considered as discharged, and the proposition of this Association withdrawn.

Resolved, In case this committee should find occasion to apply to the Legislature at its next session for the purpose of securing the said charter, it shall cooperate with the standing Committee on Legislation of this Association.

THE RADICAL CURE OF CANCER OF THE STOMACH.¹

BY WILLIAM J. MAYO, A.M., M.D.,
Rochester, Minn.,
Surgeon to St. Mary's Hospital.

CANCER of the stomach is a hopeless malady unless it can be cured by operation. The only excuse, then, for the apathy of the medical profession is a belief that the disease is hopeless anyway, whether operated upon or not. I do not believe that this is justified by the facts. In cancer of nearly all of the other organs, operation is urged, and even enthusiastically, by men who look with disfavor upon the surgical relief of malignant disease of the stomach. W. G. McDonald found 43 cases of undoubted cure after extirpation of cancer of the stomach. Murphy collected 189 cases operated upon radically by Kroenlein, Maydl, Rydger, Czerny, Morrison, Bevan and Mayo, with 26 deaths. Of these 17 survived three years, about 8 per cent. This was reduced to 5 per cent. by recurrences after three years, but as many of these cases were alive and apparently well less than three years, the law of averages might be expected to at least maintain the 8 per cent. or better it in due time.

Are the results of radical operations for cancer of the cervix uteri, for instance, much better than this? If 8 per cent. of cases of cancer of the stomach can be cured by radical operation, this discouragement is not justified, neither is it creditable to us as a profession. One-third of all cases of malignant disease is located in the stomach. From a surgical standpoint it has not received a fair share of attention.

Take another point of view. What has been the result in the cases in which recurrence has manifested itself? Kroenlein's statistics are most available for consideration. The unoperated usually died within the year; gastroenterostomy prolonged life on an average three months, and radical operation gave an increase of fourteen months over the unoperated. Mikulicz, in 100 cases, had an average duration of life following operation of one and one-third years. The relief usually lasts until shortly before death, and there is not that prolonged and hopeless illness which characterizes the unoperated cases. The patient has not only the hope of cure, but a possibility of it.

Why are the results of extirpation of cancer of the stomach not better? Because the diagnosis is not made sufficiently early. The stomach is a favorable organ for operation; it has a large blood supply from several sources. It can be rendered relatively sterile, and at least 60 per cent. of all cases of carcinoma are situated in the pylorus, the most movable and accessible part of the organ. The tendency to lymphatic infection is probably less in cancer of the stomach than in similar conditions in the breast, uterus or rectum (McDonald).

McArdle, in 802 collected cases, found 40 per cent. relatively free from important lymphatic involvement, and Shaw demonstrated that 18 per cent. of cases of cancer of the stomach which came to autopsy had absolutely no secondary involvement of any kind.

The physician has been taught to believe that the presence of a tumor contraindicates an operation, and unless one can find a tumor the diagnosis is uncertain. He is put in the position of being asked to make a diagnosis of cancer and take the responsibility of a perhaps unnecessary exploration. We should not ask for a diagnosis of cancer, but we should ask that a suspicion of malignant disease demand a surgical consultation, and as much so as appendicitis or ectopic pregnancy, and that in cases of doubt the patient be permitted to exercise a choice as to an exploration.

Some years ago an eminent authority expressed the opinion that the presence of a tumor of itself demonstrated the incurability of the disease. This dictum must be qualified at least. A small, movable tumor in the pyloric region, with obstructive symptoms, is a favorable consideration. Many cases die from starvation without secondary involvement, and the movability argues for a freedom from adhesions which complicate the operation and increase the primary mortality. From our own experience we would judge that, with symptoms warranting an exploration, the lack of definite signs usually means an extensive and hopeless involvement of the body of the stomach. Had the pylorus been involved, obstructive phenomena would have given far earlier warning. A large tumor, or one indefinite in outline or of fixed character, would be a different question, and lead to a doubtful opinion.

Another source of delay is the prolonged and usually unavailing attempt to make a diagnosis through various tests of the stomach contents. After long and painstaking experience with laboratory methods for the early diagnosis of cancer of the stomach, we have been forced to the conclusion that they do not amount to much, although late in the disease a fairly reliable guide. I have no wish to discourage such examination; it is an effort in the right direction, and I hope will tend to increased precision in the future. But, at all events, it should not lead us to procrastinate.

Given a previously healthy person of middle age or beyond, who is beginning to lose weight and strength, with loss of appetite and slow and more or less painful digestion, we should suspect cancer. If, after thorough examination by all the methods at our command, adequate reason for the condition is not forthcoming in a few weeks at most, we should advise exploration.

Should this become the practice, cancer of the stomach would give as favorable a showing as cancer of the breast or uterus. If the profession awakes to its responsibility the general public

¹Presented to the Nineteenth Annual Meeting of the New York State Medical Association, October, 1902.

will be quickly educated to its importance. I would emphasize the necessity of obtaining a careful history. A very large proportion of the cases which we have had gave an early history of ulcer of the stomach. One of my colleagues, Dr. Christopher Graham, gave this his attention and found it to be the case in over one-half of all the cases coming under observation. In several instances, operation revealed the cicatrix of former ulceration to be undergoing malignant degeneration. This is more forcefully brought to mind by the frequency with which competent men take just the opposite view, that a history of previous ulcer argues for a return of the ulcerative process and against malignancy.

In our experience, cancer of the pyloric region has been the only form of the disease which we have been able to diagnosticate sufficiently early to attempt radical relief. Many times the process is distinctly ring-like, with comparatively little lateral involvement. These cases give early evidence of retardation of the progress of food from the stomach. The repeated finding of material left from the evening meal in the morning washings from the stomach is an easy way to develop the fact of obstruction, or the test-meal method may be used.

By distending the stomach with air not only can its outline be developed, but often a tumor may be brought up within reach of the palpating hand. With an ordinary stomach-tube and a Davidson syringe, this can be safely done, air being permitted to escape or more pumped in at will. This is more effective, because always under perfect control, than the bicarbonate of soda and tartaric acid test, which is painful and does not always last sufficiently long; neither has it the element of safety. Dr. Behrend reports three deaths following its use, the sudden and uncontrollable distention doing fatal mischief to the diseased gastric wall. This simple means for practical examination is at the command of every practitioner, and while he may not arrive at as accurate results as the trained specialist, he may at least have his suspicions aroused in time to give the patient a chance for his life.

The surgical exploration presents no difficulty as to the presence of gross lesions, and usually the malignant nature of the trouble is manifest. Occasionally, however, an ulcer will have so great an amount of new tissue about it as to closely resemble cancer. We have been misled twice: once removing an ulcerous pylorus with the idea it was cancer, and once a pylorus, the subject of an epitheliomatous ulcer, supposing it to be a simple ulcer. This leads to the conclusion that, other things being equal, every ulcer which can be located should be removed either as a complete operation or as a part of the operative procedure indicated. It also has the advantage of removing the original source of disease and preventing secondary malignant degeneration of the scar tissue involved.

In deciding as to the operable possibilities, the two most important considerations are the exten-

sion of the disease to the neighboring tissues and the lymphatic involvement. As a rule, extension to neighboring viscera contraindicates operation. Extensive adhesions greatly complicate the operation and increase the primary mortality. Haberkant had a mortality of 72.7 per cent. in cases with adhesions, as contrasted with 27.3 per cent. without adhesions. Lymphatic involvement, unless localized to the vicinity of the growth, is a hopeless complication. In a general way the surgically removable glands lie in four groups: first, along the lesser curvature; second, along the greater curvature; third, about the head of the pancreas, and, fourth, in the greater omentum. In all of these positions in favorable cases extirpation may be justly attempted. It should not be forgotten that a certain amount of glandular hyperplasia may be found which is not due to malignancy. Such enlargement is often, if not usually, present in any form of disease which permits of fermentation of the gastric contents. Fenger described simple adenopathy in the submaxillary glands in cancer of the lip, and Halsted, in cancer of the breast, has recorded cases in which microscopical examination of the enlarged lymphatic glands did not develop carcinomatous change.

Mikulicz thinks that the relief afforded by pylorotomy and gastrectomy justifies the operation in otherwise favorable cases, even if all the glands cannot be removed. Extension along the lesser curvature is more unfavorable than along the greater curvature. Robson advises that in every case the resection shall extend along the lesser curvature to the gastric artery, to enable removal of glands which are very prone to infection and otherwise liable to be overlooked. It is needless to say that secondary involvement of the viscera shown by ascites, etc., precludes operation. There is but little tendency for the growth to invade the duodenum. In a fair proportion of hopeless cases, present or imminent obstruction indicates gastroenterostomy.

After purely exploratory operations for inoperable disease, I wish to draw attention to the value of the permanent, buried sutures of silk or silver wire in the strong fascia, in order that the patient may be allowed to get about at once and leave the hospital in a few days. Such patients do not bear confinement to bed well, while waiting sound abdominal union, and often die without being able to return to their homes and friends. In St. Mary's Hospital, during the past ten years, 213 operations have been made upon the stomach, 126 for non-malignant disease, with a mortality of slightly less than 5 per cent., and 92 for malignant disease, with 9 deaths, or 10 per cent. Over one-fourth of the latter group were explorations, but in no case did death follow such examination.

Radical operations upon the stomach owe their inception to the master mind of Billroth, although Péan and Rydger preceded him in the actual performance of pylorotomy. Billroth, however, placed the operation upon a sound footing and

brought it prominently before the profession. Billroth was not enthusiastic about it, and in speaking of his results he said: "All of the patients left the operating-room in shock, from which some of them recovered." His mortality was 55 per cent.

The operation which takes the name of Billroth consists in exsecting the diseased part and narrowing the cut end of the stomach to the size of the duodenum, and then suturing the intestine into the gap. The point at which the three angles came together so often gave way, with resultant leakage and death, that it received the name of the "fatal suture angle." Kocker was one of the first to see the defect in the Billroth operation, and made a radical departure from it, suturing the cut end of the stomach completely and inserting the duodenum in an independent position upon the posterior gastric wall. This is a most excellent method, but it occasionally happens that the traction necessary to adjust the duodenum to the greatly shortened stomach has a tendency to obstruct the opening. In 7 Kocker operations we had one such case, and were compelled later to do a gastrojejunostomy. In 12 pylorotomies since that time we have closed both the duodenum and the stomach ends, and at once made a gastrojejunostomy of the usual type. All in all, this has proved the most satisfactory method of operation. Pylorotomy and partial gastrectomy is not more difficult than similar operations upon the breast, uterus or rectum. We have found the following technique simple and satisfactory: through a medium incision, having its inferior angle at or slightly to the left of the umbilicus, the stomach is exposed, and the gastrohepatic omentum tied as far to the left as the gastric artery. This mobilizes the diseased part, and by passing the fingers behind the pylorus in the lesser cavity of the peritoneum, the gastrocolic omentum can be tied off without danger to the superior mesenteric artery. A gauze-pad is drawn under the freed part, and a heavy clamp placed on the duodenum, with sufficient force to form a groove. A catgut ligature is tightly tied in this groove, and a clamp placed on the stomach side and the duodenum divided just beyond the ligature. A silk purse-string suture about the duodenum, three-quarters of an inch below, enables the tied end to be invaginated in a similar manner to the stump of the appendix. The stomach is turned up and to the left, and heavy clamps placed an inch from the growth. In the sulcus formed by the pressure a continuous catgut shoemaker's stitch is placed, using one thread with a needle at each end. The diseased part is then severed and a continuous silk Cushing suture rolls in the first suture line. Independent gastroenterostomy with the Murphy button is then performed, either upon the anterior or posterior wall of the stomach, as preferred. The operation is quickly done, without loss of blood or opening the stomach.

Our experience of 20 pylorotomies with 2 deaths is too small to draw conclusions from.

yet in a general way we can say that the results of these radical operations upon the stomach have proved as satisfactory as upon the breast, uterus or rectum. The mortality of 10 per cent. cannot be considered excessive when it is noted that this includes those early cases in which misfortune so often attends inexperience. One of our cases of pylorotomy and partial gastrectomy lived three years and five months, and then died after a short illness from secondary involvement of the liver.

While we have no other case which lived beyond the three-year limit, we have several favorable cases which may be expected to afford good results.

As to complete gastrectomy, there is not much to be said. The cases are too few and the time too short. We have twice removed practically all of the stomach, but in such instances enough of the gastric wall remained to make the jejunal attachment. In none of these cases was there that sagging of the stomach and dragging down of the esophagus which made the operations of Schlatter, Richardson and others so successful.

In conclusion, let us put this question to the practitioner of medicine: Can you cure a case of cancer of the stomach; if not, why withhold the only known means of effecting such a cure—a surgical operation? Again, let us ask: Can you diagnose cancer of the stomach early enough for surgical relief; if not, why withhold an exploration—the only certain means of diagnosis?

REPORT OF AN INTERESTING CASE OF TYPHOID INFECTION.¹

BY A. W. PRESTON, M.D.,
Middletown, N. Y.

THE case which I am about to report extended over a period of five months before anything like convalescence was established, and is probably unique from the standpoint of the particular association of noteworthy complications. It is also of especial interest because it adds one to the scanty number of recorded cases of hemorrhagic pleurisy complicating typhoid and due to the presence of Eberth's bacillus. To the best of my knowledge it is the sole case of this complication which has thus far been reported in the English language. Owing to the extreme length of the clinical record we shall append no more than a brief outline of the case.

Miss C., aged 27. The history, family and personal, was negative. The evolution of the disease and the great number, variety and severity of certain symptoms appeared to indicate a neuropathic substratum. This phase, however, will be omitted from consideration, because it evidently exerted no influence upon the evolution, course and termination of the specific affection.

¹Presented to the Nineteenth Annual Meeting of the New York State Medical Association, October, 1902.

After a prodromal period of headache, lassitude and loss of appetite, which lasted some three days, the patient took to her bed (upon January 5, 1902). When first seen she complained of intense pains in the head, back and extremities. As influenza was prevalent at the time, the possibility of typhoid was not considered. The temperature was 102.6, pulse 96, respiration 30, and the urine contained a trace of albumin. Upon the third day of the disease the fever reached 105 degrees, with the respiration ranging from 45 to 50. A purgative had set up diarrhea, with stools characteristic of typhoid. Diffuse areas of consolidation were made out over the right lower lobe. While an agglutination test was not made, the symptoms appeared to sanction the diagnosis of pneumotyphus.

During the next five days the temperature ran up daily to 105, respiration from 45 to 60. On the eighth day intestinal hemorrhages set in, and within the ensuing twenty-four hours the roseola appeared along with enlarged spleen. A syndrome characteristic of typhoid was now rapidly established—alternating stupor and delirium, tremor, tympanites and involuntary escape of urine and feces. Upon the tenth day meningeal irritation was present, and the urine contained numerous casts and much albumin.

From this period until the end of the fourth week the progress of the case may be summed up as follows: The temperature showed a considerable average reduction; the intestinal symptoms persisted; the nervous phenomena—headache, restlessness, etc.—were most distressing; a tendency to nausea and vomiting was established and was destined to persist for weeks; the urine was scanty throughout and still contained much albumin. Finally the intrathoracic symptoms were practically negative.

During the fifth week the fall of temperature was marked, the maximum being about 101 degrees. The heart and respiration, however, showed a tendency to marked elevation. The intestinal symptoms showed decided improvement, while the nervous phenomena, including nausea, continued as before. During the sixth week these conditions were but little altered, although a tendency to cough set in. The sputum was examined with negative results.

The seventh and eighth weeks showed a slight degree of improvement. The temperature attained the point of apyrexia and was often subnormal, while the tachycardia and rapid respirations showed some improvement.

The ninth week saw this clinical picture varied by complete suppression of urine, attended by edema and ascites. This condition, however, lasted but a short time.

During the tenth week there was a marked change in the symptoms. The right side of the chest began to show flatness on percus-

sion, with bronchial respiration and voice and displacement of the cardiac apex to the left (to nearly the axillary line). Pericardial friction sounds were heard and the heart's action became extremely rapid and irregular (upon one occasion it reached 175 per minute, while respiration sometimes ran as high as 70). The need for interference became urgent and the right side of the chest was aspirated twice within a few hours, bringing away 1.75 liters of a hemorrhagic effusion. The state of the heart's action and respiration was at once improved. Examination of the pleural effusion revealed the presence of Eberth's bacillus. A third tapping during the eleventh week brought away only a little bloody serum.

The general condition of the patient at this period appeared to indicate a state of toxemia with persistence of renal complications, and up to the 115th day but little change was to be noted. The patient had become extremely emaciated; her nervousness persisted; the limbs were still edematous, and despite the great improvement in intrathoracic conditions she still exhibited difficult and rapid respirations.

From the 115th to the 146th day there was but little change. The temperature had long been normal, but the pulse and breathing were still rapid at times. Cough tended to increase, and all the nervous phenomena were hard to control. During this period the patient was able to sit up and her diet was liberal in character.

During the sixth month of the disease the patient gained slowly in health and was able to walk and go out of doors. The cough, which at one time had suggested a possibility of tuberculosis, was still present.

During July and August the patient was in the Adirondacks. She still suffered from chronic parenchymatous nephritis, as shown by the persistence of albuminuria and edema.

At the present time there is an exacerbation of the nephritis. The anemia and emaciation are very marked. There are ascites and edema of the lower extremities.

A study of the literature of the subject shows that some cases of hemorrhagic typhoid pleurisy have been placed upon record. The first to be reported was by Charrin and Roger in 1891. In this case the pleuritic complication set in early in the evolution of the fever. The effusion seemed to clear up by absorption, but reappeared during convalescence. Two liters of hemorrhagic fluid were evacuated by puncture. Despite this relief the case ended fatally. Postmortem autopsy revealed *absence of intestinal lesions*; bronchopneumonia; much blood in the left pleural sac and tuberculous lesions in both apices. Eberth's bacillus was cultivated from the pleural fluid. This case, in virtue of the absence of intestinal lesions, is well entitled to the designation of pleurotyphoid.

The second recorded case was that of Kelsch, reported in 1892. The patient was admitted to a hospital with evidences of uncomplicated left-sided pleurisy. Upon puncture a reddish fluid was repeatedly obtained and the typhoid bacillus could be cultivated therefrom. When some of this fluid was inoculated into animals, they died of tuberculosis. The exudate became purulent at a later stage of the disease, requiring thoracotomy. Death resulted and autopsy showed the presence of general miliary tuberculosis. There were no typhoidal lesions in the intestines. This case, therefore, like the preceding, was one of pleurotyphus in a tuberculous subject.

Several years now elapse before a third case comes to light, Menetrier reporting one in 1896. The patient had gone through an attack of typhoid of moderate intensity. The thoracic symptoms developed just as defervescence set in. The presence of a pleuritic exudate was recognized and on the thirty-fifth day of the disease puncture gave vent to a rose-colored fluid. Tuberculosis was suspected, but cultures from the exudate revealed the presence of Eberth's bacillus. The agglutination test, applied to the exudate, was negative. Patient recovered. Unlike the two preceding, this case appears to have been one of ordinary typhoid, with incidental development of a pleural localization.

The records are again silent until 1899, during which year Labiche published his thesis on typhoid pleurisy, reporting a case from the practice of Achard. The patient developed dyspnea on the tenth day of his typhoid, and puncture performed four days later brought away a serous fluid, from which the typhoid bacillus was cultivated. The effusion gave a feeble agglutination reaction. Two days later a second puncture brought away a bloody fluid which also agglutinated and contained the typhoid bacillus. The patient had albuminuria throughout the course of the fever. The pleurisy was accompanied by a certain amount of bronchopneumonia, and upon the twenty-fifth day a phlebitis of the left leg set in. Recovery took place and a final puncture of the pleural sac brought away a clear, sterile fluid. This case, like the preceding, appears to have been one of intercurrent pleurisy developing in the course of ordinary typhoid.

The year 1900 appears to have been an eventful one for hemorrhagic typhoid pleurisy, for no less than four cases were reported before the Société méd. des hôpitaux of Paris during this period. Drs. Souques, Lesné and Ravant placed two cases upon record as follows:

In the first, the thoracic symptoms began early in the evolution of the disease, indicating bronchopneumonia. Pleural friction sounds were not heard until some days later. A diagnostic puncture brought away a little bloody serum containing Eberth's bacillus. The exudate

then became purulent, but later resumed its hemorrhagic character, which it maintained until the recovery of the patient. The authors regard the salient features of the case as follows: Early development of pleurisy; alternation between hemorrhagic and purulent effusion, and presence of typhoid bacilli in pure culture.

In the second case reported by these three authors the thoracic symptoms appeared at a very early period, before the diagnosis of typhoid was established. Tuberculosis was thought of, but on the eighth day a typhoid roseola appeared and sero diagnosis gave a positive reaction. About a week later the thoracic symptoms, which had been pneumonic in character, passed into those of pleurisy. The sputum was examined for tubercle bacilli, with negative results. Puncture on the sixteenth day of the typhoid brought away a little hemorrhagic fluid. Eberth's bacillus was found only after numerous tests had been made. The pleural fluid continued to be hemorrhagic until the recovery of the patient. In both the preceding cases the authors point to the early development of the thoracic symptoms, and in the discussion which followed the reading of the paper the consensus of opinion was to the effect that these early thoracic complications indicate the presence of pleuro or pneumo typhoid—the initial localization of the disease being within the thorax.

Drs. Widal and Merklen placed two additional cases upon record during 1900. In the first case the patient began to cough and expectorate profusely early in the history of the disease. Tympanites did not develop. The presence of a roseola and a positive agglutination test left no doubt as to diagnosis. Pleuritic effusion was not in evidence until the fifth week of the disease, and the first tappings brought away pus containing Eberth's bacillus in pure state. Upon the second puncture a bloody fluid was obtained, containing no bacteria. An agglutinative test was positive, and Eberth's bacillus was recovered from the sputum. Repeated punctures brought away a bloody fluid which appeared to increase in volume with successive tappings. The patient finally recovered after three months' experience with the disease.

The second patient of Drs. Widal and Merklen had already gone through pleurisy five years earlier. He was taken with ordinary typhoid, and during the three weeks thoracic symptoms set in and persisted during convalescence. The symptoms were those of pneumonia, followed by those of pleurisy, the left side alone being involved. Tapping of the pleural sac brought away a few drops of bloody serum, which was sterile to cultivation. A number of subsequent punctures brought away blood, but Eberth's bacillus could never be recovered therefrom. At the same time the pleural fluid

exhibited agglutinating power. The patient recovered.

A case of hemorrhagic pleurisy complicating typhoid is also recorded in Nothnagel's "Handbook d. spec. Pathol. u. Therapie" (Amer. Ed., 1902). The author, Curschmann, relates that the case in question appeared to be one of pleurisy at the outset, the fever curve alone suggesting the possibility of typhoid. Tapping brought away bloody serum, which was not examined for Eberth's bacillus. The diagnosis of typhoid was abundantly confirmed by the supervention of pea soup, diarrhea, enlarged spleen, etc., while Widal's reaction gave a positive result.

GENERAL SUMMARY.

The limited number of cases thus far reported of hemorrhagic typhoid pleurisy does not permit us to indulge in generalizations. On the one hand it may be readily assumed that hemorrhage in the course of pleurisy—typhoidal or otherwise—is a mere detail, without special significance. It is worth recording, however, that when Charrin and Roger inoculated animals with the pleural exudate from their patient, hemorrhagic lesions were produced. Hemorrhagic effusion into the pericardium has also been noted in at least one of the series of cases quoted.

Labiche, in his monograph upon typhoidal pleurisy actually due to Eberth's bacillus, assumes that the complication of hemorrhage is an accident. His conclusions are of sufficient interest to be repeated and are as follows:

Pleurisy occurs at times in which Eberth's bacillus is found alone. Such pleurisies are relatively of rare occurrence. They may be serous, sero fibrinous, hemorrhagic or purulent. As a rule they are purulent.

They develop especially on the left side and in adult males, and are often consecutive to lesions of the pulmonary parenchyma. They occur by preference during the decline of the typhoid or in the course of convalescence, and their evolution is usually slow, insidious and subacute. The tendency to recovery is present in most cases, with or without treatment. The prognosis, however, is rendered more serious because the course of the disease is protracted.

It will be noted that the recorded cases of hemorrhagic pleurisy do not conform closely to Labiche's specifications. Not a few of them began early in the evolution of the typhoid and might well be designated as examples of the pleuro or pneumo typhoid. The parallel, clinically, between these cases and acute phthisis is frequently suggested, and the diagnosis is cleared up only after bacteriological tests.

If we analyze the small material available our conclusions are somewhat as follows: First, hemorrhagic typhoid pleurisy may actually be limited to the pleura and lung, without involvement of the intestines; second, typhoid fever may begin within the thorax, but may extend

later to the intestines; third, pleurisy may appear late in the evolution of the typhoid or during convalescence as a mere complication or sequela. All three types appear to be represented in the few recorded cases.

If we compare the other material with our own case we shall find that the presence in the latter of thoracic symptoms is natural and inevitable. While several of the older cases have more or less albuminuria, we do not find a typical instance of chronic nephritis among the number. Therefore, our case, in respect to its complications, is somewhat unique.

BIBLIOGRAPHY.

- Charrin and Roger. Soc. méd. des hôpitaux, 1891.
Kelsch. Semaine medicale, 1892.
Menetrier. Soc. méd. d. hôpitaux, 1896. xiii, p. 850.
Labiche. Des pleurisies a bacille Eberthreime. These de Paris, Meulan, 1899.
Souques, Lesné and Ravant. Soc. méd. d. hôpitaux, xvii, 1900, p. 21.
Widal and Merklen. Soc. méd. des hôpitaux, xvii, 1900, p. 924.
Curschmann. Nothnagel's Handbook d. sp. Pathol. u. Therapie; American ed., 1902.

PSEUDO-RHEUMATISM.¹

BY JAMES J. WALSH, M.D., Ph.D.,
New York.

PROBABLY the most familiar words in the ordinary practice of medicine are cold, catarrh and rheumatism. When we recall that the old name for cold was rheum we shall perhaps understand better than would otherwise be possible how utterly indefinite is the signification of each of these words and how many pathological conditions may be grouped under them. For all three words, rheum, catarrh and rheumatism, are derived from the Greek word *reo*, which means to flow. The idea intended is manifestly that there is in each of these diseases an increase of secretion, what in older times was called a fluxion. Colds or rheums are an increase of secretion in the respiratory tract, as a rule, due to changes of temperature. Catarrh is an increase of secretion from any mucous membrane, due to any irritant, while rheumatism is an increase of secretion from synovial structures; hence, represents an inflammation of any of the serous membranes of the body.

Under the word rheumatism particularly has come to be grouped a large series of affections, many of which bear evidently no relation to one another. True rheumatism—that is, acute inflammation of the synovial membranes—causes pain and is usually located in the joints. Hence there has come the idea that any painful condition around a joint may be spoken of as rheumatic, though frequently there may be no inflammatory changes in the joint itself and no effusion into the joint capsule to justify the use of the word rheumatism with its etymological signification of fluxion or increase of secretion.

¹Read at a meeting of the Kings County Medical Association, Brooklyn, October 10, 1902.

As a consequence of the association of the idea of pain with rheumatism, painful affections of the muscles have come to be characterized as muscular rheumatism. At times these are spontaneously inflammatory in character, a true myositis, and therefore deserve perhaps the name of rheumatism. Mostly, however, the pains in the muscles are due to nothing more than injury, or overuse, or false use—that is, the employment of the muscles at a mechanical disadvantage—or to overwork for compensatory purposes, because the corresponding muscles on the other side are unable to perform their share of the labor, or to disturbances of circulation.

The use of the word rheumatism to designate all these desperate conditions, while eminently unsatisfactory in itself, has served to prevent such careful examination of these cases as would lead to the recognition of the actual condition present in individual patients. It is easy to pronounce the word rheumatism and prescribe some so-called rheumatic remedies. Patients are rather well satisfied, as a rule, to have their affection spoken of as rheumatic, as it gives them a certain sense of the doctor's appreciation of their sufferings, and they have a definite name for their ailment. The use of any term, however, whose meaning is not absolutely fixed is sure to bring with it sooner or later a feeling of knowledge that does not really exist. Words are curious things, and while introduced to express ideas, if the original signification should once be lost sight of, they soon inevitably carry with them an assumption of knowledge that may not exist. Our present explanation of the term "dog-days" is a good example. The word "dog" has no reference to the well-known pet animal, but refers to the dog-star which is in the ascendent during July and August. The popular idea is, however, that dogs are more liable to go mad at this time, and, as a consequence, we have our annual hot-weather period of uneasiness with regard to mad dogs.

It would seem advisable, then, that we should try to limit the meaning of the word rheumatism in order to make more definite our medical knowledge with regard to the conditions grouped under it and the suitable treatment of them.

There are three principal forms of rheumatism—acute, chronic and muscular. Acute rheumatism, or rheumatic fever, is a disease that begins with a longer or shorter incubation period of chilly feeling, discomfort and loss of appetite. The fever may be initiated by a chill. The temperature rises to 102° or 104° and continues febrile for from a few days to five or six weeks. That acute rheumatism is a self-limited disease is now generally conceded. While the salicylates have done much to suppress the symptoms of the disease and make the patient comfortable, they have done practically nothing to shorten its course, and an analysis of hospital

statistics shows that the disease runs no shorter course now than before the introduction of the salicylic treatment. Cullen's famous expression that the best thing for rheumatism is "six weeks" remains as true to-day as it was 100 years ago.

The incubation period, the mitral chill, the continued fever, the self-limitation would all point to the fact that acute rheumatic arthritis is an infectious disease.

Besides these direct evidences that acute rheumatism is an acute infection, there are some indirect testimonies to the same effect. For a long time there was grouped under rheumatism a series of affections that we now know to be due to specific micro-organisms. Gonorrhoeal rheumatism is the most prominent of these, and its differentiation from ordinary rheumatism has only come in comparatively recent years. In certain ways it presents very close imitation of acute rheumatic arthritis. Another affection is the so-called scarlatinal rheumatism that is sometimes a complication of scarlet fever. This is evidently due to the same microbic cause as the scarlatina itself, though we know the specific bacterial cause no more than in rheumatism. Mumps is another acute infectious fever that occasionally gives arthritic complications.

In some of these cases the arthritic symptoms may be due to a secondary infection. In septicemia arthritic symptoms are not at all infrequent. Often septic affections are mistaken for true rheumatism until the course of the case, and especially the prolongation of symptoms, leads to more thorough investigation. It is not impossible that in rheumatism itself there may be more than one etiological factor for the different forms, for even clinically similar cases do not always respond to the same treatment, and some of them prove very obstinate to remedies that ordinarily are very effective in the control of rheumatic symptoms.

With all of these familiar characteristics it is not surprising that rheumatism should now be considered an infectious fever, probably due to a specific micro-organism. The exact specific micro-organism that produces it has not as yet been isolated. Of late years the writers of textbooks have gradually transferred rheumatism from the list of diathetic diseases to that either of the infectious fevers or to some other rubric.

So much for acute articular rheumatism. There is, as a rule, no difficulty either as to recognition or to treatment. Chronic rheumatism is another matter. Occasionally after acute rheumatism has passed some of the changes produced in the joints by the rheumatic inflammatory process are not completely resolved, but continue to be a source of pain and discomfort. These grow worse from time to time and finally produce serious changes in the joint structure, which hinder movement and locomotion, and are a source of pain or during damp weather of great discomfort. These changes continue to

grow worse until finally movement may be almost impossible. Such conditions are usually spoken of as arthritis deformans. They are by no means always ushered in by acute rheumatism. They may follow almost any severe infectious disease. Osler has attributed the origin of a number of cases of arthritis deformans that he has seen to precedent attacks of grip. A number of conservative clinicians are convinced that more cases of arthritis deformans have been seen since the epidemics of grip during the last ten or twelve years than occurred before that time. Several sets of statistics seem to show that arthritis deformans was preceded by gonorrhoeal rheumatism, and in at least one set of statistics over 30 per cent. of the cases were apparently traceable to this etiology.

It would seem, then, that the chronic changes in the joints often spoken of as chronic rheumatism are by no means necessarily connected with ordinary acute articular rheumatism or rheumatic fever. By far the greater majority of the patients who suffer from acute articular rheumatism do not develop any of the lasting changes in the joints that have come to be recognized as arthritis deformans. Apparently, then, when acute rheumatism precedes arthritis deformans there is probably some complicating infectious element of a more serious nature than the ordinary specific cause of rheumatism, which is really the etiological element in the production of the subsequent slow inflammatory and degenerative changes that bring about destructive disturbances of the joint structures. It is questionable, then, whether the word rheumatism should be applied to these conditions at all, and certainly there is no reason for expecting that ordinary rheumatic remedies will have any beneficial effect upon them. Fortunately, these conditions are rare, and the chronic rheumatism that is familiar to all of us is of quite another character.

The third form of rheumatism is the so-called muscular rheumatism. It is not easy to understand just why the term rheumatism should be applied to painful affections of muscles which sometimes occur absolutely without any exudation. It is well known, of course, that muscles in order to work over one another are separated by planes of fascia and muscle coverings, some of which partake somewhat of the nature of serous membranes. It can be well understood that many of the complicated movements so easily accomplished by the hand, for instance, could not be performed, unless muscles moved over each other almost without friction. If inflammation should occur along the lines of these muscle coverings or in the body of the muscle itself it is easy to understand that pain would result during movements.

Myositis, or inflammation of the body of the muscles, is sometimes present in these conditions, and may in certain cases be due to the same or a very similar microbic cause as sets

up inflammatory processes in the synovial membranes of joints. As a rule, however, there are no signs of inflammation. The calor, dolor and rubor of Galen are absent in patients who make the severest complaints of myalgia. Besides the affection is liable to come almost suddenly, as the result of exposure, and has none of the premonitory symptoms of an inflammatory process and disappears without the gradual diminution of symptoms that would be characteristic of an exudative inflammation.

As a matter of fact most cases of myalgia would seem to be dependent on other causes than inflammation in the muscles themselves. Many of them partake rather of the nature of a neuralgia, the nerves to the parts being interfered with in their functions because of disturbance of the circulation within the muscle and consequent failure of nervous nutrition. The pains present, however, a rather complex problem.

Joints are complicated structures requiring to be kept at an acme of nutrition in order to assure their performance of the severe duties for which they are intended. Disturbances in the constitution of the blood, then, are likely to be reflected very soon in these important tissues. In anemic conditions pains around the joints are quite common. In scurvy, effusions into the joint and pain and tenderness of the joints are almost the rule. In tabes, effusions into the joints, painless because the sensory nerves to the part are degenerate, are quite frequent. In such conditions as urticaria, where there is interference with the vasomotor system at various points, the disturbance of the capillary circulation within the joint seems to lead to effusions and other pathological conditions within the joints. Hence the familiar picture presented by the association of urticaria and joint tenderness and swelling after the use of antitoxin for diphtheria.

When more crude toxic materials are in the blood this same tendency is apt to be noted. During the prodromal period of most infectious diseases there are apt to be pains in and around the joints that are evidently a manifestation of the presence of the toxins of the disease in the circulation before it has produced its characteristic constitutional symptoms. In lead poisoning there is apt to be a sense of fatigue that is almost painful in muscles and around joints long before lead palsy makes itself manifest. In the same way those who are much given to the consumption of alcohol are apt to complain of pain in and around joints and in groups of muscles as the result not so much of any affection of the muscles themselves as the beginning neuritis that makes the use of the muscles so much more difficult than before as to produce pain, rather than fatigue, when movement is attempted.

It is evident that much of the so-called muscular rheumatism is really due to the presence of such fundamental pathological conditions as

I have mentioned. There are, however, another set of cases in which myalgia develops, unfortunately, often spoken of as rheumatics, but without any right to be grouped under any such head. These are what may be called the occupation painful conditions. There is scarcely an occupation in which a group of muscles must be used frequently, for prolonged periods, from which workmen do not eventually become afflicted with painful conditions that may well be diagnosed as rheumatic if no care is taken to look for the proper etiology of them.

A familiar example of these used to occur in members of a sister profession before the introduction of the electrical dental engine. Until the last few years dentists worked engines, by which they obtained the powder for the excavation of teeth, by means of the foot. Almost all of them developed as a consequence of this a halt in their gait. Among dentists this was well recognized, and was known as the dentist's halt. It was due to a discomfort in the use of the knee of one leg. The affected leg was not the one used to work the engine, but the one on which the weight of the body was constantly carried while the other foot was used to work the dental engine. Those who have any experience in dispensaries of men who run foot-power lathes or printing-presses, now fortunately very rare, will know of the occurrence of a similar state of affairs in these workmen.

Before the origin of the condition was realized dentists and such workmen were not infrequently treated for rheumatism. As a matter of fact such cases always exhibit more symptoms on rainy days. Just why this is so is not very clear. It would seem, however, that the presence of moisture in the air disturbs the cutaneous and subcutaneous circulation around joints and so leads to a congestion of the structures within the joint itself, with a consequent failure of nerves to obtain their proper amount of blood supply from the circulation.

When tissues are already sensitive and when much work is demanded of them, and that of a complex severe character, such as the bearing of the weight of the body and the standing the strain of the leverage of muscles, in itself no small mechanical moment, it is not surprising that this arthralgia should occur.

Something of the same thing happens with regard to the overused muscles of other joints. It is not an unusual thing to have carpenters complain of pains in their shoulders that are worse on damp, cold days. Investigation will easily show that the men are using a saw or a plane under circumstances that will not allow of the proper exercise of the muscles involved in the movement. For instance, it will be found that a man who does much sawing fails to place the boards to be sawed sufficiently low, so that the weight of his body and the large muscles of the back may supply part of the force necessary for carrying the saw through the wood. If the

sawing is done so that the arm muscles alone must supply all of the energy, then it is not long before there are complaints of the discomfort involved. If a man who uses a plane does not employ a table sufficiently low, so as to bring the weight of his body, rather than the energy of his arm muscles, on the plane, a similar set of complaints are sure to ensue. What these men need is training in sloyd.

These are only types of occupation pains. There are many others, though I mention only some of those that I have actually seen. Usually they come with the ready-made diagnosis rheumatism. A filer, for instance, who uses a file without putting the article to be filed in a position over which he can easily lean in order to bring the weight of his body on his tool, experiences the same pathological result.

A woman who irons clothes will complain of severe pains at times in the arm and shoulder of the side in which the iron is held. A little questioning will usually show that the ironing-board is so situated that in order to secure proper pressure upon it the muscular force of the arms must be employed, instead of the weight of the upper part of the body, which can be very easily applied if the ironing-board is situated low enough. Women who have to sweep much complain of a similar set of pains in the arm and shoulder, usually of the right side, because they sweep right-handed. Often it will be found that the pains can be overcome best, or at least modified, by recommending that the broom be used occasionally on the other side and by having the woman deliberately learn to sweep in such a way as to give herself a change of muscular employment.

As I have said already there is scarcely an occupation in which muscles must be used frequently but that can prove the source of just such pains. I have found it in tobacco-strippers, in nervous women from lifting heavy skirts in their hands, in motormen who failed to use the weight of their bodies in putting on the brake on a car and consequently overexerted their arm muscles, in baseball pitchers who delivered the ball without a full, free swing of the arm, in postmen in the arm they pressed against the collection-bag, but more frequently in the hand that carried the bundle of letters.

All of these conditions are worse in nervous individuals. There are many whose nervous system does not seem able to stand the strain of conveying the various motor nervous impulses required for prolonged muscular movement. In some the tiredness that develops becomes painful when they are at work only for a short time. Sometimes it is not necessary that the work should be hard in the ordinary sense of the term—that is, that it accomplishes large mechanical results—but it may be only of a complicated character, when the exhaustion of the nerves leads to the same painful condition.

Writer's cramp and telegrapher's cramp,

piano-player's spasm and postman's spasm are familiar examples of the affections that develop in nerves as the result of overuse. When the cramp that prevents further use develops the recognition of the affection is comparatively easy. In many individuals, however, the actual spasmodic contracture of muscles does not take place, but a distinct sense of pain, often reflected along other nerves in the arm, or even referred to the muscles around the elbow, is not infrequent. Such conditions are always worse on rainy days, on the general principle, perhaps, that superficial circulation is interfered with by the moisture and cold of the air, and that consequently the nutrition of the nerves is not kept up to the condition necessary in order to make complicated movements constantly possible.

Another set of joint pains that are frequently mistaken for rheumatism are due to pathological conditions in and around joints of a nature very different from anything like rheumatic inflammation. Most of what masquerades as rheumatism of the leg is really due to flat-foot. This is becoming very generally recognized now. The discomfort felt is by no means limited to the ankle, but, on the contrary, is very often first felt at the base of the big toe, or as the result of the awkwardness of movement necessitated by the absence of the usual arch in the instep; a painful sense of fatigue develops in the muscles of the calf, or at times even in the knee joint.

It is not unusual to be told by patients that they are conscious of having had flat-foot for many years, while their pains have developed only within a few weeks or months. This is usually due to the fact that overwork, or a running down in health, or an increase in weight has led to a further obliteration of the arch than before, or has interfered with certain compensations that nature had established for the condition. It is not unusual to find that patients, just before the pain develops, have been doing some work to which they were entirely unaccustomed before. These cases come to the dispensaries always with a ready-made diagnosis of rheumatism, and, needless to say, the administration of rheumatic remedies does no good.

Similar conditions around other joints may produce like effects. A wobbly knee, or a knee joint that has been injured severely or frequently, may cause either reflex or referred pains in muscles near the joints, due to the fact that in the pathological condition of the joint the muscles can not be used properly. I have found in two cases where pains were complained of in thigh muscles and in the region of the buttocks that one limb was considerably shorter than the other. Surgeons know very well that nearly every one has a distinct difference in the length of the two legs. When this exceeds a half inch the muscles on the longer leg are almost sure to become overfatigued, because in-

voluntarily the weight of the body is carried on that leg most of the time.

I have seen pains develop in muscles that were worse, especially in rainy weather, due to the fact that one leg was used with a halt. The reason for the halt was an arthritic neurosis of the knee that developed after several painful attacks from loose cartilages being caught between the bones of the leg. In another case there had been some hysterical contracture of one leg that necessitated the wearing of a somewhat higher heel, though scarcely enough to be ordinarily noticeable on one leg. As might be expected, it was the longer leg that gave the symptoms of pain that finally amounted to almost a continuous condition resembling sciatica.

Conditions not unlike those seen in the leg may develop also in the arm. Many patients suffering from scoliosis complain of pain in the shoulder and arm of the side on which the scapula is most prominent. This seems to be due to the fact that with the abnormal conditions present the muscles of the shoulder girdle can not work at the same mechanical advantage as under normal conditions. Where injuries to the shoulder have taken place, especially severe dislocations with some relaxation of the capsule of the joint, it is not unusual to have complaints of muscular pain that are often diagnosed as rheumatism.

Finally in old people there develops a degeneracy of the circulation which affects especially the joints, because these are the most used portions of the body. As a result, the nerves supplying joints and muscles near them do not receive the blood supply that they were formerly accustomed to receive and painful conditions develop. One of the first signs of generalized arteriosclerosis is an aching, especially in the large and most used joints, such as the knees and the hips. This is usually considered to be rheumatism, and is, in fact, the basis of what is spoken of as the rheumatic tendency of the old. Almost, needless to say, what is needed are not specific rheumatic remedies, but various aids to the circulation, the use of potassium iodide, in order to render the sclerotic condition as little progressive as possible, and finally the abandonment of the hard work and exposure to which the organism, as it grows older, is incapable of presenting the proper reaction.

There are a number of vague pains, most of them quite definite enough in the discomfort they give, that are liable to occur, especially in people who are exposed to the inclemencies of the weather, or who have rather sensitive nervous organizations and are confined for the most part to the house, yet on occasion find themselves subjected to a thorough wetting or exposure on a damp day. In old people, particularly, such pains and aches are extremely frequent. It is the custom to say that these people have rheumatism in their bones. Doctors have not quite agreed with this popular im-

pression and expression, but they have felt that some sort of rheumatic diathesis as the basis of these pains and aches was the readiest explanation.

Until quite recent years it was considered that an attack of acute articular rheumatism was due to an accumulation of uric acid in the blood. The pathological basis of the disease was considered to be a uric-acid diathesis. Patients with tendencies to the accumulation of uric acid in the system were supposed to run along in comparative comfort under ordinary normal conditions, but when exposed to the inclemencies of the weather or to some extraordinary disturbance of circulation because of dampness an exaggerated amount of uric acid accumulated and the result was the pathological explosion in the shape of rheumatic fever. It was pointed out that there was in rheumatism an increase of uric acid in the urine, showing, presumably, that nature was endeavoring to eliminate the obnoxious product. Rheumatic fever was accompanied by acid sweats, and this was also attributed to the uric acidemia. It was even claimed by some that the saliva and the tears contained uric acid.

As a matter of fact, however, no one was ever able to demonstrate satisfactorily an excess of uric acid in the blood of those affected by acute rheumatism. The increased elimination of uric acid in the urine is common to all fevers and might be expected to occur especially in rheumatism, because of the well-known tendency of this disease to affect the red corpuscles unfavorably and produce anemia. Notwithstanding apparently acid odor of the sweat of rheumatism tests showed that at times the perspiration in these cases was distinctly alkaline in reaction. The later theories now regard acute rheumatism at least as entirely independent of uric acid and as being an acute infectious disease. For a time an effort was made to establish the fact that lithic acidemia formed the pathological basis for rheumatism. It was the merest hypothesis, however, and has now been given up entirely.

Chronic rheumatism, however—that is, the vague pains about joints, especially those that grow worse with advancing years—is still attributed by some physicians to a uric-acid diathesis. We have heard much of this, but very little that is definite, and as with regard to acute rheumatism, so in chronic rheumatism, too, notwithstanding the effort of certain investigators with a hobby, the uric-acid idea is diminishing in importance. Uric acid belongs to gout, though it is doubtful even in this whether it is a cause or an incidental effect.

These so-called rheumatic conditions represent a large share of the ills from which mankind suffers after middle life is past. There is scarcely a person beyond 50, especially of the hard workers of outdoor life and of those who have been confined much without sufficient air,

and especially if in damp quarters, who does not complain occasionally of rheumatic twinges. Every one has a remedy for them. It is mainly with regard to this affection that men are fools or physicians after 40. There are favorite liniments of many kinds and proprietary preparations at all prices for man and beast.

In foggy England the problem presented by these affections is so important that when a famous charlatan claimed to have discovered a remedy which would give relief, and, after testing it, in a great many cases seemed to have made good his claim, the British Government paid him, I believe, £1,000 for the secret of the composition of his remedy. This is the famous St. John Long liniment, one of the turpentine liniments good enough in its own way, as most of us know, but by no means a specific.

This has been the favorite field of the quack and the charlatan. At the present moment the treatment of chronic rheumatism is a source of more opprobrium to the regular profession, perhaps, than any other group of affections. It is with this, particularly, that the osteopath has made his success. There is no doubt that for many of the cases rubbing and a certain amount of gentle counter-irritation, with properly directed manipulation, is the best possible treatment. When a dear old Senator, whose long years of service working a rather difficult political machine left him stiff in many joints, was cured by the osteopaths, after his own favorite doctor of the regular school had failed to benefit him, it is not surprising in a way that he should have promised his assistance in securing State recognition of this new school of medicine that could on occasion be so efficiently helpful. He could scarcely be expected to realize that he was asking a sovereign State to recognize the right of a mere masseur to practice the art and apply the science of medicine.

It is extremely important, then, that the many conditions that are embraced under the term chronic rheumatism should be properly differentiated in order that their treatment may be undertaken after the recognition of the special indication of each case. Certainly the ordinary practice of calling vague pains that are worse in damp weather, or that are due to exposure to dampness, chronic rheumatism, and then prescribing the anti-uric-acid remedies, whether these be considered to be the salicylates, or potassium iodide and the alkalies, is almost sure to be the source of failure in the majority of cases in ordinary practice. All that can be expected from the salicylates is the anodyne effect that may be obtained from any coal-tar product; and the alkali treatment, while of service in acute rheumatism, is usually without any proper indication in so-called chronic rheumatism.

CONCLUSIONS.

1. That acute articular rheumatism would seem to be an acute infectious disease, and with

no more necessary relation to such pathological changes in joints, as are exhibited in milder or severer forms of arthritis deformans, than certain other infectious diseases.

2. That so-called chronic rheumatism, with degenerative changes in joints, partakes rather of the nature of arthritis deformans than of a true rheumatic process, and should be treated from that standpoint.

3. That muscular rheumatism, so-called, is usually not an acute infection in any way similar to acute articular rheumatism, but that the painful conditions in muscles spoken of as rheumatism are really due to: (a) blood dyscrasias and certain toxemias (b), to functional arthritic nervous conditions, causing reflex pain in muscles around joints (c), to certain occupations in which muscles are overused or improperly employed, and finally to such joint relaxations as occur from flat-foot or dislocation or frequently repeated or severe sprains.

NOTICE.

Owing to an error in the binding of the Medical Directory for 1902, some imperfect copies of the book have been distributed. It would be greatly appreciated if any member of the Association holding such a book would return it at his earliest convenience to the business office, 64 Madison avenue, New York, when a perfect number will be substituted.

BOOKS RECEIVED.

QUIZ-COMPENDS. A compend of human physiology, especially adapted for the use of medical students. By Albert P. Brubaker, A.M., M.D., Adjunct Professor of Physiology and Hygiene in the Jefferson Medical College; Professor of Physiology in the Pennsylvania College of Dental Surgery. Eleventh edition, revised and enlarged, with illustrations and a table of physiologic constants. Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut street. 1902.

THE MATTISON METHOD IN MORPHINISM. A modern and humane treatment of the morphin disease. By J. B. Mattison, M.D., Medical Director, Brooklyn Home for Narcotic Inebriates. New York: Published for the author by E. B. Treat & Co. 1902. Price, \$1.

YEAR-BOOK OF THE UNITED STATES DEPARTMENT OF AGRICULTURE, 1901. Washington: Government Printing Office. 1902.

A MANUAL OF INSTRUCTION in the principles of prompt aid to the injured, including a chapter on hygiene and the drill regulations for the Hospital Corps, U. S. A. Designed for military and civil use. By Alvah H. Doty, M.D., Health Officer of the Port of New York; late Major and Surgeon, Ninth Regiment, N. G., S. N. Y. Fourth edition, revised and enlarged. New York: D. Appleton & Co.; London: 25 Bedford street. 1902.

ATLAS AND EPITOME OF ABDOMINAL HERNIAS. By Dr. George Sultan, First Assistant in the Surgical Clinic in Gottingen, Prussia. Authorized translation from the German; edited by William B. Coley, M.D., Clinic Lecturer on Surgery, Columbia University; Surgeon to the General Memorial Hospital. With 119 illustrations, 36 of them in colors. Philadelphia and London: W. B. Saunders & Co. 1902.

GIBSON AND RUSSELL'S PHYSICAL DIAGNOSIS. Third edition, revised and rewritten. By Francis D. Boyd,

C.M.G., M.D., F.R.C.P., Ed.; Assistant Physician, Edinburgh Royal Infirmary; Physician to the Deaconess' Hospital. With 144 illustrations. New York: D. Appleton & Co.; Edinburgh and London: Young J. Pentland. 1902.

DISEASES OF INFANCY AND CHILDHOOD. Designed for the use of students and practitioners of medicine. By Henry Koplik, M.D., Attending Physician to the Mount Sinai Hospital; formerly Attending Physician to the Good Samaritan Dispensary, New York. Illustrated with 169 engravings and 30 plates in color and monochrome. New York and Philadelphia: Lea Bros. & Co. 1902.

Book Reviews.

PHYSICAL DIAGNOSIS, DISEASES OF THE THORACIC AND ABDOMINAL ORGANS. A manual for students and physicians by Egbert Le Fevre, M.D., Professor of Clinical Medicine and Associate Professor of Therapeutics in the University and Bellevue Hospital Medical College; Attending Physician to Bellevue and St. Luke's Hospitals; Consulting Physician to Beth-Israel Hospital; Member of the New York Academy of Medicine, etc. Illustrated with 74 engravings and 12 monochrome plates. Price, \$2.25 net. Philadelphia and New York: Lea Bros. & Co. 1902.

Both medical student and practicing physician are to be congratulated upon having within their reach a work on physical diagnosis written by so able and experienced a teacher as is Dr. Le Fevre. Instructed in physical diagnosis during his college life and hospital service by, and afterward working in close relation to, the late Alfred L. Loomis, up to the time of Dr. Loomis' death, it is not strange that Dr. Le Fevre should have acquired a similarity in style in writing of things medical.

In the arrangement of subjects and attention shown to logical sequence Dr. Le Fevre is particularly felicitous. Regional anatomy is first considered; with clearness and conciseness the surface markings of the various viscera and their several divisions are given. Following this the respiratory system, the circulatory system and the abdominal organs are each in turn treated of, and under each of these main headings is given a chapter on inspection, on palpation, on percussion and on auscultation. In this manner the student is led up through a systematic consideration of the physical signs of the regions in question in the normal condition to the changes which are produced by various abnormal states.

Many of the explanations of the production and modification of physical signs differ radically from those of other writers, but in no instance do they fail to be convincing through their strict practicality and close regard to the physics of sound.

A feature of the work is its extensive illustration by means of radiographs. Those in which the trachea and bronchi of a cadaver were filled with small shot, thus throwing into relief the bronchi and their bifurcations, are unique and especially instructive. By means of this idea Dr. Le Fevre has made clear to our visual perception the relation of the left to the right bronchus, showing that the left is practically a branch of the right, which is a direct continuation downward of the trachea. He has also demonstrated the fact that the bronchus supplying the upper lobe of the right lung is given off from the primary bronchus close to the trachea. The importance of these demonstrations in explaining the increase of vocal fremitus and intensity of breath sounds over the upper lobe of the right lung as compared with that of the left is evident.

Among other original points which the author makes may be mentioned his arrangement of car-

diac lesions in a pathological sequence and the emphasis which he puts upon the changes in respiratory sounds over different-sized bronchi and bronchioles due to the changes in histological structure.

To those who have heard Dr. Le Fevre teach physical diagnosis it is most gratifying to know that his methods have been placed in book form.

ESSENTIALS OF DISEASES OF THE EAR. By E. B. Gleason, S.B., M.D., Clinical Professor of Otology, Medico-Chirurgical College, Philadelphia. Third edition, thoroughly revised. 16mo volume of 214 pages, with 114 illustrations. Cloth. Price, \$1 net. Philadelphia and London: W. B. Saunders & Co. 1902.

This little volume is extremely replete and should really have a more ambitious title. It is a question compend, but the questions are in reality nothing but paragraph or chapter captions. The answers are too voluminous to be grouped under single questions. The illustrations follow precedent and Politzer. An occasional illustration of an obsolete apparatus wastes space. There are some very good drawings from the author's collection and from that of Randall—a thoroughly scientific aurist. The Latin is occasionally solecistic: *e. g.*, *membrana tensor* (p. 20); *ex tubæ* (p. 104); *process lenticularis* (p. 24). The measurement of the drum in the vertical direction as given is too small. The method of examination of the drum-head is not fully enough explained, nor the curvilinear mastoid incision, nor the method of avoiding traumatism of the facial nerve. He forgets phthiriasis in the etiology of aural eczema and the habit of picking the ears as a causal factor in aural boils. He still believes in poultices, despite their abandonment by surgeons. He taps aural circulation with leeches in front of instead of inside of the tragus. He is not steady in his belief of the inutility of cocain instillations for drumhead anesthesia, although he knows cocain can not be absorbed by cutaneous surfaces.

The English of the book is clear, succinct and correct and does not suffer by its condensation. It is a better book for students than many manuals and eminently more practical. His exposition of otitis media is perfect. The formulæ in the appendix are well-tryed and serviceable ones.

A TEXT-BOOK OF MATERIA MEDICA, THERAPEUTICS AND PHARMACOLOGY. By George F. Butler, Ph.G., M.D., Professor of Materia Medica and Therapeutics in the College of Physicians and Surgeons, Chicago, Medical Department of the University of Illinois, etc. Fourth edition, thoroughly revised. Handsome octavo volume of 896 pages, illustrated. Philadelphia and London: W. B. Saunders & Co. 1902. Cloth, \$4 net; sheep or half-morocco, \$5 net.

The new edition of this valuable and comprehensive work has been brought well abreast of the times and a careful and thorough revision, together with the introduction of several new features, greatly enhances its value.

The chapters on Prescriptions and Weights and Measures are especially good and will be of great service to the student using this work as a text-book, while those on the Untoward Effects of Drugs, Organotherapy and Serumtherapy, together with the drug classification into Disease Medicines and Symptome Medicines, should prove a great help to the general practitioner using it as a work of reference.

Great care has been given to the synthetic classification of drugs based upon therapeutic affinities, an arrangement which the author believes to be "the most philosophical and rational treatment of the theme." The work closes with a most interesting and valuable chapter on the Relation of Physical Chemistry to Pharmacology and Therapeutics.

ESSENTIALS OF HISTOLOGY. By Louis Leroy, B.S., M.D., Professor of Histology and Pathology in Vanderbilt University, Medical and Dental De-

partments; Bacteriologist to the State of Tennessee; Pathologist to Nashville City Hospital; Associate Editor *Medical Examiner and Practitioner*, etc. W. B. Saunders & Co. Price, \$1.

This little work is attractive both in text and illustrations. The latter are nearly all original and many microphotographs have been utilized, thereby adding greatly to the attractiveness of the book, though a few are not satisfactory and not in keeping with the majority here presented. Those of the lung, lymph-node, appendix and one of the kidney by being improved would enhance their usefulness. In all works of anatomy the illustrations are of great value to the reader and should be well selected and abundantly supplied.

The text is clear and concise and by its brevity supplies the needs of those who either wish to review their histology or who desire quickly to obtain a knowledge of the essentials of the subject. For the student of medicine it might well serve as a note-book to supplement his lectures and his study of the regular text-books.

MATERIA MEDICA, THERAPEUTICS, MEDICAL PHARMACY, PRESCRIPTION WRITING AND MEDICAL LATIN: A Manual for Students and Practitioners. By William Schleif, Ph.G., M.D., Instructor in Pharmacy in the University of Pennsylvania. Series edited by Bern. B. Gallaudet, M.D., Demonstrator of Anatomy and Instructor in Surgery, College of Physicians and Surgeons, New York; Visiting Surgeon, Bellevue Hospital, New York. Second edition, revised and enlarged. Philadelphia and New York: Lea Bros. & Co.

The author tells us in the preface that he intends his work to afford a condensed text-book and work of reference. As a text-book this volume is of undoubted value. Condensation has been the governing principle in the compilation, but only so far as the matter under each subject is concerned. The subjects themselves cover a wide field, and yet justly, all being more or less directly allied to the subject of Materia Medica. The work opens with definitions, touches the subjects of light, heat and electricity, a chapter on weights and measures, and then proceeds to the drugs. These are classified, according to their physiological action, into various groups, ending with a small chapter on dietetics and the newer drugs.

The one feature of this second edition, apparent almost on every page, is the truly excellent manner in which it has been brought up to date. The drugs and their uses are those of to-day, including, with almost no omissions, those finer improvements of modern therapy. The work is filled with therapeutic hints and cannot fail to be of the greatest value to students and busy practitioners. As a work of reference we can only regret that the author's plan made it necessary to condense as much as he did.

A NOTABLE IMPROVEMENT IN THE THERAPY OF TYPHOID FEVER.

THE recent discovery by Duval and Bassett of the presence of the bacillus dysenteriae (Shiga) in forty cases of infantile summer diarrhea awakens renewed interest in the subject of intestinal antiseptics. But a few months have elapsed since Drs. P. C. Freer and F. G. Novy, of the University of Michigan, demonstrated the enormous germicidal power of benzoyl-acetyl-peroxide, more familiarly known as acetozone. Although the preliminary reports of these investigators were of necessity based upon results of laboratory experiments, their expectations are already being realized in clinical work—in the treatment of typhoid fever particularly.

In the city of Chicago, where a large number of cases of typhoid have been reported, acetozone has been used exclusively in the treatment of about three hundred of them. The consensus of opinion is that it causes the temperature to decline earlier than usual in the course of the disease, and it ameliorates the mental and physical condition of the patient, in all probability by controlling the toxemia.

Two Chicago practitioners—I. A. Abt, M.D., and E. Lackner, M.D.—have thus far reported (*Therapeutic Gazette*, October, 1902) forty cases of typhoid in children treated with acetozone, with but two deaths, a mortality of 5 per cent. One of the patients that died succumbed to pneumonia and pulmonary edema, the other to great pyrexia on the fifth day. Stupor and tympanites were almost entirely absent in all the cases, the characteristic typhoid fetor of the stools was markedly diminished and the hemorrhage occurred but twice, and in the same case. The average duration of the febrile period in 37 cases, after beginning acetozone treatment, was 13½ days. The drug did not seem to act upon the heart or respiratory apparatus.

Early this year Eugene Wasdin, M.D., of the United States Marine Hospital Service, Buffalo, N. Y., reported 27 cases (*American Medicine*, February 8, 1902) of typhoid fever, 24 of which were treated with acetozone, all of the patients recovering. The writer says: "Its application in typhoid fever has been followed by very happy results; its use has been directed to the destruction of the germ in its primary lung colony and also in its secondary intestinal colony, and it has been used by hypodermoclysis to combat terminal expressions, with the result that in 24 cases the disease has been limited almost entirely to the expression of intoxication from the primary focus, the intestinal symptoms remaining entirely in abeyance, and the disease has been shorn of many of its most disagreeable features."

In a second paper, which appeared in the *Therapeutic Gazette* for May 15, 1902, the same writer states that his patients were given from 1,500 to 2,000 cc. of the aqueous solution of acetozone daily. The diet was milk, diluted with the same solution. The first influence of the drug is observed in the increased secretion of urine. That this is not due wholly to the ingestion of large quantities of water, necessitated by the use of the saturated solution, is evident from the author's assertion that the same result was observed when acetozone was administered in capsules. The second influence to which attention is directed is the very pronounced decrease of the odor of the stools, while plate cultures from the dejecta showed comparatively few germs.

The deodorant and diuretic effects of acetozone were also observed by G. H. Westinghouse, M.D., of Buffalo (*Buffalo Medical Journal*, Au-

gust, 1902), who used it in seven cases. This observer remarks that with the increased flow of urine "a corresponding reduction of typhoid symptoms followed, and tympanites and delirium disappeared." It should be remarked that the diagnosis in all these cases, as well as in most of those reported by the Chicago physicians, was confirmed by Widal's reaction and Ehrlich's test, and in some a blood-count was resorted to. Westinghouse concludes his paper by saying that "acetozone, as an intestinal antiseptic, is unequaled by anything that I have ever employed. A complete subsidence of all the bowel symptoms followed in every case of typhoid within a few days after beginning its use. The application of the antiseptic consisted, in most cases, in simply allowing the patient to drink the saturated aqueous solution ad libitum; or, in other words, substituting this solution for all other liquids and urging the patient to partake of it freely when the natural craving was not sufficient to insure the consumption of considerable quantities."

SEPTICEMIA AND THE CURETTE.¹

BY H. PLYMPTON, M.D.
Brooklyn, N. Y.

THE attempt to break up an old-established custom in any line of life is at best a thankless job and one likely to call down harsh criticism upon the head of the daring iconoclast. To attempt to uproot old prejudices existing in favor of a certain line of practice in surgery, and diametrically oppose such practice, is to invite from some adverse criticism of the harshest kind. The only recompense for this is a logical refutation of, or concurrence in, the argument advanced, on the part of other members of the profession. This latter is what I hope for, and if I provoke a discussion, or start a line of thought in the minds of half of the readers of this article, I shall have achieved all I started out to do.

Curetting the uterus to remove fragments of afterbirth or other débris has been taught in our medical schools from time immemorial, and it is firmly fixed in the receptive and retentive mind of every medical student that the first move following any such abnormal uterine condition is to cleanse the uterus by means of the curette. That the organ should be thoroughly and aseptically cleansed admits of no argument, but that the work should be done with the curette I deny most emphatically. The majority of cases of death following the decomposition of fetus or placenta *in utero* are caused by the use of the curette, and I hold that septicemia may be avoided if a more rational procedure be resorted to. The condition of the uterus containing septic matter is one of great congestion, the thickened walls being coated internally and over the os with a

¹Presented to the Nineteenth Annual Meeting of the New York State Medical Association, October, 1902.

thick, brown, tenacious mucus. The congestion is active, and therefore the more dangerous in the event of the admission of septic matter into the circulation. If the curette is used, denuding the walls of their protective covering, an immediate vaccination takes place with a septic virus, septicemia following in an incredibly short space of time (chemical metamorphosis is marvelously rapid in the circulatory system) and death quickly ensues. If, without using the curette, we can remove the septic matter from the uterus without disturbing the mucous covering, and enable the uterus of itself to expel the coating, we shall have taken a long step forward in the treatment of this class of uterine cases.

The uterus, by reason of its congestion, may be made to perform a self-cleansing act by exciting the exudation of the serum of the blood into its cavity, thereby washing itself out, and expelling all septic matter instead of absorbing it. This process of exosmosis is induced by a properly combined alkaline solution at a temperature above 100 degrees, and a strict avoidance of bichloride, carbolic acid, formaldehyde or any antiseptic of an acid reaction or astringent nature which would coagulate the fibrin and albumen of the blood.

My method of procedure is as follows:

First. The gentle removal of whatever fragments are lying in the uterine cavity, by means of forceps, care being taken not to tear from the walls any adherent piece.

Second. The gentle flushing of the uterine cavity with the alkaline solution (100 degrees), the reservoir containing the fluid being not more than two feet above the level of the hips.

If the flushing could be continuously administered for a few hours (say two or three), the conditions would be more speedily reduced to normal, but the discomfort of the position of the patient (on a douche pan) prevents this, and a flushing once every two hours with one quart of solution is about the limit of treatment. For flushing the uterus I use a small, dilating uterine douche, and as there is plenty of room for the escape of fluid and fragments, there is no danger of Fallopian colic or salpingitis. The first flushing is frequently followed by contractile pains and expulsion of any previously adherent pieces, together with much of the mucus. A tablet of ext. *Cannabis Indica*, gr. $\frac{1}{4}$; ext. ergotin, gr. $\frac{1}{2}$, every hour till desired effect is produced will contract the uterus and alleviate pain.

The bowels should be moved freely, both by enema and catharsis. During the interval between douches the patient should be kept on her back, with the hips sufficiently raised to permit the retention in the vagina of as much of the alkaline solution as it will hold. The rapidity with which this treatment will reduce temperature, relieve pain, stop vomiting and remove offensive odor is marvelous to one who

has not tried it. Sometimes two flushings are sufficient to cleanse the uterus thoroughly, vaginal douches being all that are needed subsequently to complete the work. Uterine congestion is speedily relieved, and the uterine discharge changes from a brown, thick, bad-smelling mucus to a thin, transparent one, accompanied or followed by more or less of a flow of blood.

A reduction in the frequency of the flushings is desirable as soon as a tendency to return to normal conditions begins to be observed, as it frequently will within twenty-four hours. Then simple vaginal douches every three hours, with an occasional uterine flushing if symptoms indicate it.

The action of exosmosis (and endosmosis, for there is every reason to believe in the absorption of some of the fluid) is what is desired to relieve the existing congestion, as in a bronchitis, pneumonia, congestion of kidney, congestion of any mucous membrane, etc., and is the most rational means of restoring the parts to a normal condition.

I do not wish to be understood as decrying the use of that most valuable instrument, the curette, but only the abuse of it, to wit: its employment under such conditions as make it practically a sharp weapon loaded with septic matter, dangerous beyond the poisoned arrow of the Malay, or the fang of cobra, and utterly opposed to our modern ideas of antiseptics.

DEATHS.

Dr. Max Bracker, New York City, died September 30th.

Dr. E. Miller Cameron, New York City, died September 28th.

Dr. Edmund H. Cook, Flushing, N. Y., died September 14th.

Dr. Walker Curry, New York City, died September 20th.

Dr. Charles H. Johnson, Brooklyn, died September 18th.

Dr. James Duggan, New York City, died September 8th.

Dr. Thomas J. Kearney, New York City, died September 24th.

Dr. Charles Merritt, Mount Vernon, N. Y., died September 21st.

Dr. Arthur E. Nichols, Rochester, N. Y., died September 28th.

Dr. Joshua W. Ostrom, Goshen, N. Y., died September 24th.

Dr. Henry P. Shattuck, Brooklyn, died September 6th.

Dr. Mortimer V. Wilkie, Cuddebackville, N. Y., died August 31st.

Dr. Reuben M. Sutphen, Newark, N. J., died September 3d.

Dr. Frank D. Toms, Keyport, N. J., died September 30th.

Dr. Rufus Griswold, Rocky Hill, Conn., died August 17th.

Dr. Morris J. Asch, New York City, died October 5th.

Dr. Alonzo E. Cherry, Oneida, N. Y., died October 5th.

Dr. John Byrne, Brooklyn, died October 1st.

Dr. Daniel A. Fogarty, New York City, died October 5th.



BEECH
(*Fagus Sylvatica L.*)
Source of Creosote
Guaiacol & Thiocol

Good
Better
Best

Creosote and its preparations are known to be **GOOD** in *phthical* and *bronchial* affections.

Guaiacol, the most efficient constituent of beechwood creosote, is **BETTER** in the same affections.

Thiocol, the perfected form of guaiacol, has proved itself to be the very **BEST** remedy for such cases.

"The favorable action of Thiocol in phthical cases becomes manifest very soon."—*Klin.-ther. Woch.*, 1898, No. 19.

"Excels all other guaiacol preparations and all compounds of creosote."—*Ther. Monatsb.*, 1899, No. 2.

"Clinical experience is demonstrating its great value in tuberculosis."—Abstract in *Four. Amer. Med. Assoc.*, Sept. 20, 1902.

Dosage :

POWDER (Odorless, water-soluble, non-irritating): 5 to 20 grains three times daily.

TABLETS (5 grains in each): 1 to 4 three times daily.

"SIROLIN" (Syrup of Thiocol; 6 gr. to fl.dr.; very palatable): 1 to 3 teaspoonfuls 3 times daily.

New York
University Place

MERCK & CO.

Chicago Branch
227 Randolph Street

COUGH

THE Sum of Clinical Experience Designates Glyco-Heroin (Smith) as a Respiratory Sedative Superior in All Respects to the Preparations of Opium, Morphine, Codeine and Other Narcotics, and withal devoid of the toxic or depressing effects which characterize the latter when given in doses sufficient to reduce the reflex irritability of the bronchial, tracheal and laryngeal mucous membranes.

The Problem

of administering Heroin in proper doses in such form as will give the therapeutic virtues of this drug full sway, and will suit the palate of the most exacting adult or the most capricious child,

Has Been Solved

in the pharmaceutical compound known as GLYCO-HEROIN (SMITH).

By "Glyco-Heroin (Smith)"

is meant a pharmaceutically exact solution of heroin in chemically pure glycerine in the proportion of one sixteenth of a grain to the fluid drachm, with the addition of Ammonium Hypophosphite, Henbane, White Pine and Tolu, to enhance the curative value of the compound, and of stomachics to counteract any sensitiveness on the part of the patient's stomach.

The results attained with GLYCO-HEROIN (SMITH) in the alleviation and cure of cough are attested by numerous clinical studies that have appeared in the medical journals within the past few years.

Scientifically Compounded, Scientifically Conceived, GLYCO-HEROIN (SMITH) simply stands upon its merits before the profession, ready to prove its efficacy to all who are interested in the advances in the art of medication.

NOTES.

GLYCO-HEROIN (SMITH) is supplied to the druggist in sixteen ounce dispensing bottles only. The quantity ordinarily prescribed by the physician is two, three or four ounces.

DOSE.

The adult dose of GLYCO-HEROIN (SMITH) is one teaspoonful, repeated every two hours or at longer intervals, as the case may require. Children of ten or more years, from a quarter to a half teaspoonful. Children of three years or more, five to ten drops.

MARTIN H SMITH CO.,

...Chemists...

NEW YORK CITY.

SAMPLES AND LITERATURE SUPPLIED ON REQUEST.

The New York State Journal of Medicine.

Published Monthly by The New



York State Medical Association.

EDITORIAL AND BUSINESS OFFICES:
64 MADISON AVENUE, NEW YORK.

VOL. 2. NO. 12.

DECEMBER, 1902.

\$1.00 PER ANNUM.

THE SECOND VOLUME OF THE JOURNAL.

The New York State Journal of Medicine with this number completes its second volume and we believe that this Journal has lived up to all of its promises.

From time to time various changes have been made, all tending to improve the character of the matter presented. It is as previously stated, the official organ of The New York State Medical Association, presenting matters of interest to its members in the shape of reports of the Council and Fellows, the news of its Annual, District Branch and County Association meetings, scientific contributions from its members, etc.

The column devoted to Book Reviews has received careful consideration and our aim is to present concise and careful criticism of the contents of the book, rather than a superficial résumé of the author's preface. These books are placed in the hands of active members of the Association who have made special study of the subjects before them and hence all criticism is associated with intimate knowledge of the subject. Personalities will not appear.

An additional column of News Items has been added and members are requested to send information of appointments and matters of social interest to the publication office before the 20th of the current month. Correspondence with our members is solicited, as we are especially desirous of impressing all our members that this Journal is their own property and is run for their benefit and not purely as a business venture.

To defray the large cost of the publication of both Journal and Directory it is necessary for us to have advertisements.

The advertisements are most carefully considered, those that are ethical in the strictest sense only are received; hence our advertisers are in turn deserving of every consideration. If members will bear this in mind and mention the Journal when communicating with advertisers

the latter will readily see the advantages of continuing their support.

Associated defense of members having been adopted by the Council and Fellows at the last annual meeting, another advantage of membership in the Association has been added.

Finally we again call attention to our Bureau of Information at our business office, 64 Madison avenue. Not only will we cheerfully furnish any information in our power, but we will be glad to have our members, especially those who reside at a distance, make the office their headquarters. This invitation is extended to the wives of our members who may wish to rest, write letters, receive mail or meet their husbands here.

NEWS ITEMS.

Dr. Frederick Holme Wiggin has recently been transferred by the Commissioner of Charities, New York City, from the position of Visiting Gynecologist to the City Hospital, which he has held for the past eight years, to that of Visiting Surgeon of the same institution, made vacant by the death of the late Professor A. M. Phelps.

* * *

Dr. Wisner R. Townsend has been appointed by the Council a member of the Committee on Union in place of Dr. Frederick Holme Wiggin.

* * *

Dr. Thomas F. Reilly has been appointed a member of the Committee on Publication in place of Dr. Charles E. Nammack, resigned.

* * *

Memorial Lectureship.—Dr. Christian A. Herter, professor of pathological chemistry in the University and Bellevue Hospital Medical College, New York, has, with his wife, presented to the trustees of the Johns Hopkins University, Baltimore, the sum of \$25,000 for the foundation of a memorial lectureship in the medical department, the purpose of which is "to pro-

mote a more intimate knowledge of the researches of foreign investigators in the realm of medical science." Dr. Herter, who was graduated from the College of Physicians and Surgeons, New York, in 1885, spent the college year of 1887-8 in research work in the pathological laboratory of Johns Hopkins.

* * *

Associated Defense.—The protecting arm of the New York County Medical Association has been called upon to protect one of its members, and the way the defense is being carried on has opened the eyes of the attorney for the plaintiff. This work alone should attract every doctor in the State of New York, and the membership of this Association should double within six months. It should be borne in mind by the members that unless a man pays his dues promptly he cannot receive defense in malpractice suits. If he is in arrears for dues, the defense will be refused. This is an incentive for every member to make prompt payments to the county treasurer.

* * *

Notice of Meeting.—The preliminary program of the sixth meeting of the Congress of American Physicians and Surgeons, to be held in Washington, D. C., on May 12th, 13th and 14th, 1903, has just reached us. Under the presidency of Dr. William W. Keen, of Philadelphia, the meeting will be opened on Tuesday, the 12th of May. The subject to be considered is "The Pancreas and Pancreatic Diseases." Papers will be read by Dr. E. L. Opie, of Baltimore, Md., on the Anatomy and Histology. Prof. R. H. Chittenden, New Haven, Conn., on the Physiology and Physiological Chemistry. Dr. Simon Flexner, of Philadelphia, Pa., on the Etiology and Pathological Anatomy. Dr. Reginald H. Fitz, of Boston, Mass., on the Symptomatology and Diagnosis. Prof. von Mikulicz, of Breslau, Germany, and Dr. Roswell Park, of Buffalo, N. Y., on the Surgery. The discussion by Drs. Charles G. Stockton, Herbert U. Williams and Maurice H. Richardson follows. At 8 p. m. on this day there will be an address by the President of the Congress, Dr. William W. Keen.

On Wednesday, May 13th, the subject to be considered is "The Medical and Surgical Aspects of the Diseases of the Gall-Bladder and Bile Ducts." Papers will be read by the following: Prof. Ewald, Berlin, Germany; Dr. John H. Musser, of Philadelphia, Pa.; Dr. C. A. Herter, of New York City, on the Pathology and Therapy; by Prof. Hans Kehr, of Halberstadt, Germany; a review of eight hundred cases of gall stone operations, by Dr. William J. Mayo, Rochester, Minn.; by Dr. George E. Brewer, of New York City, on the surgery, followed by a discussion by Drs. Frank Billings, George Dock, W. S. Halsted and Henry Sewall.

PUBLICATION AMENITIES.

The following communication may be of interest to our members as showing that "all is not gold that glitters," and that the bed of roses on which the Publication Committee lies has a few thorns:

—, New York, Nov. 8th, 1902.

Publication Committee,
New York State Medical Association,
64 Madison ave., New York City.

My Dear Sir:

You have done well to expatiate on the money and time spent on perfecting your issue for 1902-1903 of the Medical Directory of New York, New Jersey and Connecticut. You deserve, indeed, the most emphatic appreciation and commendation. Your labors and efforts must have been most strenuous and exhausting, and I doubt very much whether such correctness, honesty of purpose and justice to every body as yours ever existed.

In point of knowledge and scrupulous information it is evident that you have left nothing undone, nothing unturned. Your statements are so precise, so positive. Thus, on page — you kindly report me as among those of the "greater number," and you give date, you know so well! Well, my dear sir, notwithstanding the money and time you have spent, I am constrained to tell you that everybody around here considers me as a very active, quick-going and lively sort of a dead man. Of course, after presenting me to the profession on that page in that sad posture, you naturally make no mention of my name in the list of the medical men of my city. What of it, when a man is dead? But what of my son, Dr. ———? Do you also consider him beyond all possibility of mention? Undoubtedly this second oversight is to be granted as another proof of the great expenses you have incurred in order to be well-informed! You may take it that it matters very little to either of us that you give us no recognition in your Directory or not, but certainly I object most energetically to be given up for dead before it pleases the Almighty to have it so.

Some one, a friend physician, and at that a very prominent member of the faculty of ——— Medical College, indignant as he felt at your shameful recklessness, suggested that such deed as this entitles you preeminently to a permanent chairmanship in that place which Seneca called by euphemism "regna vidua lumine," but no, no, may you live long and happy to enjoy the emmigrated and unlimited admiration of such men as,

Yours truly, still living and busily engaged
in practice,

M. A. D.

The following reply was sent:

November 11th, 1902.

Dear Doctor D.:

Yours of November the 8th at hand. Permit me to present the following information: On

page — of the Journal of the American Medical Association, dated —, 1902, you will find the record of the death of Dr. A. M. D., M. D. (the same place of residence, same date of graduation and year as the writer), but for the last three years a resident of another city in this State, died at his home in that city (date given) after a brief illness, age 54.

Several communications have been sent to you at different times within two years past, prior to February 1st, asking for information for the Directory, but no response has reached this office. If you will be good enough to fill the enclosed cards, we will be very glad to insert your name in its proper place among the living, and as I note the energetic workers of the profession.

You may rest assured that we are very desirous of having our attention called to any errors or omissions and it will please us greatly to place your name and your son's in the proper place.

Yours truly,
EMIL MAYER,

Chairman Committee on Publication.

No names have been mentioned in this statement, but it may be said that the name was such an unusual one, the college of graduation and place of residence being quite the same that the mere transposition of the first letter is the only possible chance for an error to have crept in. The gentleman's sarcasm will probably be now directed on the Journal of the American Medical Association.

A Favorable Prognosis.—Anxious wife—What do you think of my husband's condition?
Physician—Oh, he'll pull through all right. What he needs is rest, so I have prescribed an opiate.

Anxious Wife—How often shall I give it to him?

Physician—Don't give it to him at all; take it yourself.—Exchange.

New Hospital.—The corner stone of the new hospital to be erected by the French Benevolent Society at 450 West Thirty-fourth street, was laid November 18th by M. Jules Cambon, the departing French Ambassador.

The new hospital will be seven stories high, will contain 150 beds and about forty private rooms, with additional wards for children. In every particular the hospital will have a modern equipment. Its work will continue under the advice of the present consulting board, of which the members are Drs. T. G. Thomas, E. G. Janeway, J. J. Henna, J. A. Booth, G. B. Fowler, Ramon Guiteras, Frank Hartley and E. V. Agramonte.

* * *

State Care of Insane.—Sharp criticism of the State's care of the insane was made at the

State conference of Charities and Correction on November 19th, when the subject "The Mentally Defective" was discussed. The report was read by George F. Canfield, president of the State Charities Aid Association. Among other things the report said:

During the past year another forced reduction has been made, resulting in a rate of \$161.69, probably the lowest ever reached in this State. This has been maintained by diminishing the amounts spent for food, clothing and other supplies, ordinary repairs, salaries and wages.

Coincidentally, there has been an increase in the recoveries from 1,209 to 1,133, though there were nearly 600 more patients under care. Overcrowding of the State hospitals estimated at from 2,000 to 3,000 patients has resulted.

The Governor and Legislature and the State Commission in Lunacy should abandon this penny-wise and pound-foolish policy and should permit a more generous rate of expenditure.

Dr. Ellery Denison has been appointed member of the Committee on Library in place of Dr. Thomas F. Reilly.

* * *

Dr. Alvah H. Doty.—It has been generally announced in the public press that Dr. Alvah H. Doty is to be reappointed to the office of Health Officer of the Port of New York by Governor Odell. Dr. Doty has been Health Officer since 1895.

MONUMENT FOR RUDOLF VIRCHOW.

The German committee in charge of the celebration in honor of Rudolf Virchow's eightieth birthday—Professor Waldeyer, chairman; Professor Posner, secretary—has been collecting funds for the purpose of erecting a monument in memory of that great and unique man and physician. The undersigned are anxious and ready to receive contributions, which will be duly acknowledged:

Frank Billings, president of the American Medical Association, 100 State street, Chicago, Ill.; Thomas D. Coleman, 505 Greene street, Augusta, Ga.; A. Jacobi, 19 East 47th street, New York City; W. W. Keen, president of the Congress of American Physicians and Surgeons, 1729 Chestnut street, Philadelphia, Pa.; William H. Welch, 935 St. Paul street, Baltimore, Md.

Transactions.—There are a few more complete sets on hand of the Transactions of The New York State Medical Association, consisting of sixteen bound volumes in each set, which may be had by paying freight charges by any member of the New York State Medical Association or of the American Medical Association or any library, by applying at this office.

ANGINOSE SCARLATINA COMPLICATED WITH MEASLES AND DIPHTHERIA.

The co-existence of a triple infection is rather rare, sufficiently so, in fact, to warrant the report of the following case. The three diseases were clinically quite evident, the dominant one being a severe scarlatina, the bacteriologic investigation supporting this position. Measles occasionally occur with diphtheria, and while such a union was formerly considered unusually serious, antitoxin has greatly reduced the risk, and the coincidence of measles and scarlet fever has frequently been observed.

"The general condition of the child was quite low. Both sides of the neck were greatly swollen, all the glands were enlarged, the head retracted, delirium, followed by a semi-comatose condition, was present, but was probably toxic rather than inflammatory in character. The bowels were kept regular throughout the attack by 1-12 grain doses of calomel as needed. Alcohol and the tincture of the chlorid of iron were the only other remedies used internally. I attribute much, too, to the use of the normal saline solution which was used by enema as long as it was well retained and afterwards subcutaneously. It not only aids elimination, but by diluting the toxins saves the renal structures also. A strong solution of boric acid and peroxid of hydrogen were also used freely in the throat and nares and after the third week the parotid and submaxillary glands again became swollen and inflamed, but subsided under a boric acid mouth wash and the use of an ichthyol ointment locally. A suppurative otitis media which developed at the end of the second week ceased after a month's treatment, and albumin and casts had disappeared from the urine by the end of the sixth week. It is quite generally conceded that scarlatina is due to a streptococcus, probably the streptococcus-pyogenes, and the use of the antistreptococcic serum was considered, but it was not administered. In my opinion the use of the diphtheria antitoxin is indicated strongly in all cases of anginose scarlatina, as in many of these the Klebs-Loeffler bacillus coexists. Cases of paralysis following scarlatina are occasionally reported, and in these cases a mixed infection has probably been present, and the use of the antitoxin might avert such sequels."—John B. McGee, *The Cleveland Medical Journal*, November, 1902.

THE POSSIBILITY AND IMPORTANCE OF MEDICAL UNITY IN NEW YORK STATE.

The importance of medical unity, both national and local, is so great and its bearing so important on the prosperity of the individual practitioner that the following correspondence recently addressed to the President by a prominent physician from the western part of New York is of interest:

NOVEMBER 13, 1902.

MY DEAR DOCTOR WIGGIN—I write just a line to ask whether in the past year there has been anything done by the American Medical

Association, or the State Association of this State, in regard to changing some of the matters that you and I have corresponded about heretofore, concerning consultation between regulars and those usually termed irregulars, or homeopaths, but who are in good standing under the laws of the State and entitled to practice medicine the same as those of us who are graduates of regular medical schools. Anticipating that something of this sort was on foot in the American Medical Association during the past year or two, I would be very glad to know if anything has been accomplished.

Thanking you in advance for the courtesy of a reply, I am, Very sincerely yours,

NOVEMBER 18, 1902.

DEAR DOCTOR—I have received your letter of the 13th. Our Association at its recent meeting adopted an amendment to its by-laws on membership, defining the clause, "physicians in good standing and resident in the State of New York" (Article IX, Section 1), to be applicable to all legally registered physicians of this State of good character and general standing who do not indicate to the public the fact that they practice a sectarian system of medicine, thus making it possible for men who have been graduated from eclectic and homeopathic colleges and who are legally registered to become members of our Association, provided they are willing to drop their qualifying adjective and designate themselves simply by the term "physician."

There is nothing, so far as I know, in the ruling of the American Medical Association since 1884 which prevents any member from aiding physicians, regular or irregular, legally registered or otherwise, in consultation.

At the last annual meeting of the American Medical Association at Saratoga the Council of our Association presented a revision of the Code of Ethics which makes this point clearer than it was in the original, although the meaning and intention are the same.

Hoping that this explanation is satisfactory and that you may see your way clear to become a member of our Association I am,

Yours sincerely,

(Signed) FREDERICK HOLME WIGGIN.

NOVEMBER 19, 1902.

MY DEAR DR. WIGGIN—Your letter of November 18th has given me a very great deal of pleasure, and certainly I congratulate you and the Association upon the change that was obtained in the by-laws of the State Association. So well am I pleased by this and so much do I appreciate the stand that the Association has taken that if your former kind offer still holds open I would be very glad indeed to have you present my name in the usual way to the proper officers of the Association as an applicant for admission. No one can be more glad than I am of the change that has come in these matters and the possibility of bringing all medical men

together along common lines of medical work in the profession. Never has it seemed to me that it was more necessary, particularly if the profession attempts to present a determined opposition to gross violations of the law which are being committed, and to support such movements as are good in the cause of the general welfare.

Yours very sincerely,

An Ideal Hospital.—Under the leadership of Dr. Franklin H. Martin, Chicago is to have the finest private hotel hospital in America.

Plans for such an institution were adopted definitely at a banquet attended by fifty-two leading physicians at the Union League Club last evening. In detail of equipment, in conveniences and luxury of appointments, the institution will eclipse the Roosevelt of New York, the German of Philadelphia or the Lakeside of Cleveland, the three most complete hospitals in the country. The site has been selected, the architect's plans have been approved, arrangements have been made for financing the institution and officers have been elected. The work of construction will be begun within a month, and the hospital probably will be an accomplished fact by the early part of next summer.

The name of the institution will be the Shore Inn, a name which was an inspiration of Dr. Martin's. The inn will be situated at Eldridge place and Michigan avenue. A ninety-nine years' lease of property, 50 by 150 feet in area, at the northwest corner of the intersection of these two thoroughfares, has been secured. The charter for the hospital was obtained a year and a half ago by Dr. Martin and a few associates, who have been working to finance the scheme. The corporation is capitalized at \$400,000, divided into shares of \$100 each. It was agreed last evening that the eighty physicians who are interested in the institution shall each take fifty shares. Practically the stock is already subscribed for.

The institution will be intended for the uses of wealthy invalids, especially those from out of town. The building will be eleven stories in height. It will be of steel construction and absolutely fireproof. In furnishing it will be as elegant and artistic as the most luxurious modern hotel. Each room and suite of rooms will possess a bath and lavatory rooms. The walls and ceilings of the rooms will be rendered sound proof with hollow tiling.

A laundry, heating, ventilating, refrigerating and electrical plant will be erected on a lot, 40 by 60 feet, across the alley in the rear to prevent the machinery from causing vibrations in the main building. The kitchen also may be placed in this rear building, to be connected with the main hospital by galleries leading beneath the alley.

The building will be occupied in this way: The basement will contain Russian and Turkish

baths and a large swimming pool. Rooms for the bath will be duplicated throughout for the accommodation of men and women. The baths will be constructed so as to be used by persons outside the institution.

The main floor will have a hotel office, reception room for patients, large parlor, reception room for women, and the back half will be occupied as a café with alcoves, where parties may dine in privacy. The second and third floors will be reserved as a hotel for those accompanying patients. The fourth and fifth floors will be devoted to the treatment of medical cases. Details of the requirements here will be furnished the building committee by the medical department. Laboratories and baths will be upon these floors.

To guard against disturbing sounds entering the apartments of the patients each room will have a private vestibule, and the outside windows will be double like those of a Pullman sleeper. In the heated season the rooms will be cooled by the ventilating system. Food will be served in charcoal ovens sent up in heated dumb waiters from the diet kitchen. Convalescent patients may take their meals either in the café on the second floor or in a solarium on the roof floor.

The sixth floor will be given over to obstetrics. The seventh and eighth floors will be reserved for surgical cases. The ninth floor will furnish dormitories for the nurses. On the tenth floor will be massage rooms, rooms for mechanical contrivances for muscle beating, electricity and the X-ray. The eleventh floor will contain a solarium, gymnasium and recreation rooms, lighted from the roof. The entrance to the hospital will be from a *porte-cochère*. On the front and side streets will be a series of bronze lamp posts supporting clusters of electric lights.

"Every physician," said Dr. F. H. Martin, "who has to do with wealthy patients from out of town realizes, when it becomes desirable to place them in a hospital, how inadequate the accommodations of the best of our city institutions are. We have no fireproof hospitals, not one in which the walls and floors are noise proof, not one in which there is a scientific system of ventilation, not one in which a friend can obtain lodging under the same roof as the patient, scarcely one in which a patient can have a room with private lavatory facilities."

The Association.

Kings County Association.—The regular monthly meeting was held at 315 Washington street, Brooklyn, on November 11th, Dr. Arrowsmith in the chair. About twenty-five members were present. Dr. M. J. Brooks, of New Canaan, Conn., read a paper entitled, "Facts, Fancies and Fallacies in the Treatment of Consumption." The paper was discussed at considerable length by Dr. Frank E. West, Dr.

T. M. Lloyd, Dr. Bierwirth, Dr. Arrowsmith and others.

In executive session the minutes were read and approved. Dr. Squibb gave notice of certain proposed changes in the By-Laws in regard to dues to meet the changes in the By-Laws of the State Association. Dr. Sullivan read a memorial of the late Dr. John Byrne, which was ordered printed and spread upon the minutes. At eleven o'clock the meeting adjourned and was followed by a collation.

* * *

New York County.—The stated meeting of the New York County Medical Association was held on Monday evening, November 17th. There was a large and enthusiastic audience present to hear the papers of Dr. H. R. Purdy on "Unscientific and Careless Prescribing; Secret and Proprietary Remedies," and Dr. C. N. B. Camac on "The Venous Hum in Relation to Blood Count."

The members elected were Drs. Theodorus Bailey, Seymour Basch, Edward A. Bogue, Arthur A. Boyer, Daniel M. Burgess, Joseph Collins, Samuel M. Evans, J. G. W. Greef, Edwin Holmes, Chauncey Rakestraw, Dominic Saladino, Henry H. Tyson.

At the meeting it was voted to appoint a committee to investigate and report upon the advisability of abolishing the Board of Coroners in this city. The committee is to confer with the Committee on Legislation of the New York State Association and other committees representing medical societies so that the general opinion of the medical profession may be reached.

Medical associations have interested themselves in the abolition of the office of Coroner for several years. The office is now no longer a Constitutional one and can be abolished by the Legislature.

The division of the Coroner's power between the Health Board, in so far as it relates to pathological matters, and to the magistrates in other affairs, is the favored plan.

* * *

Otsego County.—The semi-annual meeting of this Association was held in Unadilla on November 11th, 1902. The members of the Association and invited guests were cordially invited by the members from Unadilla to dinner, following which the meeting was opened by the election of Dr. J. J. Sweet, of Unadilla, as temporary chairman in place of Dr. Julian C. Smith, of Oneonta, who was unavoidably absent; Dr. Arthur H. Brownell, of Oneonta, acting in his capacity of secretary. Dr. Sweet, who is a charter member of The New York State Medical Association, gave an interesting résumé of the early history of the Association and stated his firm belief in the objects for which the Association stands, which he has shown repeatedly in the earnestness with which he labors for the best interests of the Association.

Dr. Cutler, who represented Otsego County as a fellow at the recent meeting of The New York State Medical Association, gave a report of the annual meeting held in New York City, October 21-23, calling attention especially to the change in the By-Laws in reference to the dropping of the initiation fees. At the scientific session of the Association Dr. Butler reported a case of cervical dilation for the nausea of pregnancy and spoke of the various reflex neuroses induced by abnormal conditions of the uterus. Dr. Brownell reported a case of general pruritus as a complication of pregnancy. Dr. Cutler reported a case of strangulated hernia in a man 73 years old. These cases were all very generally discussed. There being no other business the meeting adjourned.

* * *

Orange County.—The regular monthly meeting of this association was held at the office of Dr. M. C. Conner, Middletown, N. Y., on Wednesday afternoon, November 19, 1902. There was a good attendance and a very profitable meeting.

Dr. E. D. Ferguson, of Troy, N. Y., addressed the meeting on the subject of hernia. He gave a very complete résumé of all the operative procedures necessary to successfully cure the various kinds of hernia which are constantly demanding careful attention from the general practitioner and surgeon. The technique which he usually employed was given in detail, together with his reasons for preferring certain particular methods.

Kangaroo tendon or catgut was mentioned as the preferable suture material; the Marcy needle and the cobbler's or mattress stitch were considered by far the best method of uniting the hernial opening. Special stress was put upon thorough cleaning of the fibrous tissue of Poupert's ligament and the conjoined tendon from all fat and shreds of tissue. Umbilical herniæ with especially large openings were considered most difficult of all to cure. In dealing with these the doctor did not favor foreign suture material, like silver wire or silver-wire netting, as recently advocated by Dr. Willy Meyer, of New York, giving as reasons that suppuration is more likely to occur, and also that, being a foreign body, it must necessarily cause irritation and in time permit recurrence of the hernia. The doctor expressed the opinion that all herniæ ought to be cured by radical operation before middle life, because a truss was likely to allow a descent of the hernia at a time unfavorable for operation. At the conclusion of Dr. Ferguson's remarks a spirited discussion was entered into by all those present, after which the association extended a vote of thanks to the doctor for his excellent paper.

At the business session the minutes of the previous meeting were read and approved, and Dr. H. H. Waldron, of Newburg, was unanimously elected to membership. The next meeting will be held on the third Wednesday in December.

THE NEW YORK STATE MEDICAL ASSOCIATION.

Nineteenth Annual Meeting, Held in New York City, October 20 to 23, 1902—Alvin A. Hubbell, M.D., of Buffalo, President.

MEETING OF THE COUNCIL AND FELLOWS.
October 20, 1902.

The President, Dr. Alvin A. Hubbell, of Buffalo, called the meeting of the Council and Fellows to order at 1.50 p. m., in the large hall of the New York Academy of Medicine.

After the calling of the roll by the Secretary, the President made a few remarks on the work and needs of the Association.

The Annual Report of the Council was read by the Secretary.

ANNUAL REPORT OF THE COUNCIL.

The recorded membership of the New York State Medical Association at this time, while numerically practically identical with that given in the Secretary's report of last year (over 1,400), still represents a most solid and eminently satisfactory advance over the conditions existing twelve months ago. For upon going over last year's membership lists, the names of many men were found enrolled who had upon one excuse or another been allowed to continue as members, when for a number of years they had failed to pay their annual dues.

It was evident to the officers of the Association, as it is to all of you, that such members were, to say the least, unprofitable. Also that our By-Laws were being disregarded absolutely by allowing these names to remain on our membership lists.

The lists were carefully gone over in December and January and all members whose dues prior to 1902 were unpaid were officially notified of their delinquency and given a specified time in which to remit their dues. We are glad to say that a goodly number availed themselves of the opportunity and were placed again in good standing. Those unheard from were, at the expiration of the time limit, stricken from our lists.

According to Article 10, Section 4, of our By-Laws, "any member whose dues for the current year are not in the hands of their County or District Treasurer six months after the first of January (or, in other words, the first of July) shall be dropped from membership."

This By-Law has been strictly followed during this year, with the result that on notification many delinquents paid up and the residue were dropped.

It seems that it must be clear to all that as an efficient working body an association which is composed entirely of men who are sufficiently wide awake and careful to fulfill the elementary duty of helping to support their body corporate even though numerically they may be inferior, is vastly superior in potential to one made up

even in part of men so niggardly or indifferent that they allow their dues to go unpaid. We, therefore, feel that the progress that has been made, which, however much courage it may have taken in doing, is of greatest benefit to the Association. We have at least assured ourselves that every member has proved himself financially interested in the welfare of the organization and at the beginning of each fiscal year our Treasurer may count on a prompt response to bills rendered.

During the year Associations have been organized in five hitherto unorganized counties, viz.: Albany, with a membership of ten; Columbia, with a membership of eleven; Otsego, with a membership of thirteen; Steuben and Rockland, each having a membership of fourteen.

Reports from Secretaries of the First, Second, Third, Fourth and Fifth District Branch Associations have been received and are appended to this report.

MEETINGS OF THE COUNCIL.

The Council held during the year seven meetings. The first meeting of the Council was held October 24, 1901, eleven members being present. On motion, duly seconded, it was resolved: That it is the purpose of this Council to use the initiation fees for the best interests of the New York State Medical Association as defined by its charter.

Moved, seconded and carried: That it is the sense of the Council that there should be no commissions offered to local Treasurers throughout the State for the collection of arrears or dues during the year 1902. The Council unanimously voted that a Finance Committee of three be appointed by the Chairman from the Council to examine and certify to all the expenses of this Association. The Chairman appointed on this Committee Drs. William H. Biggam, Charles E. Quimby and Guy D. Lombard.

Moved, seconded and carried: That the Committee on By-Laws be discharged and that a new Committee be appointed with Dr. Quimby as Chairman, to revise the By-Laws after amendment and before their publication. The report of the Committee on the Treasurer's accounts was received and ordered placed on file after being read by the Secretary.

At the meeting of the Council, held November 25, 1901, there were present nine members. Following a general discussion of the question of associated medical defense it was moved and seconded: That the plan as presented in the form of an article to be incorporated in the By-Laws, be approved by the Council and commended to the Council and Fellows for adoption, and that the same be published in the December number of the Journal with a request for expressions of opinion from the members of the Association.

The action of the previous Council meeting, creating a Finance Committee, was reconsidered

and a Business Committee of three was appointed by the Chairman to take charge of all the business of the Association and to have sole authority to initiate expenses. In compliance with this motion the Vice-president, then in the chair, appointed Dr. Quimby chairman, and Drs. Harris and Squibb members.

At the meeting of the Council, held February 7, 1902, there were twelve members present. The proposed By-Laws of Dutchess and Otsego County Medical Associations were submitted and approved, subject to slight changes therein. The amendments to the By-Laws of the New York County Medical Association, adopted by that Association January 20, 1902, were submitted and approved as submitted. It was moved and seconded: That a certified copy of the membership list of the New York State Medical Association as it stands at the time of each annual meeting be forwarded by the Secretary to the Secretary of the A. M. A. Moved by Dr. Ferguson that "Whereas, The Medical Society of the State of New York, having appointed a Committee to confer with a similar Committee from the New York State Medical Association with the view to a union of the two organizations, and notice of such creation of a Committee having been officially given to our President, together with the request that a corresponding Committee be appointed by us; therefore, be it Resolved, That this Council (the Executive Board of the Association) appoint for the purpose of the conference in question a Committee of Five, consisting of Dr. E. Eliot Harris as Chairman, and Drs. William H. Biggam, Emil Mayer, Parker Syms and Frederick Holme Wiggin, to which Committee the President is added as a member ex-officio. Seconded by Dr. Gouley and carried unanimously. Motioned by Dr. Ferguson that the Chairman of the Committee on Conference, appointed this day to meet a similar Committee of the Medical Society of the State of New York, be authorized to invoke the advice of the members of the Council, and the Chairman shall report its proceedings to the Council for consideration. Moved that the President be authorized to answer the communication sent to him by the Medical Society of the State of New York and to inform the Secretary of that Society of the action taken by the Council of the New York State Medical Association and the names of the Committee appointed. On account of a misunderstanding on the part of Dr. William S. Terriberry, concerning the initiation fees and dues of the Association at the time he joined, the Council moved that he be placed in good standing.

At the meeting of the Council, held March 21, 1902, eight members were present. The Secretary read a letter from the President, Dr. Alvin A. Hubbell, who was unable to be present, requesting him to send to the Secretary and Treasurer of the A. M. A. a list of names of physicians residing in the State of New York who are car-

ried on the roll of members of the A. M. A., and who are not members of the New York State Medical Association, with the request that their names be dropped from the roll. This the Secretary stated he had done and read a letter from the Treasurer of the A. M. A. in reply to his communication. Moved, seconded and carried: That the Secretary forward to the officers of the A. M. A. a copy of the following resolution: "The Council of the New York State Medical Association records herewith its protest against the issuance by the officers of the A. M. A. of certificates of membership and the granting of other privileges of membership to physicians residing in the State of New York, who are not members of the New York State Medical Association, in violation of the By-Laws of the A. M. A., Chapter 1, Section 3." On account of a misunderstanding on the part of Dr. G. T. Church, concerning initiation fee and dues at the time he joined, it was resolved that he be placed in good standing. The Chairman of the Committee on Publication read a report in course of which he requested that the entire management of the business office be placed under the direction of the Publication Committee, as the largest part of the business of that office is intimately connected with that Committee. Dr. Quimby moved that the foregoing request of the Committee be granted; this was duly seconded and carried. The following motion, which was adopted and carried, was then offered: The business of the Business Committee shall be transferred to the Publication Committee and the Business Committee be discharged with thanks.

At the meeting of the Council, held June 9, 1902, seven members were present. The following report of the Committee on Conference was given: "The Committee on Conference begs leave to report that two joint sessions were held in the City of New York, and that favorable progress was made on the basis that each organization should give up its charter and ask the Legislature to grant a new charter along the lines of the charter of our Association. A further meeting of the two Committees is to be held in the near future and the Committee has good grounds for the hope that the conference will result in union of the medical profession in our State." This report was unanimously accepted. Moved, seconded and carried: That the delegates from the New York State Medical Association to the American Medical Association House of Delegates be instructed to present a modified Code of Ethics, along the lines suggested, to the House of Delegates of the A. M. A.

At the meeting of the Council, held June 10, 1902, ten members were present. It was resolved that all action taken by last night's meeting be reconsidered. Moved, seconded and unanimously carried: That the report of the Committee on Conference be received; That the revised Code of Ethics be referred to the

delegates to be introduced in the House of Delegates of the A. M. A. On this motion the Council was polled as follows: Dr. Haynes, no; Dr. Quimby, no; Dr. Biggam, yes; Dr. Squibb, no; Dr. Harris, yes; Dr. Ferguson, yes; Dr. Goffe, yes; Dr. Syms, yes; Dr. Lombard, yes. Dr. Hubbell, being in the Chair, did not vote.

At the meeting of the Council, held October 20, 1902, there were present twelve members. The By-Laws of Onondaga, Albany and Steuben Counties were approved, subject to slight changes. Resolved, That whenever any County organization has a quorum it may transact business and is considered as a County Association intact and that no County Association ceases to exist as such even though falling below.

Moved: That it is the sense of the Council that a series of the transactions of the New York State Medical Association be given to any individual if he will pay transportation thereon.

Moved: That the Treasurer select as many complete sets of the transactions as he may have and place them in the Mott Memorial Library.

Resolved: To continue the publication of The New York State Journal of Medicine.

Dr. E. H. Squibb presented the report of the Treasurer.

REPORT OF THE TREASURER.

The undersigned begs leave to submit the following accounting for the year 1901-2:

The gross receipts from all sources to October 1st, 1902, amount to \$16,165.25, apportioned as follows:

Arrears and dues collected.....	\$7,585.00
Initiation fees collected	830.00
Fines collected	62.00
Interest on deposits and bank collection charges advanced, etc., credited to the Treasurer's office.....	52.55
Commission received for obtaining members to the A. M. A. through Dr. Wiggin	62.00
Money borrowed during the year....	2,300.00
Money surrendered by Committee on Arrangements A. M. A. at Saratoga	1,039.85
Sale of one office desk.....	25.00
Cash paid for private printing work..	2.03
Printing done for Fifth District Branch	66.40
Prosecution fine received from Counsel	25.00
Trunk line agent's check returned...	17.00
For advertisements in the Journal...	2,148.95
Sale of Journals, etc.....	19.25
For advertisements in Directory of 1902	959.50
Sale of Directories of 1902.....	824.48
Interest on Building Fund Mortgage received	146.24
	<hr/>
	\$16,165.25

Balance of commissions paid to local treasurers December 31st, 1901, in postage stamps	\$1.80
Balance brought over on October 1st, 1901	3,147.31
	<hr/>

Total available funds for the year....	\$19,314.36
The gross expenses for 1901-2.....	18,615.69
	<hr/>

Leaving a gross balance on October 1st, 1902, of	\$698.67
--	----------

EXPENSES OF THE BUSINESS OFFICE.

For Salaries	\$3,799.84
For rent	150.00
For insurance	20.00
For office incidentals	1,723.34
	<hr/>
	\$5,693.18

EXPENSES OF THE TREASURER'S OFFICE.

In assisting County Organizations, etc.	\$32.31
Cab service of business office to collect arrears	20.25
Balance of commissions for 1901 paid to County Treasurers	56.25
To pay off loans.....	2,300.00
Interest on loans	33.97
Direct working expenses of the Treasurer's office	31.02
	<hr/>
	\$2,473.80

LEGAL DEPARTMENT.

For professional services	\$40.00
For printing and stationery.....	8.00
	<hr/>
	\$48.00

EXPENSES OF THE COMMITTEE ON ARRANGEMENTS.

Expenses paid for 1901 meeting.....	\$1,041.02
Paid on account of 1902 meeting.....	88.95
	<hr/>
	\$1,129.97

EXPENSES OF COMMITTEE ON LEGISLATION.

For legislation proper.....	\$98.75
Printing and other incidentals.....	26.46
	<hr/>
	\$125.21

EXPENSES OF COMMITTEE ON LIBRARY.

For rent	\$175.00
For insurance	60.00
	<hr/>
	\$235.00

EXPENSES OF COMMITTEE ON PUBLIC HEALTH AND MEDICAL CHARITIES.

No bills submitted throughout the year.

EXPENSES OF COMMITTEE ON PUBLICATION.

Journal account:	
Total expense of publishing the Journal	\$3,051.73
Incidental expenses	93.29
	<hr/>

Total expense	\$3,145.02
Total receipts	2,168.20
<hr/>	
Total cost to Association	
to date	\$976.82
Directory Account:	
Total expense of publishing the	
Directory	\$4,967.54
Incidental expenses	651.97
	<hr/>
	\$5,619.51
Total expense	\$5,619.51
Total receipts	1,783.98

Cost to the Association	
to date	\$3,835.53
Expenses of business office.....	\$5,693.18
Expenses of treasurer's office.....	2,473.80
Expenses of Legal Department.....	48.00
Expenses of Committee on Arrange-	
ments	1,129.97
Expenses of Committee on Legisla-	
tion	125.21
Expenses of Committee on Library..	235.00
Expenses of Committee on Publica-	
tion: Journal account	3,145.02
Expenses of Committee on Publica-	
tion: Directory account	5,619.51
Interest received from the Building	
Fund account transferred to the	
Savings Bank	146.00
	<hr/>
	\$18,615.69

BUILDING FUND.

Building Fund Account, October 1,	
1901	\$3,468.24
Interest received on mortgage.....	146.24
Interest received from Savings Bank	7.32
	<hr/>
	\$3,621.80

Distributed as follows:

Investment in real estate mortgage on	
improved property in Brooklyn....	\$3,250.00
In Savings Bank	298.32
In Long Island Loan and Trust Co..	73.48
	<hr/>
	\$3,621.80

The present outstanding bills unpaid are:

Rent of rooms at 64 Madison avenue	
from July 1st to October 1st.....	\$75.00
Printing bill for September Journal	
and incidentals	215.34
For storage of old transactions for the	
year	100.00
Small bills to the amount of.....	49.99
Bills due but not yet in the Treasurer's	
hands:	
Printing bill for October Journal and	
incidentals.	
Publisher's bill for Vol. IV. of the	
Directory just issued.	

During the past year the business office has disposed of 849 copies of the old Transactions, leaving still on hand 3,516 volumes packed in 152 boxes on which storage is being paid, the

cost of which cannot be kept down to the present price during the forthcoming year. The Treasurer again urges the disposal of these books by at least apportioning space for their accommodation at 64 Madison avenue, if possible, and thus save storage charges.

(Signed) E. H. SQUIBB, Treasurer.

At the close of the report he asked unanimous consent to obtain from the Council and Fellows a ruling on the following propositions: (1) The Treasurer is simply the custodian of the funds of the Association, and shall pay on requisition of the Business Committee, but shall not be required to furnish the funds asked for; (2) it is his duty to keep in close touch with the local treasurers throughout the State.

Dr. F. H. Wiggin objected on the ground that this was part of the business of the Council.

Dr. W. R. Townsend, New York, moved that the Treasurer's report be referred to a committee of five to report back to the Fellows. Seconded by Dr. Ellery Denison, New York.

Dr. William Finder, Troy, moved as an amendment that this be referred to the Council with power.

Dr. Wiggin seconded the amendment, specifying new Council.

Dr. F. H. Wiggin, New York, moved as an amendment to the amendment that only the portion of the Treasurer's report which comes at its close, and for which he asks the unanimous consent of the members, be referred back to the new Council with power. Seconded.

Dr. E. Eliot Harris, New York, moved that this whole matter be postponed to the order of new business. Seconded and carried.

On motion of Dr. E. D. Ferguson, Troy, the President was requested to appoint a committee of three to examine the financial part of the report of the treasurer, and report to the house. The following were appointed on that committee, known as the Auditing Committee: Dr. W. R. Townsend, New York; Dr. F. W. Higgins, Cortland, and Dr. C. A. Wall, Buffalo.

The Auditing Committee reported through its chairman, Dr. W. R. Townsend, that its work could not be completed for many hours.

Dr. E. D. Ferguson then moved that this committee be authorized to make its audit at its convention and report in writing to the next Council. Seconded.

Dr. James P. Tuttle, New York, moved as an amendment that the Council and Fellows hold an adjourned meeting on Wednesday, October 22, at 1 p. m. Motion carried as amended.

Dr. E. D. Ferguson then made the following motion, which was seconded and carried unanimously: "I move that when this body adjourns it adjourns to meet at 1 p. m. on Wednesday to hear the report of this Auditing Committee, and such other business as may come before it."

Dr. E. Eliot Harris presented the report of the Committee on Legislation.

REPORT OF COMMITTEE ON LEGISLATION.

The Committee on Legislation respectfully submits the following report:

The Lunacy Bill, giving the Governor power to appoint the Commissioners with power over the lunatic asylums of the State, was known as the Governor's bill, and passed as a party measure. The only bill requiring visits to Albany was Senator Brackett's Osteopathic Bill, introduced in the Legislature in January this year, entitled "An act regulating and legalizing the practice of osteopathy in the State of New York, and fixing penalties for the violation thereof."

The bill defined osteopathy to mean that science or system of healing which treats diseases of the human body by manual therapeutics for the stimulation of the vital remedial forces within the body itself, for the correction of misplaced tissue and the removal of obstructions or interferences with the fluids of the body, all without the internal administration of drugs or medicines; osteopathist or osteopath means a person who has been licensed, registered and legally authorized to practice osteopathy in this State.

The bill further provides that the board shall submit to the Regents of the University of the State of New York, as required, lists of suitable questions for thorough examination in anatomy, physiology, hygiene, obstetrics, pathology, diagnosis and theory and practice of osteopathy. From these lists the Regents shall prepare question papers for all these subjects, which at any examination shall be the same for all candidates; and in anatomy, physiology, hygiene, obstetrics and pathology shall be the same as for the candidates for license to practice medicine. Applicants examined and licensed by other State examining boards, registered by the Regents as maintaining standards not lower than those provided by this Act, on payment of \$10 to the Regents, shall, on submitting such evidence as they may require, receive from them an endorsement of their licenses conferring all the rights and privileges of a Regent's license issued after examination.

Osteopathists, when duly licensed and registered in accordance with this act, shall have all the rights and privileges and be subject to the rules and regulations that govern other physicians or medical practitioners in the making and filing of certificates of births and deaths, in the control of contagious diseases, and other matters pertaining to public health; but they shall not be authorized to prescribe drugs for internal use or to perform major surgery.

And it further states that any person who at the time of the passage of this Act shall be actually engaged in the practice of osteopathy in this State, and who is a reputable graduate of a regularly conducted school of osteopathy, and who shall be recommended to the Regents by the State Board of Osteopathic Examiners, shall, upon application, without examination, be grant-

ed a license to practice osteopathy, provided application for such license be made within ninety days after the passage of this Act.

In support of the bill the osteopathists were represented by many prominent and influential citizens of the United States; among them we may mention an ex-Lieutenant-Governor of the State of Vermont. In his address before the joint session of the Committees on Judiciary of the Senate and Assembly he stated that when he was the presiding officer of the Senate of the State of Vermont he was suffering from such pains that he had to have help to get to his seat in order to preside over the Senate, and many times he was compelled to leave the chair on account of the pain he suffered. He told how he was injected hypodermically with morphine to relieve his pain and while in the Senate a physician was often compelled to give him medicine hypodermically in order that he might continue to be present during the session. When he realized that morphine was his only hope to be free from pain and his physicians could suggest no other remedy that would relieve him, he finally took up osteopathy at the recommendation of many friends. He stated how, under osteopathic treatment, he gradually improved without the use of any drug and in a short space of time he considered himself cured and has been perfectly well since then. The osteopath who treated him was present to confirm his statement. He then told how cheerfully he signed the bill that now legalizes the practice of osteopathy in his State, and how deeply impressed the members of the Senate were with his cure under osteopathic treatment; that he believed that osteopathy will have a permanent legal standing in the State of Vermont. It was also stated how the representative from the State of Vermont in the Senate of the United States was an equally firm believer in the efficacy of the osteopathic method in the treatment of diseases.

The argument in opposition presented by the Chairman of your Committee showed how the tendency of modern times is to raise rather than 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 the candidates to be examined for a license to practice medicine. He proved how osteopathy, so-called, is an agent used in the treatment of diseases, and as such has no more right and 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, and is not entitled to a special examining board. It was made clear how every part of the human body is connected sympathetically with every other part and that the protection of public health demands that no one should be allowed to treat the sick and

injured unless he can make a diagnosis based on the study of the general science of medicine as taught by the incorporated medical colleges of the State. It was also proved how 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, and pointed out how 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, and showed how the reaction from commercialism in medicine was a factor in causing the Legislature to enact the laws which prevent any person not possessing the intellectual and moral qualifications required by the Board of Regents of the University of the State of New York from practicing medicine in this State. The public is protected by discouraging commercialism in medicine and is benefited by fostering the science of medicine.

The objections to the osteopathy bill were summarized as follows:

First, osteopathy, so-called, is an agent or method used in the treatment of disease, and should not be separated from the general practice of medicine.

Second, osteopathy should not be made a special branch of medicine, by an Act of the Legislature, but should come under the present State laws, which govern all the special branches as well as the general practice 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 disease 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, including the use of drugs and other valuable therapeutic agents.

Fourth, if the so-called osteopathic bill becomes a law all candidates who fail to pass the Regents' examinations to obtain a license to practice 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 college, for instance, does not enjoy.

And, finally, there would be a deal more right and reason for the Legislature to separate the special branches of criminal and corporation law from the general practice of law and to establish for each of them a special examining board, so as to make it easier for the candidates for admission to the Bar who desire to practice as specialists, than it would be for this Legislature, through this committee, to select one special therapeutic agent used in the treatment of disease and separate it from the general practice of medicine as a panacea for all diseases at the request of those ephemeral enthusiasts who now ask for a special osteopathic examining board.

(After the hearing by the Judiciary Committee

the bill was quashed by a vote of 7 to 2. "It died in Committee.")

Another bill demanding our attention was a Senate bill on the subject of compulsory vaccination, and fixing a penalty for any one who would interfere with an officer of the Board of Health in carrying out the provisions of the act requiring vaccination and re-vaccination. The Chairman arranged a conference with the Presidents of the Departments of Health of the State and of the City of New York, and by a unanimous vote the bill was opposed on the ground that the physicians of the board were securing a sufficient number of vaccinations and re-vaccinations to efficiently protect the public against smallpox, and that the present law gave them all the power they needed to quarantine, and the physicians by using tact could do better work in securing the co-operation of the public to be vaccinated and re-vaccinated than by using the power of the penalty provided in the proposed bill on compulsory vaccination. The Commissioners of Health believed that where severe penalties were provided in a compulsory vaccination bill some indiscreet vaccinators would arouse the public to a degree that would result in a general repeal of health laws that would seriously interfere with the present efficient work of the Department of Health. Therefore the bill was defeated.

By an act of the Legislature the dispensaries in the State of New York are placed under the control of the State Board of Charities, which has power to make rules and regulations governing the giving of medical and surgical relief to persons applying for treatment. The following letter from the Secretary of the State Board of Charities shows the good effects that have resulted from placing that law upon the statute book:

Albany, N. Y., March 12, 1902.

E. ELIOT HARRIS, M. D.,

Chairman Committee on Legislation,
The New York State Medical Association,
33 West 93d Street, New York City.

Dear Sir:—Knowing your interest in Chapter 368, Laws of 1899, known as the Dispensary Law, and the results of its enforcement, permit me to bring to your attention an extract from the 33d annual report of the Brooklyn Eye and Ear Hospital for the year 1901. The extract clearly indicates what can be accomplished by the law when it is conscientiously enforced by dispensary managers. The extract reads as follows:

"The superintendent's report shows a falling off in attendance upon the clinics of about ten per cent. as compared with 1899. The enforcement of the dispensary law is properly chargeable with a large proportion of this deficit. Seven hundred and thirty two have been refused treatment by the Registrar, as unworthy objects of charity, while knowledge that such a law is on the statute book, and is being enforced, has become so widely disseminated that, doubtless, very many more have been deterred from applying for treatment. The thanks of the board are due and are very cordially given to Mr. Nichols, Superintendent of the Bureau of Charities, for his very cordial co-operation and assistance in investigating doubtful cases, as provided for and required by the law, thus relieving

the hospital of considerable expense and embarrassment."

Respectfully yours,
(Signed) ROBERT M. HIBBERD,
Secretary State Board of Charities.

The Committee on Legislation desires to express its thanks to the following named gentlemen and to many others of the Association for their valuable aid to the Committee in its work at Albany: Drs. Thomas J. Acker, S. Busby Allen, Edwin Barnes, Norman B. Bayley, Otis Howard Bradley, D. Bryson Delevan, William E. Douglas, Louis Robert Eichberg, Carlton C. Frederick, Mary Gage-Day, Nathan S. Jarvis, John J. Montgomery, Douglas C. Moriarta, John T. Nagle, Emmett D. Page, James T. Park, Victor C. Pendersen, Charles W. Piper, J. Lindsay Porteous, Charles Ira Redfield, William B. Reid, Alexander A. Stern, Albert A. Wheelock.

(Signed) E. ELIOT HARRIS, Chairman.
CHARLES B. TEFFT.
E. D. FERGUSON.
ELIAS LESTER.
CHARLES A. WALL.
EMIL MAYER.

On motion of Dr. C. E. Denison, seconded by Dr. Finder, the report was received and accepted.

The report of the Committee on Library was prepared by Dr. J. W. S. Gouley and presented.

REPORT OF COMMITTEE ON LIBRARY.

October 20, 1902.

The Committee on the Library of the New York State Medical Association has the honor to report that the library is so much overcrowded with boxes, journals and transactions of many State medical organizations that in the near future some provision, it is hoped, will be made for better storage and care of the books. During the past year the number of volumes (9,864) in the library has been increased mainly by the exchanges.

J. W. S. GOULEY,
Chairman.

On motion of Dr. W. Finder the report was accepted.

Dr. Alexander Lambert, New York, presented the report of the Committee on Public Health and Medical Charities.

REPORT OF THE COMMITTEE ON PUBLIC HEALTH AND MEDICAL CHARITIES.

The Committee on Public Health and Medical Charities desires to lay before the New York State Medical Association the following report. At the last meeting of the Association the report of the Committee on Vaccination was referred to with power. The Committee therefore considered the advisability of introducing a bill in the State Legislature, the object of which was to make vaccination and re-vaccination compulsory. After consultation with the Committee on Legislation it was decided to introduce

such a bill. The bill passed the State Senate without a dissenting vote, but in the Assembly it met such opposition that it was unable to pass that body. Dr. Frederic W. Loughran was the member of this Committee and had the matter in his special charge. Great credit is due Dr. Loughran for his untiring efforts to bring about the much needed reform in the present vaccination laws, and it is to be regretted that this reform could not be attained. No other matter of Public Health or of Medical Charities has been brought before this Committee for its consideration.

Respectfully submitted,
ALEXANDER LAMBERT, M. D.,
Chairman.

On motion the report was accepted.

Dr. J. Riddle Goffe, New York, presented the report of the Committee on Publication.

REPORT OF THE COMMITTEE ON PUBLICATION.

Your Committee on Publication, elected at the last annual meeting of the Association, immediately upon organization entered upon the work of publishing the Journal and collecting data for the new directory.

THE JOURNAL.

The Journal has appeared regularly every month and in addition to presenting papers that were read at the annual meeting, and thus serving as a means of preserving the transactions, has presented so far as it was possible to secure reports, regular accounts of the meetings of the constituent bodies, both County and District Branches. In addition to this it has endeavored to fill the position of a monthly medical newspaper, keeping members of the Association posted in regard to Association affairs and presenting a résumé of the important advances in medicine and surgery. Including the large issues of December and June, which were gotten out for advertising purposes, 37,500 copies have been distributed.

A point of vital interest to the Journal is that it has secured admission to the mails as second-class matter.

THE DIRECTORY.

The work upon the Directory has been greatly facilitated by the card catalogue, which was inaugurated by the preceding Committee. The effort to make the Directory as exact and reliable in all its data, as any such publication can be made, has been continued. Certified lists from County Clerks' offices have been obtained for comparison and the systematic course of communicating with every physician for the purpose of securing the latest information has been practiced. The new features this year are the printing of the alphabetical list of the State in blue and in the list arranged alphabetically by post-offices, the last named town upon the right hand page has been repeated. This has been

found of great assistance in referring to that list.

The Committee entertains the hope that the Directory for 1902-3 will be found satisfactory by the members of the Association.

THE BUSINESS OFFICE.

The Council at its meeting in March placed the business office under the control of the Committee on Publication. The amount of work devolving upon the Committee has therefore been great. The experiment of placing a non-professional business man at the head of the business office has not been a success and upon the expiration of Mr. Bullock's contract he was dismissed.

A detailed report of the cost of the Directory for 1902, the expense of running the Journal for the year ending October 1, and the finances of the business office will be found in the annual report of the Treasurer.

Respectfully submitted,

J. RIDDLE GOFFE,

Chairman Committee on Publication.

On motion of Dr. C. A. Wall, Buffalo, the report was accepted.

The report of the delegates to the Committee of the American Medical Association on National Legislation was received.

On motion the report of the Committee on By-Laws was postponed until the adjourned meeting of the Council and Fellows.

Dr. E. Eliot Harris presented the report of the Committee on Conference. On motion of Dr. J. Riddle Goffe, seconded by Dr. O. C. Laddlow, the report was accepted and the committee thanked for its labors.

Dr. E. D. Ferguson, Troy, moved the adoption of the resolutions. (See page 313, November issue of this Journal.) Seconded by Dr. Wiggin.

Dr. D. S. Dougherty, New York, objected that these resolutions belonged to the order of new business, but the President ruled that they were pertinent to the question, and the resolutions were then unanimously adopted.

James Taylor Lewis, Esq., counsel for the Association, reported upon the work done in the legal department.

REPORT OF THE COUNSEL.

October 7, 1902.

To the New York State Medical Association and Its Officers and Members:

Although the work of your Counsel has chiefly been confined to services rendered to the New York County Medical Association, yet as the advance of the interests of one part is promotion of the welfare of all, the work in the legal department becomes a part of the records of the parent organization.

There has been undertaken and successfully carried on in the County of New York the defense of members of that County organization from civil malpractice suits, and an attempt has

been made to stem the tide of the increasing illegal practice of medicine. The treasury of the New York County Association has not warranted the maintenance of a thoroughly equipped bureau for the attack upon these medical mountebanks, yet much has been successfully done in that direction.

Your Counsel is glad to report that he has met with the utmost courtesy from the Police Magistrates, and from the Justices of the Court of Special Sessions, the former acting as the committing power, and the latter being the trial court for violation of the medical law, and he has had occasion, during the year, to call to the special attention of the Court of Special Sessions the necessity of imposing more severe sentences, with good results, and which will be of future benefit.

There has been present for many years in the minds of some of the justices an idea that the detectives employed by the medical organizations might be a subject of criticism for extortion, and your Counsel believes that only by the infusion of new blood into this branch of the service, a most deplorable condition, if it really does exist, can be relieved. For nearly two years your Counsel has sought for a reputable man who could be trusted as the representative agent of the organization; he believes that he has now found such a person to take charge during the coming year, if the State Association decides to conduct prosecutions.

In the County of Kings some work has been undertaken towards the eradication of similar conditions, which has called forth public expressions of hearty approval from the Special Sessions bench of the Borough of Brooklyn, as well as from the Board of City Magistrates of that borough; in fact, the only medical cases presented to the notice of that Court during the past year were brought in the name of the State organization by your counsel.

From time to time during the past year your attention has been called by me to this work, and to the importance which attaches to it on account of the increasing power and strength of the State Association, upon which the great public is coming to look as its best protector in all that pertains to public health.

That this work of prosecuting the illegal practitioners should be in the hands of the State organization rather than in the separate County organizations, surely needs no argument, and should be conducted upon the lines already adopted and carried on in the New York County Association.

There has been much said by myself and others with reference to the defense from blackmailers, and the plan for accomplishing this work adopted and successfully carried on by the New York County Association can, with slight modification, be put in immediate active operation throughout the State. The medical profession is entitled to this defense. This is quite

as true from the public standpoint as from the standpoint of your own membership, for the public has a right to the unhampered, progressive, scientific work of every member of your profession, which it cannot receive so long as you have hanging above you the sword of Damocles typified in the civil malpractice suit.

That defense which the insurance companies have discovered the medical profession needs and is willing to accept, should be in the hands of brother practitioners, conducted under the careful supervision of your Council rather than any money making outside institution, and the mere fact that the State organization has taken up the prosecution of these blackmailers will, of itself, act as a great deterrent to those instigating malicious attacks upon the honest medical practitioner.

The past year has been the most eventful one in the history of the State organization. Its power has been felt in many directions throughout the Union, and the influence it has exerted has added much to the history of the medical profession of the State of New York, as well as to the traditions of the National Organization.

Your Counsel extends to you his congratulations and the assurance of his warmest regards.

Faithfully yours,

(Signed) JAMES TAYLOR LEWIS.

On motion the report was accepted.

Under the head of unfinished business, on motion of Dr. F. H. Wiggin, it was voted to consider at this time the amendments to the by-laws proposed last year.

Dr. C. E. Quimby, New York, explained that the original copy was not at hand; accordingly, on motion of Dr. C. A. Wall it was voted that the printed amendments be taken as the amendments originally proposed. The amendments, as printed in the New York State Journal of Medicine for December, 1901, pp. 299-301, were then taken up section by section.

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 Public Health 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 the Standing Committees.
6. Unfinished business.
7. New business.
8. Adjournment." Adopted.

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." Adopted.

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."

On motion of Dr. F. H. Wiggin, the following was adopted as a substitute for the foregoing amendment; the President having ruled on a point of order raised by Dr. E. V. Delphey, that a substitution of any kind pertinent to this question was in order.

1. The Council shall upon request and compliance with 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 section 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.

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 Sec-

tion 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 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 section of Article II in conformity with the foregoing amendments. Adopted.

To amend Article III by striking out in Section 1 the final words "and Fellows." Adopted.

By striking out in Section 3 the words "Cushing's Manual of Parliamentary Practice," and substituting the words "Robert's Rules of Order." Adopted.

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 "all matters," and substituting the word, "questions;" by striking out the words "and Fellows suggestions," and substituting the word "recommendations;" and by striking out the words "by the Council in these matters." Adopted.

To amend Article V, Section 10, by striking out the words "printed transactions of the Association," and substituting the words "New York State Journal of Medicine." Rejected.

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."

On motion of Dr. E. Eliot Harris the consideration of this was postponed to the adjourned meeting of the Council and Fellows on Wednesday, October 22.

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. Adopted.

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." Adopted.

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 charter and the 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." Adopted.

By inserting after Section 8 the words "Section 9. The Committee 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." Adopted.

To amend Article VII, 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 payment of the required initiation fees and dues. Upon such acceptance of the Council members of this Association resident in that County shall become members of such County Medical Association." Adopted.

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-membership. Physicians of eminence, members of other State Associations, shall be eligible for corresponding membership, and in other countries for honorary membership." Adopted.

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. Application for membership shall be accompanied by an initiation fee of five (5) dollars and the annual dues for the current year. Non-resident appli-

cants 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."

After considerable discussion, on motion of Dr. W. R. Townsend, New York, it was voted that the annual dues be six dollars (\$6) and all who pay before the first day of March shall be allowed to pay five dollars (\$5) for the year. Carried.

On a reconsideration of this action, Dr. E. H. Squibb offered as a substitute a set of resolutions which had been embodied in the Treasurer's report, viz.: The annual dues shall be six dollars (\$6); there shall be no initiation fee, and a rebate of one dollar (\$1) shall be allowed all who pay within three months after the bill is rendered. This substitute motion was unanimously carried.

On motion of Dr. E. H. Squibb, the following section was made Section 4 of Article IX, and it was then adopted as printed.

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." Adopted.

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 meetings," in Section 1, the words, "or by a three-fourths affirmative vote." Rejected.

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." Adopted.

The By-Laws as above amended were then adopted as a whole.

On motion of Dr. E. D. Ferguson, seconded by Dr. E. E. Harris, the following resolution was adopted:

Resolved, That the Committee on Audit make a report upon the receipts and expenditures of the Association; the possibilities of increasing the receipts or diminishing the expenditures, and as to what action is necessary to keep the expenditures less than the receipts, or, in case this is not possible, what shall be done.

Dr. Alexander Lambert, on behalf of Dr. C. E. Quimby, introduced the following resolution, and moved its reference to the whole Association by the referendum:

Whereas, The broadest dictates of humanity should be obeyed by physicians in all their professional relations, and

Whereas, The relief of suffering and the extension of scientific medicine are the fundamental objects of all such relations,

Resolved, That it is the sense of the New York State Medical Association that any change in the Code of Ethics of the American Medical Association, which extends the right and privilege of consultation to all physicians having a license to practice medicine conferred by a medical board authorized by the state, to be consistent, ought to render such physicians eligible to full professional fellowship and membership in medical societies.

The President ruled that the By-Laws do not permit a referendum.

On motion of Dr. E. E. Harris, the resolution was tabled by a vote of 13 to 9.

Dr. C. E. Quimby presented the report of the Committee on Nominations. (See page 303, November issue this journal.)

On motion of Dr. C. A. Wall it was unanimously voted that the Council and Fellows rule, in accordance with the requests contained in the report of the Treasurer, and directed the Council to take care of the question of providing necessary funds.

On motion the meeting of the Council and Fellows adjourned at 5.50 P. M.

ADJOURNED MEETING OF THE COUNCIL AND FELLOWS.

The adjourned meeting of the Council and Fellows was called to order by the President at 1 P. M. on Wednesday, October 22.

Dr. C. E. Quimby said that, in accordance with the resolution, the Committee on By-Laws had considered the proposed amendment of Article V, Section 9, and the following was the amendment reported:

To the Council and Fellows of the New York State Medical Association:

Your Committee on Revision of By-Laws begs to report the following amendment:

To amend Article V by substituting for Section 9 the words, Section 9. The Committee on Nominations shall consist of a chairman and two fellows elected by each District Branch. It shall be the duty of this Committee to present an approved list of nominees for all elective offices at the annual meeting of the Council and Fellows, together with such further nominations for said offices as shall have been submitted to the chairman of the Committee prior to the Saturday preceding the annual meeting. Such nominations shall be submitted in writing and approved by five fellows. The final meeting of the Committee shall be on the first day of the annual meeting immediately after the adjournment of the Council and a majority of the Committee shall constitute a quorum.

(Signed) CHAS. E. QUIMBY,
Chairman.

Dr. E. Eliot Harris presented a minority report, in which he advocated that the Chairman or member of the Committee receive the nominations presented in writing and signed by five Fellows.

"The Committee on Nominations shall consist of a Chairman and two Fellows elected by each District Branch.

"It shall be the duty of this Committee to present a list of nominees for all elective offices at the annual meeting of the Council and Fellows. The said list shall include such further nominations for said offices, as shall have been presented in writing and signed by five Fellows to the Committee prior to the meeting of the Committee at the annual meeting.

"The final meeting of this Committee shall be on the first day of the Annual Meeting immediately after the adjournment of the Council and a majority of the Committee shall constitute a quorum.

"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."

After some discussion, on motion of Dr. Wall, both reports were laid on the table.

Dr. W. R. Townsend, New York, presented the report of the Committee on Audit.

REPORT OF AUDITING COMMITTEE.

October 21, 1902.

To the President and Fellows of the New York State Medical Association.

Sirs: The Committee appointed at the meeting of the Council and Fellows, held October 20, 1902, to audit the books of the Treasurer and report on the financial condition of the Association, respectfully submit the following:

The vouchers and accounts were found in excellent condition and correct.

The Treasurer's statement, submitted on October 20, is a correct transcript of the cash book, but does not take into account the bills payable or receivable, nor does it show the assets and liabilities, and your Committee respectfully suggest that such statement be added to the future reports of the Treasurer.

The receipts for the year ending October 1, 1902, were \$19,314.36. Of this amount, cash on hand October 1, '01, was \$3,147.31.

Received from loans during the year. \$2,300.00
Received donation, Saratoga Com... 1,039.85

Total \$6,487.16
Which compared with the receipts of the previous year shows, excluding these items, an increase of \$746.41, or receipts, 1901, \$12,080.79; receipts, 1902, \$12,827.20. On October 1, 1901, the cash on hand was \$3,147.31, but the unpaid bills amounted to \$3,375.26, and the cash balance was therefore insufficient to pay off bills already due, and the Association was in debt on October 1, 1901.

During the past year it has been necessary to borrow money (\$2,300), which has been repaid.

On October 1, 1902, the cash on hand amounted to \$698.67, and the unpaid bills to about \$3,400, and the bills to be paid during October, November and December, before any more dues will be paid in, will amount to about \$1,000, and the estimated receipts for this period will be:

From Journal advertisements..... \$500.00
" Sale of Directories..... 100.00
" Arrears and dues..... 100.00
Total \$700.00

In other words, on January 1, the Association will be in debt to the amount of about \$3,700, which will have to be paid from the receipts for the next year.

During the past year the assets of the Association have been increased by the purchase of desks, typewriting machines, card catalogues, County Clerk lists, etc., by about \$500, and this amount will not be needed in 1903, and the expenses will be diminished by this sum.

In estimating the receipts for 1903 the Committee see no reason why they should not equal those of the past two years, or about \$12,000, and they believe that the expenses should be kept within these figures.

In order to increase the revenues of the Association the Committee would suggest that every member make it his business to bring in as many new members as possible and also strive to sell as many copies of the Directory as he can.

To provide for the bills now due and unpaid, the Committee would suggest that all who can do so, pay their 1903 dues in advance, so that the Business Committee of the Council will be enabled to pay these outstanding obligations.

The Committee also recommends that extreme economy be practiced in every department, so that the Association may soon again be placed in a sound financial condition.

Respectfully submitted,
(Signed) WISNER R. TOWNSEND.
F. W. HIGGINS.
CHAS. A. WALL.

On motion of Dr. E. D. Ferguson the report was unanimously accepted and adopted.

On motion of Dr. D. S. Dougherty, New York, seconded by Dr. E. E. Harris, the resolutions presented by Dr. Lambert were taken from the table and were read by the Secretary.

After some discussion, on motion of Dr. E. D. Ferguson, action was indefinitely postponed.

On motion, the meeting of the Council and Fellows adjourned at 2.10 P. M.

REPORT OF THE FIRST DISTRICT BRANCH.

The annual meeting of the First District Branch was held at the Arlington Hotel, Rome, May 21st, 1902. There was a large attendance of members and guests.

The meeting was called to order at 1.30. Dr. C. B. Tefft, of Utica, in the chair. The following programme was carried out:

1. President's address. Dr. C. B. Tefft, Utica, "Organization of the State Association and its affiliated branches." The paper was well received and exhaustively discussed.

2. "Report of three cases of appendicitis." Dr. W. B. Reid, Rome. Discussion was opened by Dr. Tefft and participated in by nearly all present.

3. "Placenta Previa." Dr. W. L. Wallace, Syracuse. This was a very interesting article and provoked very much profitable discussion.

The following officers were elected:

President, Dr. Jeremiah R. Sturtevant, Theresa.

Vice-President, Dr. H. C. Sutton, Rome.

Secretary and Treasurer, Dr. E. H. Douglas, Little Falls.

Executive Committee: Dr. J. G. Hunt, Utica; Dr. J. FitzGerald, Rome; Dr. G. N. Lehr, Rome.

Fellows, Dr. J. W. Douglas, Boonville; Dr. C. B. Tefft, Utica; Dr. Douglas Ayres, Fort Plain.

Alternates, H. D. White, Rome; F. J. Douglas, Utica; C. H. Glidden, Little Falls.

The meeting was adjourned subject to call of chair.

(Signed) EDGAR H. DOUGLAS,
Secretary.

REPORT OF THE SECOND DISTRICT BRANCH.

Report of the eighteenth annual meeting of the Second District Branch of the New York State Medical Association, held at the Altruria, Troy, N. Y., May 29th, 1902.

The meeting was called to order by the president, Dr. E. D. Ferguson. The following pro-

gramme was gone through and every number was carried out without a skip.

1. Business session, 10 a. m.

2. President's address, "Nephrectomy, nephrotomy and then cystotomy." Dr. E. D. Ferguson, Troy.

3. Value of blood examinations, Dr. William Finder, Troy.

4. Lantern slide exhibition, showing the normal and pathological anatomy of the brain and spinal cord, Dr. Hermon C. Gordinier, Troy.

5. Report of a case of congenital absence of the vagina, Dr. William J. Hunt, Glens Falls.

6. Listerism; its past, present and future, Dr. G. Scott Towne, Saratoga Springs.

7. Report of cases, Dr. P. C. Curtis, Round Lake.

Adjourned for lunch.

1.30 p. m.

8. (A) Remarks upon X-ray work in general.

(B) Exhibition of patients and radiographs, Dr. James P. Marsh, Troy.

9. Report of a case of empyema of gall bladder with calculi of unusual form, Dr. Lyman G. Barton, Willsboro.

10. Diagnosis and treatment of appendicitis, Dr. David W. Houston, Troy.

11. Sclerema Neonatorum, with report of a case. Dr. Edgar R. Stillman, Troy.

12. Report of a case of ovarian papillomatous-cystonia, complicated with suppuration and extensive adhesions, Dr. William E. Swan, Saratoga Springs.

Upon report of the Nominating Committee the following names were placed in nomination and were duly elected to serve for the ensuing year:

President, Dr. E. D. Ferguson, Troy.

Vice-President, Dr. P. C. Curtis, Round Lake.

Secretary and treasurer, William L. Hogeboom, Troy.

Forty-three members were present and registered. County Associations are established in Albany, Columbia, Rensselaer, Saratoga and Warren and the Medical Association has gained greatly in numbers and interest during the last year.

Upon motion the meeting adjourned to meet at Hudson, N. Y., the last Thursday in May, 1903.

(Signed) WILLIAM L. HOGEBOOM,
Secretary.

REPORT OF THE THIRD DISTRICT BRANCH.

I beg leave to make the following report concerning the standing of the associations in the Third District Branch:

Broome County, gain 1.

Cayuga County, loss 1.

Chemung County, gain 1.
 Cortland County, gain or loss, 0.
 Delaware County, gain 2.
 Madison County, gain 1.
 Onondaga County, loss 2.
 Otsego County, gain 5.
 Schuyler County, loss 1.
 Seneca County, loss 2.
 Tioga County, gain or loss 0.
 Tompkins County, gain 1.

Net gain in the branch of five members.

Losses have been in all cases occasioned by the non-payment of dues. This is not a very flattering report, and shows just where a great deal of missionary work ought to be done. The membership of all the County Associations ought to be doubled within the next year, but this can only be done by calling upon men of good standing personally and urging them to become members.

Yours very truly,

(Signed) FRANKLIN J. KAUFMANN,
 Secretary Third District Branch.

REPORT OF THE FOURTH DISTRICT BRANCH.

The eighteenth annual meeting of the Fourth District Branch of the New York State Medical Association was called to order by the President, Dr. Charles A. Wall, of Buffalo, at the Hotel Athæneum, Chautauqua Assembly Grounds, N. Y., on July 23, 1902, at 12 o'clock, noon, sixty-one members being present. Secretary reports that the By-Laws submitted at the last annual meeting were adopted. The report of the Treasurer was accepted. On motion of the Secretary, an assessment of fifty cents was levied upon the members of the Branch.

The President made a few remarks relative to the status of the County and District Branches of the State and American Medical Associations.

Dr. Alvin A. Hubbell, President of the State Association, made a few remarks.

Dr. Frederick Holme Wiggin, of New York, made a few remarks relative to the cost of sustaining the Medical Directory, Journal and other business of the State Association. Dr. Thomas D. Strong, of Westfield, delivered an address of welcome to all guests of Chautauqua County. Dr. Darwin Colvin, of Wayne County, made a few remarks.

The members of the Nominating Committee, Drs. Chace and Scoville, reported the following names for the officers of the Branch for the coming year:

President, Dr. J. W. Morris, Jamestown.

Vice-president, Dr. Bernard Cohen, Buffalo.

Secretary, Dr. William Irving Thornton, Buffalo.

Treasurer, Dr. Joseph Burke, Buffalo.

Nominating Committee to the New York State Medical Association, Dr. A. G. Bennett, Buffalo, and Dr. T. D. Strong, Westfield.

Upon motion of Dr. A. A. Hubbell, Dr. Shaw was directed to cast a ballot for the above and

they were declared duly elected. Dr. Joseph Burke of Buffalo read a paper entitled "Congenital Narrowness of the Aortic System." Discussion by Dr. Julius Ullman, of Buffalo.

Adjournment for dinner at invitation of County Medical Association.

Afternoon session called to order at 2 P. M. D. Alfred T. Livingston, of Jamestown, read a paper entitled "The Broad Therapeutic Application of Ergot." Discussion by Dr. E. H. Long, of Buffalo. Dr. Wisner R. Townsend, of New York, read a paper on "The Differential Diagnosis of Diseases of the Hip Joint," illustrated by skiagraphs. Discussion by Dr. William C. Phelps, of Buffalo, and Dr. William M. Bemus, of Jamestown.

Dr. Frederick Holme Wiggin read a paper on "Post-operative Intestinal Paresis." Discussion by Drs. Eugene Smith and Marcell Hartwig, of Buffalo.

Dr. Grover Wende, of Buffalo, read a paper on "Eczema." Discussion by Dr. Alfred E. Diehl, of Buffalo.

Dr. Charles A. Wall introduced Dr. J. W. Morris, of Jamestown, as the president for 1902-3.

A vote of thanks was extended to the Chautauqua County Association, and to Drs. Wiggin and Townsend, of New York City. On motion of Dr. Cohen, the meeting was declared adjourned, to meet at Buffalo in 1903.

The total membership in the Fourth District Branch is 176, distributed as follows:

Allegany County, 6; Cattaraugus, 3; Chautauqua, 30; Erie, 88; Genesee, 4; Livingston, 3; Monroe, 11; Niagara, 2; Ontario, 1; Orleans, 5; Steuben, 14; Wayne, 4; Wyoming, 5; Yates, none.

Steuben County Association has been organized during the past year.

Respectfully submitted,

WILLIAM IRVING THORNTON.

October 5, 1902.

REPORT OF THE FIFTH DISTRICT BRANCH.

The secretary of the Fifth District Branch Association submits the following report of the work of the past year.

There has been held during the year one special meeting and the regular or annual meeting of the Association.

The special meeting was held at the Palatine Hotel, Newburgh, on November 20th, 1901. This meeting was a most successful one, there being seventy-one members of the District Branch Association present. Dr. Emil Mayer, the president, presided, and in a brief address welcomed the members present and gave a very concise résumé of the object of the meeting.

Papers were read by Dr. John B. Deaver, of Philadelphia, and Dr. Charles E. Quimby, of New York.

The annual meeting of the association was

held at Hosack Hall, N. Y., Academy of Medicine, Tuesday, May 8th, 1902.

There were present the officers and others to the number of seventy. After the reading of the minutes, and the reports of the treasurer and several standing committees, the Nominating Committee presented the names of the following officers for the ensuing year:

President, Dr. Parker Syms, of New York.

Vice-President, Dr. Charles E. Townsend, of Newburgh.

Secretary, Dr. Charles S. Payne, of Liberty.

Treasurer, Dr. Edmund L. Cocks, of New York.

For Nominating Committee to the State Association, Dr. J. W. S. Gouley, of New York, and Dr. W. H. Biggam, of Brooklyn. All of which were unanimously elected. At 2.30 p. m. the meeting opened in scientific session. Address by the President, Dr. Emil Mayer.

Paper read by Dr. Walter M. Brickner on "The Use and Usefulness of the X-ray in Medical and Surgical Practice." Paper by Dr. D. Bryson Delevan on "The Province of the General Physician in Diseases of the Upper Air Passages." Paper by Dr. W. S. Gottheil on "Illustrations of Skin Affections."

The secretaries of the several County Associations report very successful meetings and in most instances new members have been added to the associations.

Very respectfully submitted,

(Signed) C. S. PAYNE,
Secretary.

Second Day—Tuesday, October 21st.

MORNING SESSION.

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

The address of welcome was delivered by the Chairman of the Committee of Arrangements, Dr. Irving S. Haynes.

The Secretary gave a brief résumé of the work done at the meeting of the Council and Fellows on the first day.

The scientific session was opened by the reading of a paper by Dr. Frederick P. Hammond, New York, entitled "The Pathogenesis of Eclampsia."

Dr. William E. Swan, Saratoga Springs, read a paper, "Bacterial Flow of the Vaginal and Cervical Canal in Health: With Remarks Concerning Infections of the Female Genital Tract." It was discussed by Dr. F. W. Higgins, Cortland.

Dr. Mary Gage-Day, Kingston, read a paper, "Treatment in Gynecology from a Medical Standpoint." Discussion by Dr. Edward Wallace Lee, Drs. J. H. Burtenshaw and J. Riddle Goffe, New York; Dr. George H. Peddle, Perry, Dr. Richard H. Gibbons, Scranton, Pa.; Dr. Remus, Jamestown; Dr. William Finder, Troy, and Dr. Eden V. Delphay, New York.

Dr. J. Riddle Goffe, New York, read a paper, "What Advice Should Be Given to a Woman Suffering from Fibroid Tumors?" Discussion by Dr. E. D. Ferguson, Troy; Dr. F. H. Wiggin, New York; Dr. Goffe closing the discussion.

Dr. James Hawley Burtenshaw, New York, read a paper, "The Principles Involved in the Repair of Lacerations of the Pelvic Flow." Discussion by Dr. E. D. Ferguson, Troy; Dr. F. H. Wiggin, Dr. R. H. Gibbons, Dr. E. V. Delphay and Dr. David P. Austin, New York; Dr. Theodore P. Simpson, Beaver Falls, Pa., and Dr. J. Riddle Goffe. Dr. Burtenshaw closed the discussion.

The delegates from other societies were formally received by the President, after which, at 1 P. M., the Association adjourned for lunch.

AFTERNOON SESSION.

The Association reconvened at the call of the President at 2 P. M., and the scientific programme opened with a symposium on colds. Dr. James J. Walsh, New York, read a paper on the "Etiology of Colds"; Dr. George F. Cott, Buffalo, read a paper, "Symptomatology of Colds"; Dr. A. Alexander Smith, New York, read a paper on "Treatment of Colds." The general discussion was participated in by Dr. W. H. Thornton, Buffalo; Dr. W. Freudenthal, New York; Dr. Max Einhorn, New York; Dr. Harry R. Purdy, New York; Dr. Thomas J. Acker, Croton; Dr. G. W. Murdock, Cold Spring; Dr. J. O. Stranahan, Oneida County; Dr. A. H. Brownell, Oneonta; Dr. Wey. Closing remarks were made by Drs. Walsh and Cott.

Dr. Alfred Stengel, Philadelphia, Pa., read a paper, "The Newer Relation of the Pancreas to General Medicine." It was discussed by Dr. W. H. Aker.

Drs. C. M. B. Camac and Thomas Hastings, New York, presented a paper, "A Preliminary Study of the Metabolism in Myxedemia Before and After the Administration of Thyroid Extract," which was read by Dr. Camac. It was discussed by Dr. Max Einhorn, A. Stengel, Dr. Wolff and Dr. J. J. Walsh, and the discussion was closed by Dr. Camac.

Dr. W. Wotkyns Seymour, Troy, read a paper, "The Present Position of Gall Stone Surgery." It was discussed by Dr. Gibbons, and some closing remarks were made by Dr. Seymour.

Dr. Augustin H. Goelet, New York, read a paper, "A Study of the Indications for Nephropexy." Discussion by Dr. A. E. Gallant, Dr. Parker Syms and Dr. Max Einhorn, New York, and Dr. Gibbons, Scranton. Dr. Goelet closed the discussion.

Dr. George A. Leitner, Piermont, read a paper, "The Surgical Diseases of the Kidneys from the Standpoint of a General Country Physician." Discussion by Dr. A. H. Goelet and Dr. Gibbons.

On motion, the Association adjourned at 6 P. M.

EVENING SESSION.

The meeting was called to order by the President at 8 P. M.

Dr. William S. Gottheil, New York, exhibited a case of leprosy of eighteen years' standing, occurring in a woman. The lesions were principally upon the face and hands.

Dr. Heinrich Stern, New York, read a paper, "The Relation of Obesity to Improcreance."

Dr. Hermon G. Gordinier, Troy, read a paper, "A Case of Idiopathic Brain Abscess with Focal Symptoms Diagnosed as Brain Tumor." Discussed by Dr. W. M. Leszynsky, New York.

Dr. William E. Douglas, Middletown, read a paper, "A Case of Melancholia Agitans."

Drs. William S. Gottheil and R. Abrahams, New York, made a "Report and Presentation of a Case of Idiopathic Atrophy of the Skin." The clinical presentation was made by Dr. Abrahams, and Dr. Gottheil described the results of the microscopical examination.

Dr. T. D. Crothers, Hartford, Conn., read a paper, "Unrecognized Toxic Insanities."

On motion, the Association adjourned at 9.30 P. M.

Third Day—Wednesday, October 22d.

The meeting was called to order by the President at 9.45 A. M.

Dr. W. B. Reed, Rome, read a paper on "Strangulated Hernia in Children Under One Year of Age." Discussed by Dr. A. J. Ochsner, of Chicago.

Dr. J. A. Bodine, New York, read a paper, "Local Anesthesia in Radical Cure for Inguinal Hernia." Discussion by Dr. J. A. Wyeth, New York; Dr. E. D. Ferguson, Troy; Dr. Alexander Lyle, New York; Dr. A. J. Ochsner, Chicago; Dr. William J. Mayo, Rochester, Minn.; Dr. John B. Harvie, Troy; Dr. E. W. Lee, New York; Dr. R. H. Gibbons, Scranton; Dr. A. E. Gallant, of New York. Dr. Bodine closed the discussion.

Dr. J. A. Wyeth, New York, exhibited "A Case of Large Cavernous Congenital Angioma of the Back" occurring in a child.

Dr. John B. Harvie, Troy, read a paper, "Intestinal Obstruction."

Dr. William J. Mayo, Rochester, Minn., read a paper, "Radical Operations for the Cure of Cancer of the Stomach."

Dr. A. J. Ochsner, Chicago, read a paper, "Surgery of the Stomach for the Relief of Non-Malignant Conditions." Discussion by Dr. J. A. Wyeth, Dr. W. F. Funder, Dr. R. H. Gibbons and Dr. J. R. Goffe. Drs. Mayo and Ochsner made closing remarks.

Dr. Theodore Dunham, New York, presented a "New Apparatus for the Treatment of Esophageal Stricture."

Dr. Alvin A. Hubbell, Buffalo, then delivered the President's address, taking for this

topic, "Reflections on Some of the Purposes and Work of the New York State Medical Association." (See page 303, November issue of this Journal.)

On motion, adjournment at 1 P. M. for lunch.

AFTERNOON SESSION.

The Association reconvened at the call of the Vice-president, Dr. W. H. Biggam, at 2.25 P. M.

Dr. J. H. Woodward, New York, read a paper, "Further Observations of General Interest Regarding the Course and Management of Cataract."

The symposium on Typhoid Fever was opened by a paper on "The Serum Reaction in Typhoid," by Dr. Thomas W. Hastings, New York. Dr. George Blumer, Albany, read a paper, "The Pathology and Bacteriology of Typhoid Fever from the Standpoint of Recent Investigations."

Dr. Nathan E. Brill, New York, read a paper on "Paratyphoid Fever."

Dr. W. S. Thayer, Baltimore, read a paper, "Arteritis and Arterial Thrombosis in Typhoid Fever."

Dr. W. Gilman Thompson, New York, read a paper, "The Modern Treatment of Typhoid Fever."

Dr. Albert W. Preston, Middletown, read a "Report of an Interesting Case of Typhoid Infection."

The general discussion was participated in by Dr. S. J. Meltzer and Dr. E. Libman, New York; Dr. W. H. Thornton, Buffalo, and closing remarks were made by Drs. Camac, Brill and Thayer.

On motion, the Association adjourned at 5.15 P. M.

The evening was taken up with a banquet.

Fourth Day—Thursday, October 23d.

MORNING SESSION.

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

Dr. H. W. Carter, New York, read a paper, "The Advantage of Nitrous Oxide in General Surgery; Exhibition and Description of a Stopcock for Its Administration with Varying Percentages of Oxygen."

Discussion by Dr. A. A. Hubbell, Buffalo.

Dr. Edward Wallace Lee, New York, read a paper, "Suggestions Favoring a Standard Technique in Operative Surgery." Discussion by Dr. A. J. Ochsner, Chicago; Dr. W. J. Mayo, Rochester, Minn., and Dr. J. J. Walsh, New York. Dr. Lee closed the discussion.

Dr. Robert H. M. Dawbarn, New York, read a paper, "Points in the Control of Emergency Hemorrhage, Both Medical and Surgical." Discussion by Dr. F. W. Higgins, Cortland; Dr. Homer Wakefield and Justin L. Barnes, New York; Dr. W. G. Schauffler, Dr. W. E. Swan, Dr. Fitzgerald, Dr. Stern, Dr. Simpson, Beaver Falls, Pa.; Dr. A. J. Ochsner and Dr. W. J. Mayo. Dr. Dawbarn closed the discussion.

A symposium on pneumonia was presented as follows:

Dr. A. C. Abbott, Philadelphia, Pa., read a paper, "Pneumonia from the Bacteriological Standpoint." Discussed by Dr. Alexander Lambert, New York.

Dr. Alexander Lambert, New York, read a paper, "Leucocytosis in Pneumonia."

Dr. Joseph W. Grosvenor, Buffalo, sent a paper on "Treatment of Pneumonia," but owing to the absence of the author and the lack of time, only his conclusions were read.

Discussion by Dr. F. W. Higgins.

On motion, the Association adjourned at 1 P. M.

AFTERNOON SESSION.

The meeting was called to order again by the President at 2 P. M.

Dr. Francis P. Kinnicutt, New York, read a paper, "The Finsen Light Treatment of Small-pox; also the Finsen Treatment of Various Dermatoses by Concentrated Chemical Rays, with Exhibition of the Lamp." Discussion by Dr. W. S. Gottheil, Dr. Milton Franklin and Dr. L. Duncan Bulkley.

Dr. Eden V. Delphey, New York, opened the symposium on the Roentgen ray by a paper on "The Roentgen Ray: Its Mechanics, Physics, Physiology and Pathology."

Dr. Carl Beck, New York, read a paper, "The Operative Treatment of Fractures as Indicated by the Roentgen Ray."

Dr. Charles Warrenne Allen, New York, read a paper, "Results in Fifty Cases of Cancer Treated with the Aid of the Roentgen Rays."

Dr. E. V. Delphey, New York, read a paper, "The Roentgen Ray in Gynecology."

Dr. Joseph B. Cook, New York, read a paper, "The Roentgen Ray in Obstetrics." The general discussion was participated in by Dr. W. J. Morton, New York; Dr. F. P. Kinnicutt, Dr. C. W. Allen, Dr. W. B. Coley, Dr. Homer Wakefield, Dr. Milton Franklin. Dr. Delphey made closing remarks.

This completed the scientific programme. It was followed by the installation of officers.

Dr. A. A. Hubbell said: "In bringing this session to a close I think we have cause for congratulating ourselves in having had one of the best programmes ever presented to the Association. I am sure we have had a much larger average attendance than ever before, even though our registration has not been quite so high as at some other times. This good average attendance is, of course, due to the excellent programme that our committee of arrangements had prepared for us. This programme has been supported by some of the most distinguished men in our Association. It has also been honored by distinguished colleagues from out of the State, making the programme an exceptionally strong one, and we have been honored by guests from several different State societies. I congratulate the Association, and I congratulate myself

on the good fortune of having been the presiding officer at this meeting.

"It is my pleasure now to introduce to this Association the incoming officers, the Secretary and the Treasurer have been re-elected. I take great pleasure in presenting to you the President for the ensuing year.

"Dr. Wiggin, the President-elect, has been a tremendous factor in the growth of this Association. We must regard Doctor Gouley in one sense as the father of the Association, but Dr. Wiggin and his associates have contributed much to the success of this Association. He deserved this honor long before, and I am very glad that it has come, although perhaps late. I am sure there is a prospect for still greater success for our Association.

"At the other end of the State we have an honored worker who never misses a meeting—Dr. Thornton. He thoroughly deserves the honor of being Vice-president. I need not speak of our Secretary, who has been re-elected. He has been of very great assistance to me. Our esteemed Treasurer is re-elected, and I am glad to say that the Association is still to have the benefit of his services.

"I now transfer the gavel to my worthy successor, Dr. Frederick Holme Wiggin, of New York, the President of the New York State Medical Association." (Applause.)

Dr. Wiggin: "Mr. President, Ladies and Gentlemen—I thank you for your very kind reception, and I hope during the coming year I shall have your sympathy rather than your congratulations in connection with this position which I have been asked to fill at this time.

"You know that an organization means a systematic union of people in a body whose officers and members are all working for a common end. You have, therefore, also a responsibility in this matter. It has been my experience that the members have not always realized that they were an important factor in the success or failure of the work of the officers. The latter are set apart for a little time to bear the burden of the day while you are allowed to attend to your own affairs. Now, these men, whom you have asked to assume this responsible position and to do good, real, honest work, both day and night for you, deserve your sympathy, and when they ask you to come to the meetings, to pay your dues and to do many other proper things, you should respond cheerfully.

"I want to ask for a little charity towards the men who are conducting the affairs of the Association. If some notice fails to reach you of a meeting, do not believe that the Chairman or Secretary is guilty of some little trick. That idea is gaining too much ground in this Association for comfort. Do not believe that every one but yourself is dishonest; remember that your officers are human beings and try and believe that they are endeavoring to do their duty. If our Journal has not been as interesting as it

should be, it has been more the fault of the individual members than of the Committee on Publication. Those of us who have been actively engaged in this work find that we often receive no response until we have written several letters. The greater part of the expense and the annoyance of official life are due to the neglect of the individual members to play their part well.

"Go home and think of what I have said here, and talk to other members about it.

"This year promises to be one of great importance to us. We are trying to hold out the olive branch to another society, and settle for all time the differences separating the members of the regular profession of the State of New York. All present here at this time can do much towards bringing about this desirable end. If our overtures fail, then you must help me to fight the battle of the profession of the State of New York as well as of the United States. We must be united. If we cannot be united nominally, then we must do such good work that no reputable physician can afford to be outside of this organization. It lies largely with you as well as with the officers to bring that result about.

"It now gives me great pleasure to introduce the Vice-president, Dr. Thornton."

Dr. W. H. Thornton: "I thank you very much for the honor conferred upon me. During the last eighteen or nineteen years I have worked as well as I could for this Association, and in doing so it has been a great source of satisfaction to me to observe the progress of the Association. We have been able to do some work in the Western Branch of the State Association, and intend to do much good. I hope we can very largely increase our membership before the next annual meeting of the State Association. If I can assist the Association better in this new office, I shall be only too glad to do so."

On motion of Dr. E. Mayer, the Association unanimously tendered a vote of thanks to the retiring officers for their labors, especially the President, Vice-president, Secretary, Treasurer, and the Chairman of the Committee of Arrangements.

Dr. Hubbell replied: "I have esteemed this position of President a high honor from the beginning, but the courtesy shown me by the Association has heightened that honor very much, and I am sure I only express the feelings of the other officers who have served you this past year."

At 5 P. M. the Association adjourned *sine die*.

NOTICE OF MEETING.

The quarterly meeting of the Erie County Medical Association will be held at the University Club, Buffalo, on December 8th. Dr. Marcel Hartwig will present "Hypertrophy of the Prostate" for discussion, and Dr. Arthur G. Bennett and Dr. E. E. Bradshaw the subject, "Is a Cycloplegic Necessary for Refractive Work?"

Original Articles.

THE NEWER RELATION OF THE PANCREAS TO GENERAL MEDICINE.*

BY ALFRED STENGEL, M. D.,
Philadelphia, Pa.

THE hidden situation of the pancreas made this gland one of the last of the important organs with which early anatomists became familiar, and the unobtrusiveness of the symptoms resulting from derangements of its functions made diseases of the pancreas practically unknown until comparatively recent times. Clinical observations and studies of the pathological anatomy of the pancreas were published by Morgagni and attempts at diagnosis of cirrhosis of the pancreas were made as early as the latter part of the eighteenth century, but all such attempts were of little practical worth. Several excellent monographs appeared during the former half of the nineteenth century and in 1878 Friedreich published a memorable review of the literature and of the then existing knowledge. Numerous cases of neoplasm, cysts and abscess with more or less satisfactory analyses of the clinical manifestations might be cited from the older literature, but whatever accuracy may be claimed for diagnosis of diseases of this organ dates from the publication of Fitz's lectures in 1889, and the modern conception of the relations of the pancreas to general metabolism took origin in the experimental studies of Von Mering and Minkowski, published in the same year. The physiology of the gland as far as its relations to digestion are concerned was established by Claude Bernard in 1856, after some notable attempts had been unsuccessfully made by earlier experimenters. Until very recent years, however, the role of the pancreatic secretion in digestion was considered of secondary importance, while gastric digestion was unduly magnified. Experimental studies in dogs and more lately some widely-heralded successes at removal of the stomach in man, have shown that gastric digestion is by no means indispensable, while the studies of physiological chemists have indicated that the proteolytic action of the pancreatic ferment greatly exceeds that of pepsin in rapidity and completeness. It follows that the digestion of the upper small intestine is a far more important function than had been thought and that the pancreas is in equal measure a highly important organ. New light has been thrown on the functions of the stomach, and in particular the motor power of this organ has come to be recognized as of even greater significance than its secretory activity. Chemical studies of the gastric contents have given place in large measure to methods for estimating the power of the organ to thorough-

*Read before the New York State Medical Association at the Nineteenth Annual Meeting, October 20-23, 1902.

ly mix its contents and propel these forward to the intestine for fuller digestion. Though some attempts have been made to establish methods for expressing the duodenal contents to determine intestinal digestion and thus in part pancreatic activity, it must be regretfully confessed that none of these is practical or reliable.

The suggestive resemblance of the pancreas to the salivary glands in their anatomical features as well as in their physiologic relations is indicated by the German name of the pancreas—*Bauchspeicheldrüse*. This resemblance, as well as the occasional occurrence of sialorrhoea as a symptom of pancreatic disease, has suggested a reciprocal relation or a connection of some sort through the respective nervous mechanisms, and some attempts have been made to arrive at an indirect estimation of pancreatic activity by studies of the saliva. I have myself thought that investigations in this direction might prove fruitful and encouraged Dr. Samuel M. Hamill to carry out a study of the saliva in various conditions. Others have published similar experiments, but it must be confessed that no result has been thus far achieved. Whatever expectations one may have entertained regarding such investigations concerned the amylolytic function of the pancreatic secretion. The failure to attain results in this direction has been more than counterbalanced by the discovery of other relations of the pancreas to carbohydrate metabolism, but this may be passed over for the present to be discussed later under the head of the internal secretion of the pancreas.

Excess of fat in the stools, fatty diarrhoea or steatorrhoea has been recognized as a symptom of pancreatic disease since it was first observed by Kuntzmann in 1820. Claude Bernard determined three actions of the pancreatic juice with regard to fats: 1st, the cleavage of neutral fats; 2d, the emulsification of these fats, and 3d, the promotion of their absorption. Numerous clinical experiments strengthened the physiologist's deductions, but later experiments seemed to show a want of relation of the pancreas to steatorrhoea and pathologists recorded instances of fatty diarrhoea without pancreatic disease and pancreatic disease without unduly fatty stools. More recent investigations and clinical experiences indicate that while the pancreas is a highly important organ in fat absorption it is not essential, and that the bile plays a considerable part in such absorption under normal circumstances and may replace the pancreatic juice almost wholly in pathologic conditions. Fatty diarrhoea is therefore an important symptom when other symptoms also point to the pancreas, and especially when there is no jaundice. The absence of fatty diarrhoea is far less important in excluding pancreatic disease.

Let us now consider very briefly the third digestive function of the pancreas: its proteolytic action. The importance of intestinal digestion

as contrasted with gastric digestion has been discussed. Whether the rapid emaciation of some cases of pancreatic disease can be properly referred to failing digestion of proteids or not remains to be determined by metabolic studies. Reduction in fat absorption, even though slight, may play a part, but this is probably a subsidiary part. Failure of albuminous digestion has been shown by experimenters who have removed small or large parts of the pancreas and have found excessive discharges of nitrogen and often visible portions of meat in the stools. Similarly in diabetes azorrhoea and the passage of wholly undigested meat has been repeatedly observed. This symptom, while of comparatively little value when taken by itself, is of considerable significance if the secretion of bile is normal and gastric and intestinal disease can be excluded.

Turning now to more obscure functions we come upon one of the most interesting results of modern medical investigation—the discovery of the relation of the pancreas to glycosuria. The occasional association of diabetes and pancreatic disease was observed by clinicians like Cowley, Chopart and Bright in the latter part of the eighteenth and early part of the nineteenth century, but this association was regarded as one of coincidence in most cases or as secondary pancreatic disease resulting from diabetes (Friedreich), Bouchourdat and Lancereaux insisted on the etiologic importance of the pancreatic disease and the latter author described quite carefully the symptomatic peculiarities of pancreatic diabetes, or, as he termed it, on account of the great emaciation, *diabetes maigre*. These clinical and pathologic studies and others of the same sort confirming them did not fully establish a pancreatic form of diabetes. The merit of thoroughly demonstrating the relation belongs to Von Mering and Minkowski. Other experimenters, including Claude Bernard, had attempted the solution of the question, but had failed to obtain results. Von Mering and Minkowski produced all of the features of diabetes as it occurs in man by extirpation of the pancreas in animals. Later a long line of experimentalists have confirmed their results. The total removal of the pancreas regularly causes glycosuria or diabetes in certain animals, but in other animals the results have been less satisfactory. The glycosuria thus produced does not remain constant, but tends to decrease after a time. When a considerable part of the pancreas is left intact glycosuria does not occur unless the remaining gland tissue suffers degenerative changes. That the results of pancreatic extirpation are the consequence of removal of a glandular activity and not of shock to important nervous structures in the vicinity (solar plexus) is satisfactorily demonstrated by the results of partial extirpation in which equal traumatism is inflicted, as well as by the absence of diabetes when a portion of the gland still attached to its arterial supply was implanted under

the skin of the abdomen. The subsequent removal of the embedded portion was followed by diabetes. Some have contended that removal of the gland operates, in part at least, by withdrawing the normal pancreatic secretion and by interfering in some way with intestinal digestion of starches. This opinion, however, is unwarranted in view of the results of the implantation of portions of the gland. In some of these experiments the embedded portions have been found to retain their ordinary secretory activity, but there was nevertheless pronounced glycosuria, an indication that some other activity of the retained portions of gland had been destroyed. It may be safely asserted that the occurrence of diabetes in cases of pancreatic disease or extirpation is the result of the abrogation of a function other than that of ordinary secretion. No end of speculation might be indulged in regarding the nature of the function so destroyed. It is possible on the one hand that the pancreas normally has a capacity for destroying injurious substances, or on the other hand that it elaborates a secretion that plays an important part in carbohydrate metabolism. While direct proofs are still wanting, the weight of evidence points to a lack of consumption or normal conversion of sugar resulting from cessation of an internal secretion of the pancreas as the cause of pancreatic diabetes. Lepine claimed that he had demonstrated the existence in the blood of a glycolytic ferment of pancreatic origin, but his experiments are far from satisfactory or conclusive. Other authors also asserted the discovery of glycolytic ferments, but a review of the whole question of glycolysis shows how uncertain all these experiments are. No satisfactory demonstration has been made to show that the results obtained are ascribable to a ferment rather than to products of post-mortem change. All that can be safely said at the present time is that the pancreas probably makes a secretion concerned in destruction of sugar.

It has been believed by some that increased conversion of glycogen into sugar is the important consequence of pancreatic disease, and that the resulting hyperglycemia causes diabetes. A mass of evidence might be adduced in disproof of this view which has been abandoned by practically all investigators.

The source within the pancreas of the internal secretion, if such there be, has been the subject of some apparently productive investigations. Langerhaus, in 1868, described certain groups of cells differing from the true glandular cells in appearance. These "islands" as they have been called do not stand in any relation with the excretory ducts of the gland, but on the contrary appear to be blood glands, and discharge their secretions into the circulation. A number of pathologists and experimenters have found lesions of these islands in cases of diabetes and absence of such lesions in non-diabetic cases. The most suggestive studies were those of Opie,

who found interstitial pancreatitis associated with diabetes in cases in which the disease had caused destruction of the islands of Langerhaus and absence of diabetes when the interstitial inflammation left the islands unaffected. Other investigators have found results pointing in the same direction, though sometimes in cases of diabetes the islands were not visibly altered. On the whole, however, the evidence strongly suggests a close relation. In a recent case under my care the patient was admitted to the hospital apparently in uremic coma, with abundant albumin and casts in the urine. There was a history of diabetes, but no sugar was present the first two days. On the third day sugar appeared and a strong odor of acetone was detected. The patient now presented the peculiar respirations of diabetic coma. Sugar continued in the urine in variable quantity till death. At the autopsy the kidneys were found highly diseased; the pancreas was normal to naked eye examination, but microscopically marked degenerative changes (hyaline change and necrosis) of the islands of Langerhaus were detected.

While the results of recent studies tend more and more to magnify the importance of the pancreas in the pathology of diabetes, it cannot be asserted that this organ always plays a part. The results of injuries of the base of the brain and of tumors in this situation, as well as the absence of demonstrable changes in the pancreas in such or in other cases do not permit us to view diabetes as necessarily a pancreatic disease. The advance in the significance of pancreatic disease, made during the last five years, has been in the direction of inclusion of cases with comparatively slight change in the pancreas—cases, in short, in which the islands of Langerhaus have been involved without gross change in the rest of the organ. These cases, it may be readily conceived, and the assumption is sustained by pathologic evidence, are unattended with symptoms usually regarded as indicating disease of the pancreas. It is perhaps not too much to surmise that in the future other instances of seemingly non-pancreatic diabetes will be found to be dependent on changes in this gland now unrecognized and possibly wholly functional in character.

The diagnosis of diseases of the pancreas must very shortly pass from the stage of uncertain guessing to that of a scientific process based upon well recognized clinical indications. A number of pancreatic symptoms have been recognized and a combination of these has in the past sometimes led to accurate diagnosis, but the nature of these symptoms is such, and their occurrence so irregular, that they cannot be relied upon in the majority of cases. The situation of the organ, in addition, is such that it is not readily examined by any of the ordinary means of exploration. There remains then only the possibility of detection of chemical methods by which derangements of the function of this

gland might be detected. Some of these will be referred to presently.

Among the symptoms of pancreatic disease emaciation has already been alluded to. In some cases its rapidity of development, and its intensity, are such that the term *cachexia pancreatica* is indeed well merited. The most pronounced cases of this sort have been cases of carcinoma of the pancreas, but the independence of the cachexia from cancer is shown by its presence in cases of other forms of pancreatic disease. That it is dependent on the failure of the pancreatic digestive ferments is more than likely, and in view of recent knowledge it is therefore not surprising that without this symptom diabetes may be present in consequence of affection of the islands of Langerhaus. There is nothing in the emaciation of pancreatic disease by which it can be specially recognized, though its intensity, rapidity, and the associated prostration are highly suggestive, and when combined with indications pointing to deep seated disease in the upper abdominal zone, this combination becomes almost diagnostic. In acute pancreatic disease it is wanting and it is notable that such acute disease frequently occurs in the corpulent.

Fatty diarrhoeas or steatorrhoea has already been discussed, and its unreliability when taken by itself has been referred to. That the pancreas plays a part, and an important part, in the digestion of fats and that the lack of pancreatic secretion may be the cause or contributing cause in fatty diarrhoea, is undoubted; but, just as certainly cases of pancreatic disease may be unassociated with this symptom and the symptom may occur when the pancreas is normal. It need only be explained that while the pancreas is an important factor, it does not exclusively control fat absorption.

Lipuria and lipemia may be referred to in the same connection. While both of these symptoms are met with in cases of diabetes and in pancreatic disease, they are of comparatively little practical value. The occurrence of indican in the urine was at one time thought an important sign. Being a product of indol transformation under the influence of pancreatic secretion and bacterial activity, its absence was looked upon as an indication of pancreatic disease. In a few cases the occurrence of intestinal obstruction without indicanuria has been regarded as proving such pancreatic disease, and autopsy has confirmed the suspicion. Recent investigations, however, would show that no reliance can be placed upon the estimation of indican or of the conjugate sulphates to determine the presence or absence of diseases of the pancreas. It is not impossible that determinations of fat splitting ferments in the urine may be so perfected that some indication of diseases of the pancreas may be obtained. No such methods have, however, been devised.

Sialorrhoea has been mentioned as an occa-

sional pancreatic symptom. It is by no means frequent and possibly less significant of pancreatic than of certain gastric diseases.

Peculiar forms of diarrhoea besides the fatty diarrhoea I have discussed occur in some cases. The diarrhoea may be copious and watery or ropery in character, suggesting an analogy with the sialorrhoea just spoken of. In other cases the stools are not diarrhoeal in the ordinary sense, but the patient discharges inordinate quantities of fecal matter, most probably because the lack of pancreatic digestion has hindered digestion and absorption of food.

I shall refer very briefly to subjective symptoms. In acute cases (acute pancreatitis and pancreatic hemorrhage) these are highly characteristic and have repeatedly led to a correct diagnosis; but in chronic cases the symptoms may be readily confounded with those of other diseases. Deep seated, intense epigastric pain of sudden onset and accompanied by profound depression or collapse is a combination of symptoms that may result from perforation of a gastric or duodenal ulcer, from certain nervous diseases, and from angina pectoris, but is more distinctly characteristic of acute pancreatic disease, especially when symptoms pointing to the other conditions named have been excluded. In chronic cases the symptoms may be similar but less intense, except in the case of acute exacerbations, as when a pancreatic calculus becomes lodged and released at intervals. The situation of the pain, its intensity and its distribution (running toward the left and sometimes to the left shoulder) are significant conditions. In nearly all cases the patient is conscious of the deep seated character of the pain and he describes it as passing through the body rather than around it. Reflex disturbances of the stomach and profound depression or collapse probably the result of irritation of the adjacent nervous mechanisms (solar plexus) are important accompaniments.

I cannot now discuss at length the situation and topographical diagnosis of tumors and cysts of the pancreas. Their deep origin, their immobility, their relations to the stomach, and the symptoms accompanying them sometimes make the diagnosis fairly certain. When the head of the pancreas is involved the occurrence of jaundice, with distention of the gall bladder and without notable increase in the size of the liver, may establish a diagnosis. In a recent case I was able to recognize a pancreatic carcinoma by the occurrence of marked gastric dilatation accompanied by constant vomiting of large quantities of bile. There was no jaundice, as the bile duct was unobstructed and the obstruction of the intestine occasioned enlargement of the stomach, while it caused a discharge of the bile into that organ.

If now we consider the possibilities of diagnosis of pancreatic disease and review the literature we shall find that carcinoma and cysts have been recognized repeatedly and that in typical

cases this diagnosis may be fairly certain. Acute pancreatitis and hemorrhage into the pancreas are also conditions that are now generally recognized as coming within the range of diagnostic possibility.

Whether or not a case of diabetes is pancreatic in origin is a more difficult matter. It is not warranted to regard emaciation even though rapidly developed and profound as necessarily significant of pancreatic disease, though the association of some other pancreatic symptoms may render the diagnosis certain. In this connection let me say that the symptom glycosuria is too often considered a necessary one to the establishment of a diagnosis of pancreatic disease. We have seen that this symptom is by no means a constant one, and that extensive disease of the organ with pronounced symptoms of failing pancreatic secretion may be unattended with glycosuria, while the latter symptom may result from pancreatic disease of such a kind and distribution that the ordinary disturbances of secretion are lacking and such pancreatic symptoms as emaciation, fatty diarrhoea, etc., do not present themselves. We still lack a method of investigation to recognize such cases.

Pancreatic calculi have been correctly diagnosed during life in five cases. This at once indicates the difficulties in diagnosis and the occasional possibility, for in the cases referred to there was good reason to make the diagnosis. In some other cases of suspected calculus the suspicion was confirmed, but it cannot be said that an accurate diagnosis was made. In a case observed by Pepper in 1882 the diagnosis was made on the ground of repeated attacks of intense colic, deep seated in the upper part of the abdomen, the pain radiating to the left, unattended by jaundice. No stone was passed and the case was not examined post mortem. Within a few days a similar case has been under my observation. A lady who ordinarily presents no evidence of gastric, hepatic, cardiac or nervous disease, and whose urine is normal, has had four attacks of severe abdominal colic, which she locates in the upper and left abdominal region, and which she describes as so situated that she cannot tell whether it is nearer the back than the anterior surface. The pain shoots directly through the body and there are tender spots to the left of the spine. The first attack occurred ten years ago, the other three have been separated by long intervals, the last occurring a week ago. There has never been the slightest trace of jaundice. Each attack is accompanied by moderate fever. There is great tenderness and muscular rigidity in the epigastrium, but no tumor. Such cases as this in which gastralgia, gastric ulcer, cancer, angina, locomotor ataxia and other conditions attended with gastric crises can be excluded, and in which the location and distribution of the pains are suggestive, may be regarded with some suspicion of pancreatic disease. They illustrate the limitations of our knowledge in the absence

of such objective signs as tumor or the passage of a stone.

With regard specifically to the relations of the pancreas to general medicine, we must recognize that but a beginning has been made by the recognition of the bearing of pancreatic disease on diabetes. In the future it is not improbable that more accuracy of knowledge of the peculiar digestive disturbances that result from pancreatic disease will be attained and that specific disturbances of metabolism will be recognized.

SURGERY OF THE STOMACH FOR THE RELIEF OF NON-MALIGNANT PATHOLOGICAL CONDITIONS.*

BY A. J. OCHSNER, B.S., F.R.M.S., M.D.

Surgeon-in-Chief of Augustana Hospital and St. Mary's Hospital of Chicago. Professor of Clinical Surgery of the Medical Department of the University of Illinois.

ALL stomach surgery at the present time is directed toward the relief of gastric ulcer or one of its various sequelae. Of these the most common are pyloric constriction followed by gastric dilatation due to obstruction; chronic recurrent ulcer with its hemorrhages; pouched stomach with its residual contents of decaying food giving rise to the absorption of products of decomposition; adhesions to the stomach wall of surrounding structures due to threatened perforation; acute perforation; and last, but not least in importance, carcinoma originating in an ulcer.

In this paper I will attempt to give in as concentrated a form as possible the present status of stomach surgery for the relief of gastric ulcer, well knowing that the subject is still in the first stages of its development, and that most surgeons have had but little opportunity to test their theories in this field, and those with the largest experience have come to positive conclusions upon only a few phases of this subject and are constantly changing their methods as a result of increased experience.

My own clinical experience comprises twenty-seven operations in this variety of stomach surgery, which is, of course, not sufficient to warrant any positive conclusions, especially as many of these cases are of too recent date to make the results obtained by the methods employed necessarily permanent. This list contains two cases of perforative ulcer with two deaths; eight open but not perforated ulcers, all recovering, and seventeen non-malignant pyloric obstructions, with one death from pneumonia a month after the operation. For the purpose of comparison I will state that during the same period I operated 32 cases for the relief of cancer, with six deaths.

As a matter of clinical experience it should be stated that a large proportion of cases of perforative ulcer of the stomach are encountered in which the opening in the stomach wall has been closed with omentum or by the adhesion of the

*Read before the New York State Medical Association at the Nineteenth Annual Meeting, October 20-23, 1902.

stomach to the anterior abdominal wall, or if the ulcer is not located on the anterior wall, into the pancreas or some other organ. In many of these cases the diagnosis is made accidentally when the resultingsub-diaphragmatic abscess or an abscess in the abdominal wall is opened. The frequency with which this condition is encountered would indicate that it is not an uncommon matter for spontaneous closure of these perforative ulcers to occur. It stands to reason that many of these perforations from which the patients recover are never diagnosed.

It is quite a different matter in the cases in which the perforation occurs into the free peritoneal cavity. In these cases all observers seem to agree that only an early operation can result in a reasonable percentage of recovery, as shown especially well by Mikulicz, Keen, Lennander, Tinker, Weir and Foote and others. In all cases operated more than twelve hours after the occurrence of the perforation, the prognosis was almost absolutely bad. This was the case in my own two patients.

In case of perforation into the free peritoneal cavity, the indications for treatment are of course perfectly plain. A free abdominal incision should be made, the perforation located, the existing hemorrhage controlled, the perforation closed. The peritoneal cavity should be carefully cleansed and drained. A sufficient amount of fluid should be supplied to compensate for the amount lost by hemorrhage. This can usually be done by means of frequently repeated enemata of half a pint of normal salt solution, or in case this is not sufficient, by means of subcutaneous injection of normal salt solution.

The patient should be supported by means of exclusive rectal alimentation for a period of from one to three weeks after the operation. In case of nausea, gastric lavage should be practiced.

Even with an early operation, however, under the most favorable conditions, the prognosis must always be bad in this class of cases. It seems, therefore, that the suggestions of Robson, Mayo, Andrews and others to treat cases of gastric ulcer surgically long before perforation can take place and thus to prevent this catastrophe deserves the serious consideration of every surgeon. This becomes especially clear when we bear in mind that a large percentage of all cases suffering from ulcer of the stomach ultimately die either directly from perforation or from hemorrhage, or from carcinoma, Lebert 10 per cent., Welch 15 per cent., Robson 20 per cent., Brinton 50 per cent.

The more we are familiar with these cases, the plainer it becomes that serious ulceration of the stomach occurs only in the presence of faulty drainage. This may be the result of an obstruction in the pylorus itself, due to spasmodic contractions caused by the presence of a slight fissure or a minute ulcer which causes a paroxysm

whenever this surface is irritated by the presence of food.

In many cases a history of perforative appendicitis resulting in extensive peritonitis, and this in turn in troublesome adhesions will cause a sufficient distortion of the pylorus to cause this obstruction. Again the presence of stones in the gall bladder may cause spasmodic contractions of the pylorus. It does not matter how the obstruction to the pylorus is accomplished, the result must be the same upon the stomach. The contents of the stomach cannot pass on into the intestine in a normal way and as a result of this there is first a compensatory hypertrophy of the walls, then a dilatation with an accumulation of mucus and remnants of food which are sure to undergo decomposition. This is accompanied with the formation of gas, which will further increase the distention of the stomach. This in turn produces a deformity in the outlines of the stomach, the latter taking the form of a pouch downward, and this in turn increases the obstruction to the pylorus, because the food has to be elevated a considerable distance before it can reach this orifice.

The normal stomach extends obliquely across the abdominal cavity, the cardiac end being much higher than the pyloric end. The lesser curvature of the stomach extends almost vertically downward for the first two-thirds of its extent, slanting only very slightly toward the right, beginning at the point of entrance of the oesophagus, almost the entire curve being confined to the third nearest the pylorus. The greater curvature is more uniform and extends across the abdomen at an average angle of about 45. It is important to bear this in mind, because it explains to a great extent the increase in the obstruction resulting from the element of dilatation, which is in itself the result of an obstruction to the pylorus. It further explains some of the unsatisfactory conditions which are apt to persist after the primary obstruction of the pylorus has been relieved by a plastic operation for the enlargement of this orifice.

The pylorus which has been thus enlarged would readily permit the stomach contents to pass, if the stomach still had its normal form and position, but with the greater curvature, forming a deep pouch which has resulted from the obstruction, the emptying of this organ is greatly interfered with, even if the constriction of the pylorus no longer exists.

It is possible that the operation recently devised by Finney will overcome this difficulty. This operation consists in a long horseshoe-shaped incision through the anterior wall of the pylorus, the pyloric end of the stomach and the first twelve centimeters of the duodenum. This wound is subsequently closed in a manner which will leave the end of the stomach wide open into the duodenum. Theoretically, this operation promises well, because the enlargement of the

pyloric orifice is in a downward direction, but sufficient time has not elapsed to make definite conclusions, concerning its practical value, possible. It is necessary to await these results because the opening does not reach the lowest point in the stomach pouch.

The important fact which determines the necessity of surgical treatment consists in the tendency which is constant in a large proportion of these cases to progress from bad to worse, until the patient succumbs to a perforation or a hemorrhage or to some inter-current disease, determined by the reduced condition of the patient because of the presence of recurrent ulceration, or, as has been demonstrated so beautifully, especially by Fuetterer, there occurs an implantation of carcinoma at the seat of the ulcer. All of these conditions virtually depend upon the fact that it is impossible for the stomach to completely empty its contents at any time, and consequently its injured mucous lining is never fully relieved of the irritation due to the presence of decomposing substances. It is true that this fault can be overcome in mild cases by systematic dieting and the proper use of gastric lavage, but in advanced cases the only competent remedy consists in supplying proper permanent drainage.

This can be accomplished with the greatest degree of safety to the patient by making an anastomosis between the lowest point in the stomach and the jejunum at a distance of about forty centimeters from the point at which the duodenum issues through the mesentery of the transverse colon. Personally I prefer the Murphy button, but it is likely that the choice of method of making anastomosis is immaterial so long as the lowest point in the stomach and the proper length of small intestine are chosen. It is possible that anastomosis by means of the elastic ligature devised by McGraw will prove very valuable in these cases, but I have not as yet any personal experience with this method, which is, however, very popular with those who have tried it. Walker, of Detroit, and Mixer, of Boston, claim excellent results for this method. It is also immaterial whether the anterior or the posterior surface of the stomach be chosen for the anastomosis, provided the above precautions are observed. The error of making the opening in the stomach not at the very lowest point is very common and very pernicious, as has been pointed out by Mayo.

After free drainage has been established in this way the ulcer will heal, but if it has not been sufficiently extensive to cause a permanent closure of the pylorus, the latter is almost certain to begin to act in its normal physiological capacity again and then the artificial anastomotic opening will close, as shown by the experience of Mayo and myself. Then conditions will exist very similar to those which were present when the patient originally became ill. The pylorus will again become irritated and this will

result in its spasmodic contraction, which will prevent the normal drainage of the stomach, consequently an ulcer which has previously existed is likely to reopen and the entire history will be repeated. In my experience this occurred in about twenty per cent. of the cases and always within two months after the primary operation.

It is quite different if the pylorus has been closed permanently, because then the opening at the lowest point in the stomach will take up the normal function of the pylorus and will remain permanently patulous. It is possible that with the very large anastomotic opening which can be secured by means of the McGraw elastic ligature, this secondary complication may be prevented. This seems to be borne out by the experience of Walker in these cases. If this is not ultimately confirmed by clinical experience the remedy would be in closing or excising the pylorus in all of these cases. In many cases it may seem unsafe to make so extensive an operation, especially if it has to be performed during an uncontrollable hemorrhage or shortly after a hemorrhage in cases in which bleeding recurs frequently, making it unsafe to wait until the patient has fully recovered before attempting an operation, or in cases greatly reduced from lack of nutrition.

In these cases, however, simple gastro-enterostomy will result in temporary relief of the patient. The ulcer will heal and the patient will gain rapidly in weight and strength. It is, however, important in these cases to perform the second operation early, provided symptoms of recurrence appear.

This operation will be very simple and it is well borne by the patient. It consists in enlarging the gastro-enterostomy opening by making an incision four or five centimeters longitudinally through the jejunum and the same distance through the greater curvature of the stomach and then uniting the two openings with two rows of sutures. The remaining gastro-enterostomy opening will form one end of the new opening. I have repeatedly seen both the pyloric and the gastro-enterostomy openings reduced to less than five millimeters in diameter at the time of the secondary operation. It is possible that in this secondary operation the McGraw elastic ligature may be especially useful. At the same time an excision of the pylorus should be made.

By grasping a portion of the gastro-hepatic omentum directly above the pylorus between two pairs of haemostatic forceps, cutting between these and ligating, and repeating this step below the pylorus with the gastro-colic omentum, the pylorus becomes entirely bare. It can then be caught between two pair of long-jawed haemostatic forceps and excised. A purse-string suture is run around the end of the stomach and the end of the duodenum beyond the forceps. When the forceps are removed, these

sutures are tightened and the crushed ends are inverted into the stomach and the duodenum respectively. A few Lembert sutures complete the operation.

It seems to be unnecessary to excise the ulcer unless it is located directly in the pylorus or unless it is impossible in a given case to make a positive differential diagnosis between ulcer and carcinoma.

The presence or absence of enlarged lymph glands no longer serves as a positive diagnostic sign, because they are frequently present in both conditions. Whenever there is any doubt in this regard, the ulcer should be excised, if it is located in a position in which this is possible. If located upon the posterior surface of the stomach, it is often impossible to remove the ulcer because of strong adhesions to the duodenum or to the pancreas.

DISCUSSION.

Dr. John A. Wyeth said that there was nothing for him to discuss because he was so thoroughly in accord with what had been said by these two distinguished surgeons. These cases were certainly not medical, and the physician had nothing to do with them further than to refer them to the surgeon. He thought this statement applied even to the milder cases treated by Dr. Ochsner.

Dr. William Finder, of Troy, said that there was an important measure which would aid both the physician and the surgeon in determining whether there was a simple or a malignant ulceration. He referred to blood examinations, many of which he had made. When there was an ulcer there was always some leucocytosis, but it was not marked; on the other hand, in cases of malignant ulcer there was a noticeable and steadily progressing leucocytosis. The diagnosis in many of these cases was verified by autopsy, the patient refusing operation. He would, therefore, recommend that a series of blood examinations be made in this class of cases.

Dr. R. H. Gibbons, of Scranton, Pa., said that Dr. Mayo's recommendation to operate early for the purpose of making a diagnosis was an all-important point in this field of surgery. Dr. Charles C. Thompson, of Scranton, Pa., had recently made a gastro-enterostomy by means of the common stitch. The dog was taken violently ill about ten days afterward. It was found that there was an intussusception of the left or lower arm of the "elbow" amounting to seven inches. By making a hole in the posterior wall of the stomach this was beautifully demonstrated. Many cases of vicious circle, therefore, might be due to this cause. To prevent this vicious circle various plans had been adopted, such as the use of the Murphy button lower down. He personally recommended bringing together of both arms of the elbow by the method advised by Dr. Bodine in his operation for cholecystotomy. Both arms of the intestine are brought up and sewed with catgut.

Dr. J. Riddle Goffe thought all present were ready to accept the conclusions reached by these two writers. He would like to know something regarding the after-treatment, particularly as regards the maintenance of proper nutrition.

Dr. Mayo said that the surgery of the stomach had been hampered largely by tradition. The opinions and dicta laid down by men fifteen or twenty years ago still passed current. He looked forward to the time, and that very soon, when operations upon the stomach would be frequent and as successful as operations for appendicitis, gall stones and pelvic disease. There was no doubt that spur formation was one of the important causes of the so-called vicious circle. This vicious

circle had often resulted from a method of operating intended to avoid the blood vessels of the stomach, but which left a pouch in which the secretions accumulated. By doing the operation posteriorly the results were somewhat better, because it happened that the opening was put at the lower level. To avoid this vicious circle it was only necessary to place the opening at the bottom of the stomach. He was opposed to waiting for blood counts and other methods; while these were going on, the patient often went to the undertaker instead of going to the surgeon and being relieved.

Dr. Ochsner said he had entirely given up gastro-enterostomy because a large proportion of the cases had vicious circle. In a large experience with carcinoma of the stomach he had found that by simply washing out the stomach before and after meals the patients lived with greater comfort than if the gastro-enterostomy were made in the wrong way. He had had the good fortune of seeing Dr. Mayo do the operation in the right way, and had been surprised that he had never thought of the error in his former technique. The small intestine was a delicate tube, and the less it was disturbed the better. If the bile could run down hill without running into the stomach the vicious circle would not be established and the bile would not be vomited. The after-treatment consisted in exclusive rectal feeding for from two to four days, according to the patient, and then giving a small quantity of some of the predigested foods for a few days more. From the sixth or seventh day on the patient received broths. If the patient vomited at any time from any cause, even as a result of the anesthetic, the pharynx should be cocaineized and the stomach washed out with normal salt solution.

PNEUMONIA, FROM THE BACTERIOLOGICAL STANDPOINT.*

BY A. C. ABBOTT, M. D.

Professor of Hygiene and Bacteriology, University of Pennsylvania.

Mr. President and Members of the Association:

Before taking up the matter under consideration let me thank you for your courteous invitation to participate in this symposium.

Though the subject is replete with interest, our knowledge upon it is as yet far from complete or satisfactory in several important particulars, especially as regards the mechanism of infection and immunity.

In the course of my remarks I shall endeavor to point out these deficiencies, to indicate the lack of evidence for certain more or less popular impressions on the subject and to emphasize the reasons why due caution should as yet be exercised in the employment of animal products, generated in the course of pneumococcus infection, in the treatment of pneumonia in man.

From the bacteriological standpoint acute inflammatory conditions of the lungs may be conveniently divided into two groups: the one embracing that typical manifestation dependent upon a specific exciting cause and known to us as pneumonia; the other those expressions of pulmonary inflammation that are sometimes primary, sometimes secondary, variable in their clinical and anatomical peculiarities, and of inconstant etiological relationships.

It is to the former of these groups that my remarks will be especially directed.

*Read before the New York State Medical Association at the Nineteenth Annual Meeting, October 20-23, 1902.

The striking clinical peculiarities of pneumonia, the circumstances surrounding its occurrence; its occasional epidemic dissemination; and its unique local lesion, led, long before anything was known of its exciting cause, to the suspicion that acute lobar pneumonia might with propriety be reckoned with the typical infections.

It was not, however, until 1874 that this suspicion was expressed in the form of a logical argument. In his admirable article on Pneumonia, written for v. Ziemssen's *Handbuch der speciellen Pathologie und Therapie*, Jürgensen (¹) makes the first forcible plea for the inclusion of acute croupous pneumonia with the typical infectious diseases. To fully explain the phenomenon in all its phases it is necessary, he maintained, to assume the existence of a specific exciting factor, for none of the agencies hitherto regarded as of etiological import can, when critically examined, either alone or together, be regarded as of more than incidental or predisposing significance in inducing the condition.

With similar expressions of opinion from equally influential contemporaries, directing attention to a promising field of inquiry for the pioneers in the science of bacteriology then in its infancy, it is not surprising that results of one kind or another were prompt in forthcoming.

Within a year of the date of Jürgensen's paper Klebs (²) announced his discovery of spherical "monads" infective for rabbits in the bronchial secretions of pneumonic patients.

Six years later (1881) Eberth (³) followed Klebs with a description of elliptical cocci that he had found in the hepatized lung, the pleura and the meninges of a case of pneumonia with meningitis; and in the same year Koch (⁴) also notes the finding of oval cocci in the periphery of the pneumonic exudation of acute lobar pneumonia. Photographs were made from sections of these tissues and included as illustrations in his classical monograph "*Zur Untersuchung von pathogenen Organismen.*"

A year later (1881) Friedlander (⁵) demonstrated cocci constantly in stained sections of the hepatized pneumonic lung. In the following year Günther (⁶) and v. Leyden (⁷) detected micrococci in the fluid drawn from the pneumonic lung during life by means of the hypodermic syringe; Günther having shown them in stained sections and by photographs to be grouped in pairs and surrounded by a capsule.

Thus far, that is up until 1883, no effort had been made to cultivate the bacteria obtained from the lungs or other organs in pneumonia, and it was not until November of that year that Friedlander (⁸) in a second communication gave an account of the first successful efforts to isolate bacteria in pure culture from the tissues of acute lobar pneumonia.

As to the nature of the organisms seen microscopically by the investigators who antedated Friedlander one can only speculate. The or-

ganisms depicted by Günther certainly bear a strong resemblance to the diplococcus now generally regarded as etiologically related to the disease, and from the descriptions given by the other observers and the conditions under which their examinations were conducted there can be little doubt that some of them at least had also encountered that organism.

Friedlander's observations were at the time, very naturally, regarded as of great importance and for several years the "Pneumonie-Mikrokokkus" discovered and described by him was considered by many as standing in causal relation to the condition in which it was found. This opinion was strengthened not only by the frequency of its association, but more by the success which Friedlander stated he had had in the production of pneumonia in animals.

It would serve no useful purpose to enter at this time upon the details of Friedlander's work. It suffices to say that he found, as is well known, capsulated, oval micro-organisms in something more than fifty cases of genuine pneumonia examined by him and missed them, as he says, in only a few instances. It is not surprising that his work attracted very widespread attention, nor that the general trend of opinion at the time was to the effect that the exciting cause of pneumonia had been discovered.

The influence of subsequent events, however, upon Friedlander's views has been, as you are aware, to rob them of practically all but historic interest.

While resembling in certain particulars the now recognized micrococcus of lobar pneumonia, the organism discovered by Friedlander is by its morphological, cultural and pathogenic features readily shown to be a distinct species. Though found occasionally in croupous pneumonia, it is absent from the majority of cases, and even in those in which it is detected it is rare, if ever, that it is unaccompanied by the organism now believed to excite the disease.

In consequence of these facts, together with others that will be presented later, the adherents to the views of Friedlander have dwindled in number until to-day they represent but a small and at most uninfluential minority. Singular enough we find Weichselbaum among those who still believe in the occasional etiological significance of Friedlander's organism,* a position in which he finds himself doubtless as a result of his own investigations published in 1886, and to be mentioned later on.

Those of you who have followed this matter will recall that in 1881 Sternberg (⁹) and in the same year Pasteur (¹⁰) announced the discovery

*As late as 1898 Weichselbaum, in his monograph "*Parasitologie*" in Weyl's *Handbuch der Hygiene*, in writing upon Friedlander's organism, remarks: "Der Bacillus pneumoniae wurde bei lobärer und lobulärer Pneumonie und zwar allein oder in Verbindung mit dem Diplococcus Pneumoniae oder den Eiterkokken gefunden ferner noch bei Pleuritis, Endocarditis, Pericarditis, Otitis und Meningitis in Abscessen u. s. w., jedoch bisher nur in relativ wenigen Fällen. Nichtsdestoweniger besteht kein Zweifel, dass er in den betreffenden Fällen der Erreger der vorhandenen Krankheiten war."

in human saliva—in the case of the former from a normal individual, in that of the latter from a child afflicted with hydrophobia—of a micrococcus, a diplococcus, that had the property of causing acute septicaemia in rabbits. Pasteur predicted that the organism would prove of importance in the etiology of disease, though neither he nor Sternberg suspected its relation to pneumonia, a reasonable omission at the time and under the circumstances of their discoveries.

In 1883 Talamon⁽¹¹⁾ detected in the fluid drawn by means of the hypodermic syringe from the hepated lungs of eight cases of lobar pneumonia a lanceolate micrococcus grouped in pairs which, from his description, especially from the accounts of his culture tests and its pathogenic properties on animals, was without doubt the organism that Sternberg and Pasteur had found in the saliva and was shown equally without doubt to be worthy of serious consideration in connection with the disease. He gave to the organism the name "coccus lanceolatus," a designation now regarded as freer from objection than any of the very many others with which it has been christened.

The real significance, however, of this organism in the causation of pneumonia was not impressively demonstrated until 1884, when A. Fraenkel⁽¹²⁾ reported to the Third Congress for Internal Medicine, held in Berlin, the fact that he had isolated in pure culture on solid media the diplococcus under consideration from three cases of lobar pneumonia. In one case he found it pathogenic for rabbits, contrary to what is true of Friedlander's organism; and he also found it devoid of certain conspicuous cultural peculiarities by which the latter organism is characterized. Fraenkel expressed the belief that the organism isolated by him is different from that of Friedlander; that it is the real exciting cause of lobar pneumonia, and, for the first time, recognized its close relationship to the pathogenic diplococcus found in saliva by Sternberg and Pasteur. In a subsequent paper⁽¹³⁾ Fraenkel established the identity between his organism and the so-called micrococcus of sputum-septicaemia. He gives its morphological peculiarities; notes the fluctuations in its virulence; and mentions its occasional presence in the mouth of healthy human beings, a fact that he regards as of significance in explaining the occurrence of pneumonia after the action of certain predisposing causes, particularly of catching cold.

In the following year (1886) three communications gave further accounts of his investigations⁽¹⁴⁾. He described more in detail the characteristics of micrococcus lanceolatus with which he had busied himself; brought out the points of distinction between it and the organism of Friedlander, and gave the grounds for identifying it with the micrococcus of sputum-septicaemia. He also gave acceptable reasons for regarding it as the common and most frequent exciting cause not only of pneumonia, but of many of the other

conditions concomitant with and secondary to pneumonia. In one of these papers^(14a) he expressed the belief that the available evidence warranted the opinion that pneumonia might occasionally, though rarely, be excited by other organisms, especially that of Friedlander, a view that was subsequently (in the last of the three papers^[14c]) modified to the effect that the single specific cause of genuine croupous pneumonia in man was the micrococcus lanceolatus under consideration.

In the course of his analysis of the subject Sternberg was at first disposed to regard the capsulated "coccus" (now known to be a bacillus) discovered by Friedlander as identical with the organism found by him in saliva and named by him "micrococcus pasteuiri." Later studies of pneumonia convinced him, however, of the error and left no room for doubt that the organism with which Fraenkel had busied himself was identical with the one both he and Pasteur had in 1881 encountered in the saliva⁽¹⁵⁾.

Except in certain particulars Fraenkel's work received the fullest confirmation through the investigations of Weichselbaum⁽¹⁶⁾. Weichselbaum's study was conducted at about the same time as were those of Fraenkel and independently of them. His work was of importance not alone because of its confirmatory character, but because of its comprehensive nature; the scientific precision with which it was in general conducted and the large material from which the conclusions were drawn. Though antedated by the publications of Fraenkel it is for many reasons of equal importance, and stands to-day as one of the conclusive arguments for the micrococcus lanceolatus as the specific factor in the causation of pneumonia.

Weichselbaum examined by both microscopic and cultural methods 129 cases of acute pulmonary inflammations, in 94 of which micrococcus lanceolatus was found. Of these, 78 were genuine lobar pneumoniae.

In the course of Weichselbaum's work certain results were obtained which, from our modern ideas of a specific infection, were more or less discordant. Thus, for instance, he found that though the large majority of the cases of pneumonia examined by him had associated with them a specific micro-organism, namely, micrococcus lanceolatus, there was still a small group of those cases, clinically typical, in which that organism was not found, its place being taken by some one or another of the bacteria of interest, either that of Friedlander or the so-called "streptococcus pneumoniae" of Weichselbaum.

If this observation be correct, we have before us an interesting condition, namely, a phenomenon of definite clinical and anatomical peculiarities that may at one time be due to the activities of one organism, at another to an organism of totally different biological characters and pathogenic potency; a state of affairs not fully in accord with our modern conceptions of a spe-

cific infection. Obviously we are disposed to question the accuracy of the observation. Indeed, there can be no doubt from Weichselbaum's own writings that he himself had misgivings. We are disposed to think, with him and others, that in some of the cases at least, in which only the organism of Friedlander was demonstrated, the micrococcus lanceolatus, common to the majority of the typical cases, may have been present and may have been overlooked. When we bear in mind that the diplococcus common to acute lobar pneumonia is an organism of most uncertain morphology, vigor and virulence; that even in the hepatized lung its characteristics are seen to vary according to its location in the lesion, cultures from the progressing periphery being usually viable and virulent, those from the center being often incapable of growth and disease production—i. e., dead, it is easy to comprehend the difficulties of its detection and to understand how it may, in some cases, have been present in such small numbers, or, more likely, in a state of such low vitality as readily to have been overlooked, especially when associated with the more rapidly growing, easily identified, hardy organism of Friedlander, an organism now known to be pretty often present in the upper air passages in health as well as in disease, and also known to be of relatively low disease producing power when tested on the lower animals. This belief receives material support through the results of subsequent investigators. To cite only a few conspicuous instances: Pearce⁽¹⁷⁾, as a result of the examination of 121 cases of acute lobar pneumonia by trustworthy modern methods demonstrated the presence of micrococcus lanceolatus in 118 of them; Currie⁽¹⁸⁾ in every one of 32 cases examined by him, and Welch⁽¹⁹⁾ in 10 consecutive cases analyzed in the Pathological Laboratory of the Johns Hopkins University. Results of this character, together with such observations as those of Currie⁽²⁰⁾ and others not only lead us to suspect the bacillus of Friedlander as being of doubtful pathogenic significance, but when all the circumstances are carefully considered, viz.—the relatively slow and uncertain growth of micrococcus lanceolatus; its comparatively rapid death and degeneration in the diseased tissues; the irregularity of its morphology and staining peculiarities; the fluctuations in its cultural peculiarities and the relatively immature technique of the time, we may, I believe, without going too far, safely suspect that micrococcus lanceolatus was or had been present in all the cases of genuine lobar pneumonia examined by Weichselbaum. Indeed, attention has already been called to certain technical procedures employed by him which, without entering into details, could scarcely have been expected to certainly and at all times reveal the presence of each individual species present in the exudate under consideration.⁽²¹⁾

With Fraenkel's concluding papers, substan-

tiated in their important particulars by the excellent work of Weichselbaum, the question concerning the etiology of acute lobar pneumonia was settled to the satisfaction of most minds.

There was one point, however, in which the argument was by many regarded as incomplete. According to the tenets of bacteriology a micro-organism shall be capable of reproducing the condition in which it is found before it can be regarded as the cause of that condition. Genuine lobar pneumonia was not regularly produced in animals by any method of inoculation with micrococcus lanceolatus. By particular methods of inoculation a sufficient number of efforts to satisfy the skeptical were crowned with some degree of success, but the outcome of many more was the induction of conditions both clinically and anatomically distinct from pneumonia as we understand it.

There are many reasons for this, the most important being that the animals available for experimentation do not naturally suffer from pneumonia as it is seen in man; and if they did it is doubtful if the simple injection of cultures into the body, even into the tissues of the lungs, of an animal in health, would excite the disease without the agency of those predisposing factors that go so far to determine the incidence of pneumonia in human beings. The production of an area of inflammation, even of hepatization, by the direct injection of pneumococcus cultures into the lung of an animal is of importance, but, with the best intentions, it cannot be regarded as the reproduction of pneumonia as observed in man. It is only a more or less faithful duplication of the local pulmonary lesion. There are good reasons for believing that normal man is but lowly susceptible to infection by this organism, and that for him to contract the disease it is necessary either for the invading organisms to be possessed of the fullest vigor and virulence or for his natural powers of resistance to have been lowered through the depressing influence of some one or another of the detrimental agencies to which he is from time to time exposed. It is not unlikely that in contracting the disease both conditions are, as a rule, fulfilled. The agency of cold in predisposing to pneumonia is so generally admitted that a number of efforts have been made to reproduce the disease in animals by subjecting them to extremes of temperature both before and after inoculation with the specific organism⁽²²⁾. Positive results are said to have followed such treatment in a few instances, but a consideration of the conditions of the experiments and the outcome scarcely convinces one that either the disease or the conditions under which it occurs in man were faithfully reproduced by the methods used.

The balance between the receptivity of the animal and the vigor of the invading foe is so nice in the natural order of things and is of such importance in deciding the course infection shall take, particularly in the disease under consider-

ation, that it is perhaps only by accident that these relations are fully reproduced or encountered in experimental work.

When we further bear in mind that most of the animals susceptible to infection by *micrococcus lanceolatus* contract, as a result of inoculation, either a local or a general infection that is sometimes of long duration, but more often acutely fatal; and when we remember the striking variations in susceptibility of animals of different species and of the same species at different ages to infection by this organism, together with the remarkable fluctuations in vitality and virulence already noted, it is scarcely surprising that but a small number of efforts to produce pneumonia in animals have been crowned with success.

To discuss further the details of this phase of the subject might be instructive, but I fear, at this hour, wearisome; and, furthermore, to plead at this late date for a general recognition of *micrococcus lanceolatus* as the specific exciting cause of pneumonia would, I am sure, be regarded as superfluous. In one of his splendid contributions to our knowledge of this topic Welch (²³) sums the matter up in the following acceptable manner:

"Acute lobar pneumonia as it occurs in human beings is a very definite and well characterized affection both anatomically and clinically. So far as known, the domestic animals are not subject to a form of pneumonia etiologically and anatomically identical with croupous pneumonia in man. Bacteriologists are not always pathologists, and the bare statement that the pneumonia produced experimentally is in all respects identical with acute lobar pneumonia in human beings should be received with caution. But fortunately it is not necessary to insist upon the absolute identity of the experimental pneumonias caused by the pneumococcus with human acute lobar pneumonia. We possess conclusive experimental proof that the diplococcus pneumoniae is capable of producing spreading inflammatory exudates with all of the characteristics of the exudate in croupous pneumonia as it occurs in man. The evidence that this microorganism is the cause of acute lobar pneumonia in man rests upon many points—which seem to constitute incontrovertible proof."

Interest in the subject of acute pulmonary inflammations was not abated by the discoveries in connection with the most characteristic manifestation. There are other types of pneumonia constantly encountered by the clinician and the pathologist, the etiology of which forms a subject of both practical and theoretic import. With the adoption of systematic bacteriological analysis as a routine procedure in the wards of the hospital, in the sick room and in the autopsy amphitheater several significant facts were soon established. First, it was found that the pneumonias, other than those of the genuine croupous type, are not specific in their etiology—

while they may often be, like the croupous type, due to the activities of *micrococcus lanceolatus*, they are as often, or oftener, due to the invasion of other organisms, especially the common pyogenic species.

Second, sufficient evidence has accumulated by this time to warrant the generalization that pneumonias occurring in the course of, or following upon other infective diseases, are often referable to the local action of the particular agent exciting that disease—so that, for instance, in the atypical pneumonia associated with typhoid fever we may suspect the localization of *bacillus typhosus* in the lung; in those concomitant with or following influenza, the influenza bacillus; in plague, the plague bacillus, with suppurative or erysipelatoid processes the common pyogenic organisms, and in the terminal infections, whether the lungs be the portal of entry or not, pneumonic manifestations are frequently characterized by the presence of that organism or group of organisms that are directly accountable for the fatal termination (²⁴).

Third, that in the course of typical pneumonia there are now good grounds for believing that the exciting organisms are not always confined to the diseased lung, but are frequently carried from it by the blood or lymph channels, giving to the disease the character of a septicaemia and farther complicating it with secondary involvements of more or less remote organs. In the early days of our knowledge on the subject evidence of the presence of pneumococci in the circulating blood in pneumonia was occasionally forthcoming. Later investigations have shown this to be much more often the case than was formerly supposed, and to be, in all probability, of far greater significance than it had been our custom to regard it. Thus, for instance, of 220 cases of pneumonia collected by Cole (²⁵), including 30 of his own, in which bacteriological examination of the blood was made during life, 106, or 48.2%, revealed the presence of diplococci in the circulating blood. Of this group of 106 positive cases 46, or 43.4% proved fatal, while of the 114 cases from the blood of which the organism was absent (or at least was not demonstrated) only 29, or 25.2%, proved fatal; a fact of obvious bearing upon the prognosis of the disease. Whether or not the renal involvements so often seen in pneumonia are always to be referred to the direct action of pneumococci carried to the kidneys by the blood cannot be decided at this time, since pneumococci have been found both in kidneys with and in those without demonstrable lesions. The studies of E. Fraenkel and Reichel (²⁶) revealed the presence of pneumococci in the kidneys in 22 out of 26 cases of pneumonia examined by them.

One of the most interesting and important phases of the subject comprehends the pathogenic potentialities and limitations of the organism concerned in the causation of pneumonia. That the Fraenkel-Weichselbaum pneumococ-

cus was capable of exciting conditions other than pneumonia was known or suspected almost from the beginning of our acquaintance with it. You will recall that mention was made a few moments ago of Eberth's discovery (in 1881) of elliptical cocci not only in the hepaticized lung and pleura of a case of pneumonia complicated with meningitis, but of apparently the same organism in the meninges as well. Since then its occurrence has been repeatedly noted not only in meningitis accompanying pneumonia, but in uncomplicated sporadic and in epidemic cases as well, and its etiological rôle in these instances can scarcely be questioned, unless it be in the case of the genuine epidemic type of the disease where the evidence points more directly to another organism as the common cause⁽²⁷⁾.

Its recognition as an exciting factor in pleuritis, endo- and pericarditis was established almost coincidentally with its identification with the pneumonic process and as bacteriological methods were systematically applied to the study of disease our knowledge of its pathogenic capabilities became still further extended. In consequence it has come to be regarded as a possible factor in the causation of widely divergent conditions, conditions differing not only in their clinical manifestations, but in their distribution and anatomical peculiarities as well. Without entering into the details it suffices to say that the records show it to have been etiologically concerned in inflammations of the serous and mucous surfaces; in abscesses in different parts of the body; in localized and disseminated inflammations of the joints; in diseases of the bones and periosteum; in inflammations of the parotid and thyroid glands; in suppurations about the nasal cavities, and in diseases of the kidney. It is the most frequent cause of metapneumonic pleurisy and empyaema; and it may cause septicaemia with or without local or disseminated pus formations. Since this organism is a frequent inhabitant of the mouth cavity in health, being at the same time often of full vigor and virulence, it is likely that invasion of the body takes place as a rule by way of the air passages and their accessory sinuses, though there is some evidence for believing that the intestines may occasionally serve as the portal of entry.

Notwithstanding the proof that pneumonia is a specific infection, notwithstanding the fact that the causative organism has been isolated and many of its peculiarities determined, we are still unable to utilize this information in satisfactorily explaining the phenomena of the disease. With the facts gleaned from the study of the exciting cause of pneumonia as a basis, efforts have been made, it is true, to explain the mechanism of the infection, to interpret the clinical phenomena, and to induce immunity from it, but as yet with little or no agreement in results and but little of substantial value to a full understanding of the subjects.

As the reasons for this may not be generally

apparent a few words in illustration of some of the difficulties encountered by the investigator may not be superfluous. While the biological peculiarities of all infective bacteria with which we are acquainted are liable to fluctuations under the influence of changing environment, there is probably no species with which the student has to deal in which this is so conspicuous as in the case of the pneumococcus.

When found in the normal mouth cavity it may be at one time as fully virulent as when in the advancing zone of a solidifying lung; at another either feebly infective or entirely devoid of this property.

In that portion of the pneumonic lung in which exudation is most actively in progress it is usually possessed of marked pathogenic powers, while in the deeper portions of the same lung, where hepaticization may be complete, it is often found to be of low virulence and sometimes entirely devoid of this property; in fact, often even incapable of exhibiting any evidence of life.

Under conditions of artificial cultivation extraordinary variations, not only in pathogenesis but in form and cultural peculiarities, are manifested. A culture obtained from a pneumonic sputum at the height of the disease, or from the blood of an animal dead of pneumococcus septicaemia may be of fullest virulence at the beginning and at the end of ten days or a week, sometimes more, sometimes less, may be not only without disease producing power, but may be actually incapable of further cultivation; i. e., may be dead, and this too under the most careful supervision; a fact which may bring to your notice one at least of the vexatious obstacles encountered in the course of this work.

In the case of some of the pathogenic species it is possible in one way or another to demonstrate their action, and separate from the living bacteria elaborating them the poisons through which are produced the lesions peculiar to the disease with which such bacteria are associated. As yet this has not been satisfactorily accomplished for the pneumococcus. The results of investigations upon this point are so at variance that a final general statement as to the character, location, mode of action, and manner of isolation of a specific intoxicant is not at this time justifiable.

From the symptoms of pneumonia in man, from the character of lesions produced in both man and animals, and from what is known of other infective bacteria, there can be no doubt that the growth of pneumococci in the tissues is associated with the elaboration of an intoxicant; in fact, the blood and tissue juices obtained during the height of pneumonia have been shown to be not only toxic for rabbits, but sometimes comparatively highly so.

The results of studies of the organism under artificial conditions of growth, on the other hand, contribute little in support of this view; for neither by the use of filtrates from fluid cul-

tures of virulent pneumococci, nor by the use of dead pneumococci themselves, destroyed by heat or otherwise, is it always possible to demonstrate the presence of intoxicants of conspicuous potency or in considerable quantity. By certain investigators, notably the Klemperer Brothers, efforts to demonstrate the existence of such toxins have met with success, but many other trustworthy students have either met with failure or have found intoxicants in only very small quantity or of but low toxicity. These differences may be referable to differences in the pathogenicity of the cultures used; but we cannot speak with certainty on that point. At all events, whether there be a toxin elaborated by the pneumococcus or not, there is as yet no consensus of opinion that there is a demonstrable parallelism between the virulence of the pneumococcus under artificial cultivation and the production of a specific toxin.

In his Huxley lecture recently delivered in London, Dr. Welch makes the significant suggestion that the intoxicating effect of certain pathogenic bacteria from which it has as yet been impossible to separate toxins, as commonly understood, might be explainable through an interaction or combination between certain elements, as yet unknown, contained within the bacteria on the one hand, and the tissues on the other; the relation between these bodies being complementary and the product of them being a substance proving destructive to the cells of the tissue. In view of the failure to isolate toxins from the pneumococci it would seem that this suggestion was particularly applicable to the subject at present under discussion. At all events it seems to me worthy of the most careful experimental consideration.

The foregoing has a direct bearing upon the efforts to procure a curative serum from animals rendered immune from pneumococcus infection and aids materially in comprehending the lack of success with which these investigations have in general met.

I do not desire to trespass upon your time to too great an extent, but it is essential to an understanding of the matter that certain fundamental principles underlying artificial immunization in general be clearly borne in mind.

Briefly stated, when immunity is artificially induced in susceptible animals it is through either the employment of infective bacteria or the products of their growth—both being modified in one way or another so that their employment does not imperil the life of the animal. In some cases living, virulent bacteria in such infinitesimal numbers are used that the animal, though susceptible, has still the power to overcome them, and after a brief reactionary period to return to the apparently normal condition. In other cases the living bacteria attenuated in virulence by thermal or chemical treatment are employed; the results of their sojourn in the tissues being often a mild attack of the disease from

which the animal recovers, and during which varying degrees of immunity are acquired. In still other cases the bacteria themselves in large numbers, but dead, destroyed by thermal or chemical means, are used, this to take advantage of the fact that in certain pathogenic species the specific poison is intimately bound up with the bacterial protoplasm; while in still other cases, notably those in which success has been most marked, the poisonous products of growth of the bacteria, separated from the living organisms by various chemical and mechanical procedures, are used.

The object of all this is obviously to excite in the tissues of the animal through the bacterial poisons reactions that are at bottom identical with those constituting the disease from which the animal is being immunized. And when it is possible to induce a high degree of such reaction or to repeat the reaction with sufficient frequency it is customary to find that the animal is not only protected from the ordinary fatal dose of the living infective organism, but often from high multiples of that dose.

In a few conspicuous instances this has, as you are aware, been done, notably in the case of Diphtheria, of Tetanus, of Anthrax, and of certain other septic infections of animals. However, the conspicuous successes have been in the case of the so-called toxic infections, and the reason for this will serve to explain the failure or only indifferent success that has followed upon efforts to immunize against pneumococcus infection.

In the case of the toxic infection with which we are best acquainted, i. e., diphtheria and tetanus, we have, to begin with, species of bacteria whose deviations from the average pathogenicity are slight as compared with those of the pneumococcus, and it is comparatively easy to secure types of the fullest vigor and virulence and have them retain these characteristics. By the use of such types it is always possible to obtain toxins in readily measurable amounts and of easily determinable toxicity. By the judicious adjustment of the doses of such toxins susceptible animals may with comparative ease be rendered tolerant—to speak loosely—to their action. When in this state they are not only immune from the toxins, but from the living organisms as well, and, what is of much greater importance, this tolerance is found to be due to the presence in their circulating blood of antidotal tissue elements—antitoxins as they are called—that will neutralize the toxins outside the body, in a test tube, or in the body of another animal or person into which they may be injected or in which they may be generated.

For successful immunization against pneumococcus infection and the induction of a useful antitoxic state in the immune animal it is of fundamental importance that we possess a means of securing the specific poison or of inducing its generation in the animal under treatment in such

a way as to induce the systematic reaction that results in the production of a specific antidote—either to the poisons or to the living bacteria themselves.

There has been no lack of effort in either of these directions. Early in the study of this subject the Klemperer Brothers (²⁸) attracted widespread attention through a series of important investigations and an ingenious hypothesis formulated as a result of them. They maintained that a toxic substance, to which they gave the name "pneumotoxin," is produced by the growing pneumococcus; that this substance can be isolated from the materials in which the pneumococcus has grown, and that by its use, as well as by other methods, such as the employment of living cultures modified by heat, animals can be rendered immune from infection by this organism; and that the blood serum of such artificially immunized animals is capable not only of protecting other animals against infection, but of greatly mitigating the course of the disease in animals already infected. They believed acquired immunity from pneumococcus infection to be referable to an antitoxic substance, an "antipneumotoxin," elaborated by the tissues. They claimed to have isolated such a body from the blood serum of artificially immunized animals. They found that if cultures of the pneumococcus capable of causing a fatal septicaemia in rabbits were exposed to moderate degrees of heat their pathogenic action was lessened and that they caused then only a mild systemic reaction that was followed by immunity. They interpreted the crisis of pneumonia in man as the moment at which the antidote to the "pneumotoxin" is elaborated by the cells of the body, regarding the events preceding the crisis, especially the elevation of temperature, as essential preparatory steps to the generation of the antitoxin. They believed the fever of the disease to have the same influence in modifying the toxic products of the pneumococci growing in the lungs as the heat artificially applied by them to the virulent organism and its products in the culture tube. They maintained that after the crisis the blood was characterized by the presence of the antidote to the specific poison of the pneumococci and that the living pneumococci being thereby prevented from injuring the tissues were rendered harmless and were soon destroyed, though not necessarily at once.

Believing the blood during the post critical period to be antidotal to the "pneumotoxin" and the blood of immunized animals to have a similar effect, they employed the sera obtained under these conditions therapeutically with favorable results.

Unfortunately these results, that attracted so much attention at the time of their announcement, are not in accord with those of many other investigators working upon the same problem and of certain investigators working along lines identical to those followed by the Klemperers.

Indeed, by a number of competent authorities they are regarded as disproved in many of their important particulars. As stated above, the existence of a specific pneumotoxin is not so readily demonstrable as their results would indicate. The immunity conferred upon rabbits by the method employed by them is often long delayed in its appearance, of low degree and of but short duration. The sera of such immune rabbits, "sometimes protects perfectly, sometimes partially, and sometimes not at all" against pneumococcus infection (Washbourn, ²⁹). The blood serum from human beings during pneumonia, including the post critical period, contrary to their declaration, is not always characterized by the presence of antitoxic substances and may even be possessed of marked toxic powers, as has been demonstrated on a number of occasions by injection into rabbits (Welch, l.c.), Foa and Carbone (³⁰) and Washbourn (l.c.).

I have dwelt at some length upon the work of the Klemperers both because of the widespread attention that it attracted and because of the influence exerted by it upon the work of other investigators. Since the publication of that paper a great many more or less successful efforts to immunize animals against this infection have been made. In some cases the methods followed were those of the Klemperers; in others living virulent pneumococci highly diluted were injected into the circulating blood; and in others sterile extracts of the blood and organs from animals and man dead of pneumococcus infection were employed. The outcome is in the main confusing—beyond the proof that animals may be immunized and that their blood sera often, not always, contain protective substances—there is little agreement, and as to the mechanism of such protection as is afforded there is a variety of interpretations. By the Klemperers (l.c.) and by Mosney (³¹) it is referable to the presence of antitoxins in the blood serum; by Foa and Carbone (l.c.), Emmerich and Fowitzky (³²), and Kruse and Pansini (³³) to the bactericidal action of the serum; by Arkharoff (³⁴) to a gradual attenuation of the living bacteria; Issaëff (³⁵), a pupil of Metschnikoff, naturally maintains that protection is afforded through the destructive action of phagocytes upon the pneumococci; M. Wasserman (³⁶) holds that the protective substance is only to a small extent present in the circulating serum, that its points of origin or of deposit are the bone marrow, the spleen and the thymus gland, while Pane (³⁷) believes the action of the protective serum upon the susceptible animal to be essentially the same as that of the specific toxins produced by the living organism, differing only in the rapidity with which they excite the systemic reaction indicative of tissue resistance.

From what has been said, and it represents but a part of the evidence, it is manifest, I think, that there is little justification for the belief that

a reliable curative serum for use in the treatment of pneumonia has been produced or by the customary methods of procedure is likely to be produced in the immediate future. Just what the outcome will be of the group of investigations upon larger animals, now in progress in several quarters, cannot, of course, be predicted, but before results claiming to be positive are accepted as final it is fair to insist that they be much more firmly grounded in experimental proof than anything hitherto contributed to the subject.

BIBLIOGRAPHY.

- (1) Jürgensen—v. Ziemssen's Hdb'k d. spec. Path. u. Therap. Band V. s. 1.
- (2) Klebs—Arch. f. exp. Path. Bd. 4.
- (3) Eberth—Deutsches Arch. f. klin. Med. Band XXVIII.
- (4) Koch—Mittheilungen aus d. Kais. Ges. Amte. Band I., 1881. s. 46. (Description of photographs 57 to 60 inclusive.)
- (5) Friedländer—Virchow's Arch. Band 87.
- (6) Günther—Deutsche Med. Woch. 1883, p. 52.
- (7) v. Leyden—Ibid.
- (8) Friedländer—Fortschritte der Med. 1883, No. 22.
- (9) Sternberg—National Board of Health Bulletin. April 30, 1881.
- (10) Pasteur—Bull. de l'Acad. de Med. Séance du 18 Jan., 1881. Discussion on paper by Raymond & Lannelangue. (See also Note by Welch—Johns Hopkins Hospital Bulletin. Vol. III, page 126.)
- (11) Talamon—Progres méd. 1883, No. 51.
- (12) Fraenkel, A.—Verhandlung der 3d Congr. f. inn. Med. 1884.
- (13) Fraenkel, A.—Verhandlung d. Vereins f. inn. Med. 13 Juli, 1885. Deutsche med. Woch. 1885. s. 546.
- (14) Fraenkel, A.—a (Zeit. f. klin. Med. 1886—Band X.)
b (Deutsche med. Woch. 1886—No. 13.)
c (Zeit. f. klin. Med. 1886—Band XI.)
- (15) Sternberg—Trans. Path. Soc. Philadelphia, 1885.
- (16) Weichselbaum—Med. Jahrbuch. Wien., 1886, s. 483.
- (17) Pearce—Boston Med. & Surg. Journal, 1897. Dec. 2d.
- (18) Currie—Med. and Surg. Reports, City Hospital, Boston, Mass., 1897.
- (19) Welch—Bull. of the Johns Hopkins Hospital, 1890, Vol. I, p. 74; 1892, Vol. III, p. 125.
- (20) Currie—Jour. Exp. Med. 1899, Vol. IV, p. 169.
- (21) See Baumgarten's comment. Footnote in Baumgarten's Jahresbericht. 1886, p. 75.
- (22) See—Ergebnisse der Allg. Path. u. Path.-Anat. d. Menschen u. d. Tiere. Lubarsch u. Ostertag; 6 ter Jarhg. 1899. Versuche ueber predisponierende Wirkung der Erkältung, s. 47.
- (23) Welch—Johns Hopkins Hospital Bulletin. Vol. III. 1892. pp. 137-138.
- (24) See Flexner—Trans. Assoc. Am. Phys. 1896. Vol. XI, p. 229.
- (25) Cole—Johns Hopkins Hospital Bulletin, 1902. Vol. XIII, No. 135, p. 136.
- (26) E. Fraenkel u. F. Reichel—Zeit. f. klin. Med. 1804. Bd. XXV, p. 230.
- (27) See—Flexner & Barker. Am. Jour. Med. Sc. 1804.
- See Councilman, Mallory & Wright—A Report of State Board of Health of Mass. 1898.
- (28) Klemperer, G. & F.—Berliner klin. Wochenschr. 1891, Nos. 34-35.
- (29) Washbourn—Jour. Path. and Bact. 1895. p. 225.
- (30) Foa & Carbone—Gaz. med. di Turin, 1891. No. 1.
- (31) Mosney—Arch. d. med. exp. et d'Anat. path. 1892, t. IV, p. 195-244.

- (32) Emmerich & Fowitzky—Trans. VII internat. Cong. Hyg. and Demog. London, 1891.
- (33) Kruse & Pansini—Zeit. f. Hygiene, Bd. XI, 1891, p. 279.
- (34) Arkarow—Arch. de med. exp. et d'Anat. path. 1892, t. IV, p. 498.
- (35) Issaëff—Annales de l'Inst. Pasteur, 1893, t. VII, p. 260.
- (36) Wassermann, M.—Deutsche med. Woch., 1899, p. 141.
- (37) Pane—Centralblatt. f. Bact. u. Parasitenkunde. Abt. I, 1897, Bd. XXI, p. 664.

DISCUSSION.

Dr. Alexander Lambert, of New York, said he had listened to this paper with a great deal of pleasure, and there was certainly no reason for him to apologize for its length. The speaker said that for four years he had endeavored to find an effective serum against the pneumococcus. He had tried it on thirteen human beings, but, in his opinion, with negative results. He had used a horse serum obtained by injecting very virulent cocci into the horse. After one of the bleedings the horse died, and the autopsy showed a malignant endocarditis on the valves of the heart as a result of the action of the micrococci. Investigation showed that the pneumococci were growing in the serum in the ice-box; nevertheless, ¼cc. of this mixed with a culture and injected into rabbits would protect them absolutely, although the germs would invariably kill rabbits not so protected. In his opinion, the lungs being, so to speak, outside of the blood vessels, the serum did not reach the exudate where it was most needed. In a certain number of cases it seemed to prevent the general septicemia which occurs in fatal cases. In one man having a pneumococcus septicemia this was controlled by the serum, the pneumonia running its normal course thereafter and the patient recovering. The nondiffusibility of the immune body was a great disadvantage. It belonged to the globulin type and was not a nuclealbumin. These globulins were not diffusible through membranes. It was believed now that two substances were required to destroy the bacteria; that is, the so-called immune body and the so-called alexin or complement. This meets with the former in the leucocytes to form hemolysin. Richardson had already proved that the alexins in typhoid fever constituted the peculiar elements of that disease.

At the conclusion of the symposium on pneumonia, Dr. F. W. Higgins, of Cortland, said he would like to hear the experience of the authors regarding creosote. He had been using the salicylates, but having had a recent unfortunate experience he was more than ever interested in the creosote treatment.

OCULIST AND OPTICIAN.

From the St. Louis *Globe-Democrat*, a newspaper, we cut the following advertisement:

The Difference Between an Oculist and an Optician.—The optician tests your eyes free and ruins them for you. The oculist is a graduate of medicine, who has to take a special course and several postgraduate courses to become one. If you have trouble with your eyes, Go to an Oculist and Pay for the Examination, then bring your prescription to me to be filled. I will save you money. I am the best frame-fitter in St. Louis.

Optician and Expert Frame-Fitter.

That optician deserves the encouragement of every physician. Both poisons and spectacle lenses should not be sold to the public except upon a physician's prescription. Whatever article of the *materia medica* may do physiologic good may also do as great or greater harm.—*American Medicine*.

Book Reviews.

A TEXT-BOOK OF PATHOLOGY AND PATHOLOGICAL ANATOMY. By Dr. Hans Schnaus, Professor in the Pathological Institute at Munich. Translated from the sixth German edition by A. E. Thayer, M.D., Instructor in Pathology, and edited, with additions, by James Ewing, M.D., Professor of Pathology in Cornell University Medical College, New York. In one octavo volume of 597 pages, with 351 illustrations, including 35 colored inset plates. Cloth, \$4, net. Philadelphia and New York: Lea Bros. & Co., publishers.

This work is well known to all German students as a most comprehensive text-book of pathology, and it is a pleasure to find it translated into English. In size it does not rank with the larger works on the subject, but in its wealth of valuable information and clearness of style it leaves but little to be desired. Many of the references, however, are adapted more to the needs of the clinician than to those of the student, and to the former it will undoubtedly prove to be especially valuable.

The matter is divided into a general and a special part. In the former are discussed such topics as disorders of circulation, regressive and progressive processes, anomalies and deformities, and general diseases from disturbed functions. Under the last heading are grouped such auto-intoxications as uremia, retention icterus, myxedema, diabetes, Addison's disease, status lymphaticus, Basedow's disease, puerperal eclampsia and uric-acid diathesis.

In the special part the pathological changes of the various organs are described. The eye and the ear are not taken up, but a brief chapter on the skin has been included. Of particular value is the chapter devoted to the lungs. That on the pancreas is too brief, when one considers the vast amount of work accomplished in recent years upon this organ. It is interesting to note that the parasitic origin of tumors receives but slight attention. The author believes that the so-called parasites and protozoa are either innocent fungi or the degenerative product of cells, and that tumors are spread as bits of living tissue, increasing and invading the tissue wherever they stop. The definition of psammoma (page 164) is hardly sufficient for the student. To quote: "When certain cell groups or fibrous strands calcify, the tumor is known as a *psammoma*, and is usually benign." We fully agree with the author's statement that a positive diagnosis of syphilis is impossible when based upon vascular changes alone (page 292).

The translation is very satisfactory, though here and there certain foreign idioms are manifest. The editor has added but little to the original text. The author's preface has been eliminated. The book is handsomely gotten up, the illustrations and plates are numerous, and in most instances excellent. Altogether the work is a readable and important one, and it should be in the hands of all who are interested in pathology.

TRANSACTIONS OF THE WISCONSIN STATE MEDICAL SOCIETY. Pp. 474.

This publication contains the proceedings of the fifty-sixth annual meeting of this Society. Twenty-seven papers that were read at the meeting are contained in this volume. Among these are interesting articles by Dr. Flexner, of Philadelphia, and Dr. Cushing, of Baltimore; then follow the names of the 750 members of the Society. Taking it as a whole the volume is a very creditable one.

INTERNATIONAL CLINICS. A quarterly of illustrated clinical lectures and especially prepared articles of interest to students and practitioners by leading members of the profession. Edited by Dr. Henry W. Cattell; Volume III, Twelfth Series. Philadelphia: J. B. Lippincott Company. Pp. 303, cloth.

This volume is in keeping with the same high standard that the Clinics have maintained since Dr.

Cattell has taken charge of the publications. All of the monographs are from the pens of well-known writers. Osborne writes on typhoid, Dieulafoy on pleurisy and Selmans on inflammation. Not the least interesting are the articles by two members of our State Association, *i. e.*, Internal Piles, by Dr. J. P. Tuttle, and Insect Parasites, by Dr. J. J. Walsh. While the volume may not appeal to the specialist it will be of great service to the general practitioner, particularly so if he does not keep abreast of current medical journalism. The work is well bound and the articles are well illustrated.

DISEASES OF INFANCY AND CHILDHOOD. Designed for the use of students and practitioners of medicine. By Henry Koplik, M.D., Attending Physician to the Mount Sinai Hospital; formerly Attending Physician to the Good Samaritan Dispensary, New York. Illustrated with 160 engravings and thirty plates in color and monochrome. New York and Philadelphia: Lea Bros. & Co., 1902.

The author has incorporated what is of value in the recent literature on this subject, with the results of his own clinical experience, and given an excellent compendium of pediatrics of to-day as understood and practiced by himself. As he has consistently followed his purposes of deciding for the reader between divergent views, he must naturally expect criticism from those who differ with him.

In some instances his classification is open to criticism. Some of the articles are so short as to be unsatisfactory and some subjects which deserve consideration have been entirely omitted.

We cannot understand why the author classes scrofula as a specific infection. He defines scrofula to be a constitutional dyscrasia, which may be due to one or two different causes. A dyscrasia that may be produced by more than one infection is certainly not specific.

A small percentage of cases of otitis is followed by caries of the mastoid. This hardly justifies classifying otitis as a disease of the bones.

The article on epilepsy is meager and disappointing. Scant attention is given to the nontuberculous forms of cerebral meningitis.

A number of skin affections, notably the parasitic ones which are quite common in children, are not even mentioned. For instance, tinea capitis is preeminently a children's disease and at present is quite prevalent in large cities.

The diagnosis of this condition is of great importance in children attending school, for obvious reasons, and hence is certainly deserving of attention in a chapter on skin diseases.

Typographically, the book does credit to the publisher. The numerous illustrations, which are mostly original, are well chosen and add greatly to the value of the book.

THE PHYSICIAN'S VISITING LIST, for 1903. Fifty-second year of its publication. Philadelphia: P. Blakiston's Sons & Co., 1012 Walnut street.

The 1903-1904 edition of The Physician's Visiting List (Lindsay & Blakiston's) enters upon the fifty-second successive year of its publication. In addition to the numerous other valuable features, we note two new ones, namely, the pages on incompatibility, chemic, paracetic and therapeutic, and the page on the immediate treatment of poisoning. These additions will enhance considerably the value of this little work as a pocket record book and ever-handy reference guide for the medical practitioner.

THE MEDICAL NEWS VISITING LIST, for 1903. Philadelphia and New York. Lea Bros. & Co. \$1.25.

A visiting list of convenience for the active practitioner, its pages are arranged to record memoranda and engagements of every description occurring in the practice of medicine and surgery. It is printed on fine, tough paper and durably and handsomely bound.

TRANSACTIONS OF THE STATE MEDICAL ASSOCIATION OF TEXAS. Pp. 600.

The promptness with which the editor of the Texas Association has published the proceedings of his so-

ciety bespeaks a volume of good papers. After reading it over one cannot fail to be impressed with the fact that Texas is well to the front in the field of scientific medicine.

It contains 54 original papers, together with the discussions on the same, the minutes of the May meeting and a list of upward of 600 members of the Association. It is one of the handiest bound copies of transactions coming to this office.

TRANSACTIONS OF THE WEST VIRGINIA STATE MEDICAL ASSOCIATION. Pp. 250.

This little volume contains 17 original papers, the minutes of the thirty-fifth annual meeting, lists of members, and a copy of the new constitution and by-laws made to conform with the requirements of the constitution of the American Medical Association. The total membership is 381.

TRANSACTIONS OF THE MISSISSIPPI MEDICAL ASSOCIATION.

This volume of 262 pages contains 22 articles presented at the thirty-fifth annual meeting of this organization. The society has a membership of 500 and is apparently in a flourishing condition.

TRANSACTIONS OF THE COLORADO STATE MEDICAL SOCIETY.

This volume opens with the minutes of the annual meeting. A new constitution and by-laws to conform with those of the American Medical Association were adopted. It was decided that on account of the amount of time and labor expended by the delegate of the State Society to the House of Delegates of the American Medical Association his expenses be paid. This is an excellent idea, and we trust it will be imitated by other State organizations in the future. Certainly there was not much recreation for the members of the House of Delegates at the Saratoga meeting. Another commendable feature of the proceedings was the award of a prize for an essay on "Self-drugging, with Proprietary Medicine." The volume also contains 28 original articles, many of which are profusely illustrated. The meeting was held in June, and the transactions appeared in August, a promptness that is commendable. The Society has a membership of 450.

THE PRACTICE OF SURGERY. A treatise on surgery for the use of practitioners and students. By Henry R. Wharton, M.D., Clinical Professor of Surgery, Women's Medical College of Pennsylvania; Surgeon to the Presbyterian and Children's Hospitals; and B. Farquhar Curtis, M.D., Professor of Clinical Surgery, University and Bellevue Medical College, New York; Surgeon to St. Luke's Hospital, etc. Third edition, revised and enlarged. Profusely illustrated. Philadelphia and London: J. B. Lippincott Company, New York. 1902.

The past three to five years have been marked by the writing of so many text-books on surgery that the appearance of a third edition of one of them indicates the favor with which the previous editions must have been received by the medical profession. The authors have succeeded in the difficult task of condensing into one volume "the information necessary to enable the general practitioner or student to carry on or begin the successful practice of the art of surgery." They have accomplished this by devoting fully 700 pages of the book to general surgery, pathology and bacteriology, wounds and their treatment, sepsis and antiseptics, anesthesia, operative complications, the pathology, diagnosis, symptoms and treatment of affections of the bones, joints, muscles, arteries, veins, nerves, etc.

The descriptions given are concise and lucid, and the illustrations are well chosen. The chapters on fractures and dislocations are admirable for their conciseness. The sections devoted to the diseases of the abdominal cavity and its contents and to hernia are well written and fully up to date, although some details of importance—such as the occurrence of fat necrosis

in affections of the pancreas, Kader's method of gastrostomy, and others—are omitted.

Some of the definitions of surgical lesions might be criticized. The term "puruloid material" is certainly not well chosen, nor should syphilis and rabies be included under the list of inflammatory conditions caused by special bacteria without further comment. Aside from these minor matters, however, the volume is worthy of recommendation to the busy practitioner and the student. It shows careful editing, methodical exclusion of unnecessary detail, due consideration of the more recent advances in surgical knowledge, and is a distinct improvement upon the previous editions.

BIOLOGICAL LABORATORY METHODS. By P. H. Wells, Ph.D., Director of Alabama Experiment Station; Professor of Gynecology and Botany, Alabama Polytechnic Institute. New York: the Macmillan Company. Cloth, \$1.60, net.

Although this little volume is intended particularly for college students, it will be more valuable to the student intending to fit up a laboratory of his own; as an aid in this work it will be found very useful. The descriptions of operations are concise and clear. The amount of space given to oculars, objectives and the theories of optics is rather large considering the size of the book. The chapters on photography are excellent. The laboratory worker will perhaps be disappointed at finding no directions for preparation of individual species either in bacteriology or marine biology, but the book is not intended for a hand-book in either of these subjects. An unpleasant impression is received in turning over the pages by the apparently unnecessary prominence and frequency of the names of various manufacturers of optical goods. The book is profusely illustrated and well indexed.

APPLIED SURGICAL ANATOMY. By George Woolsey, A.B., M.D., Professor of Anatomy, Cornell University Medical College. Lea Bros. & Co.

This work compares favorably with any other upon similar topics to be found anywhere. Every page shows evidence of careful work. With exceedingly few exceptions the facts of anatomy bearing upon surgery and upon surgical pathology are set forth, and in a scholarly way. It is also up to date, including the results of recent studies in various countries. An exception is the omission of any reference to the law of Courvoisier, referred to by Osler, among others, and now generally admitted to be valuable in the diagnosis of surgical diseases of the gall-ducts.

A rather curious fact is the pretty general omission of the names of American workers in original fields, though their work is itself given; whereas the names of European workers are carefully stated, in courtesy to them.

In a subsequent edition it would be well for the author to be systematic in the matter of either adopting or dropping the metric system. In parts of the book all measurements are metric; in other parts the English scale is exclusively used; and occasionally both systems upon the same page.

The actual errors in statement of fact are very few indeed. An important exception, which should be noted and corrected, is the assertion upon page 303 that the catgut used by surgeons is made from the *muscularis mucosæ* of the bowel of sheep.

This is undoubtedly taken from the thirteenth American edition of "Gray's Anatomy," page 1021, where the anatomist who there wrote up the abdominal viscera made this error, and subsequently admitted to the reviewer that it was a mistake. He meant the *submucosa*—the middle one of the five layers of the bowel-wall, and the only one of any tensile strength. The *muscularis mucosæ* is so insignificant a layer—practically microscopic only—that until recent editions it was ignored altogether, as the name "submucosa" indicates, it being thus assumed that the submucosa is the layer next beneath the mucosa.

Dr. Woolsey's book is supplied with a carefully prepared index, adding much to its value.

INDEX TO VOLUME 2.

CONTRIBUTORS.	
Abbott, A. C.	359
Allen, Charles Warrenne.....	176
Ayers, Edward A.....	119
Bates, W. H.	199
Biggam, William H.	152
Brothers, Abram	258
Bryant, Joseph D	254
Bullock, Earl Sprague	84
Burke, Joseph	286
Cohen, Bernard	80
Cruikshank, W. J.	208
De Schweinitz, E. A.	9
Deaver, John B.	267
Denison, Ellery	329
Dennis, Frank W.	113
Doty, Alvah H.....	329
Ferguson, E. D.	297
Fielder, Frank S.	107
Floersheim, Samuel	201
Gerster, Arpad G.	76
Gibb, Joseph S.	24, 56
Goldon, S. Ormond	226
Golet, Augustin H.	180
Harrison, Geo. F.	205
Haynes, Irving S.	271
Higgins, F. M.	240
Hotchkiss, Lucius W.	141
Hubbard, S. Dana	102
Hubbell, Alvin A.	363
Jack, G. N.	145
Kathan, Dudley R.	241
Keys, Edward L., Jr.	206
Le Boutillier, William G.	15, 183
Le Fevre, Egbert	47
La Garde, Louis A.	21
Lee, James	226
Lester, Elias	253
Leo, Johanna B.	197
Lewis, James Taylor	198, 251
Livingston, Alfred	262
Loughran, Frederic William	222
Lyon, Irving Phillips	281
Lytle, Albert T.	232
McFarland, Joseph	41
Marple, Wilbur B.	204
Mayer, Abraham	42
Mayer, Emil	5, 164
Mayo, William J.	314
Morre, R. C.	7
Myers, A. F.	220
Nammack, C. E.	8
Ochsner, A. J.	356
Preston, A. W.	316
Quimby, Charles E.	12, 109
Reilly, Thomas F.	86, 329
Robinson, A. R.	51
Robinson, Edward Percy	150
Rochester, De Lancy	88
Stearns, B. W.	185
Stengel, Alfred	352
Stockton, Charles G.	232
Sturtevant, J. R.	220, 229
Syms, Parker	83
Townsend, Wisner R.	265, 329
Tuttle, James P.	169
Van Hoesenberg, Henry	230
Walsh, James J.	319
Whitcomb, J. L. C.	41
Wiggin, Frederick Holme.....	329
Wyeth, John A.	17, 35

SUBJECTS.	
A	
Abdominal myomectomy, vaginal versus.....	278
Abolition of the newspaper publication of personal medical advertisements	166
Address, the President's. By Alvin A. Hubbell, M.D., Ph.D.	204
Address of the President-elect, Frederick Holme Wiggin, M.D.	351
Address of the Vice-president-elect, William H. Thornton, M.D.	352
Address read at the special meeting of the Fifth District Branch. By Emil Mayer, M.D....	5
Adrenalin in ophthalmology, the use of. By Wilbur B. Marple, M.D.....	204
Alcohol as understood at the beginning of the new century, the therapeutic value of. By Frank W. Dennis, M.D.....	113
Alcoholism, Quinquand's sign of chronic (exch.)	90
American Medical Association, report of meetings of the	190
meetings of the board of trustees.....	93
the reorganization of	273
excursion. By Johanna B. Leo, M.D.....	197
Anesthetics, instruction in (exch.).....	195
Anesthetics, ethyl bromide and chloride, respectively, as surgical. By S. Ormond Goldon, M.D.	226
Ankylostomiasis	248
Anginose scarlatina, complicated measles and diphtheria	332
Annual meeting of the New York State Medical Association, the nineteenth.....	218, 334
Program. By Irving S. Haynes, M.D., chairman Committee on Arrangements.....	271
Annual transactions, a monthly journal versus...	275
Antiseptic, tuppentine as an	101
Antitoxin laboratory of the State Board of Health.	134
Antivivisectionist, Dr. Pfeiffer remains an	92
Antivivisectionists, the (exch.).....	195
Aortic system, congenital narrowness of the. By Joseph Burke, M.Sc., M.D.	286
Appendicitis. By John B. Deaver, M.D.....	267
Army, the Surgeon-General of the.....	188
Army surgeons wanted	217
Army canteen, the	1
Army, venereal diseases in the	2
Army, venereal virulence in the	2
Arteriosclerosis, cardiac manifestations of. By De Lancy Rochester, M.D.....	88
Arteriosclerosis, the management and treatment of. By Egbert Le Fevre, M.D.....	47
Associated defense	330
Association, the principles of the American Medical	156
Association, the State. By James Taylor Lewis, counsel	198
Association, the annual meeting of the N. Y. S. M.	218, 271
Associations, County. See County Associations.	
Association, American Medical, 35, 93, 123, 125, 154, 155, 156, 187, 188, 190, 197,	273
Association of Urologists, the American.....	91
Atropin as a safeguard in chloroformization (exch.)	248

B	
Bacillus, tuberculin and products of the tubercle.	9
Bacillus, life of the typhoid	249
Bacteriological standpoint, pneumonia from the. By A. C. Abbott, M.D., Philadelphia.....	351
Benefits of the association	6
Benzine in surgery (exch.)	90
Bias, Herbert Spencer and his antimetaphysical.....	215
Bill, State charities	150
Bill, the lunacy	35
Bills before the Legislature	37, 68, 98
Bill, the osteopathic	33
Bill, abstract of the Brackett osteopathic.....	34
Blackmailers, doctors and (exch.).....	36
Blackmail suits against physicians	1
Blackmailers and illegal practitioners. By James Taylor Lewis, counsel	251

Blood origin and not nerve or reflex, asthma of.
 By G. N. Jack, M.D. 145
 Blood examination from the standpoint of the
 general practitioner. By F. M. Higgins,
 M.D. 240
 Board, Health, Camden 219
 Brief preliminary report of the use of urea at St.
 Joseph's Sanitarium, Silver City, N. M.
 By E. S. Bullock, M.D. 221
 Bromide, ethyl, as an anesthetic 226
 Bronchitis in adults 11
 Bronchitis, infantile (exch.) 298
 Bronchus, a Durham tube in the right. By E. D.
 Ferguson, M.D. 297
 Bronx, contagious disease hospital for the 99
 Burrage Hospital, Boston Harbor 247
 Burke benefaction, the (exch.) 219
 "Busy Doctor," A (exch.) 218

C

Cancer and skin diseases, radiotherapy in (illus.).
 By Charles Warrenne Allen, M.D. 176
 Cancer, the treatment of. By B. W. Stearns, M.D. 185
 Cancer of the stomach, the radical cure of. By
 William J. Mayo, A.M., M.D. 314
 Cancer, the parasitic origin of 188
 Canteen, the army 1
 Carcinomatous growths with caustics, the treat-
 ment of 51
 Cardiac manifestations of arteriosclerosis. By
 De Lancy Rochester, M.D. 88
 Cardiac organization society's committee on
 tuberculosis 249
 Care of the insane 331
 Charities bill, State 150
 Checks on degeneracy 218
 Chloroformization, atropin as a safeguard in
 (exch.) 248
 Cholecystitis, four cases of typhoid, two followed
 by gall-stones. By Charles G. Stockton,
 M.D., and Albert T. Lytle, M.D. 232
 Cholera, present outbreak of 131
 Christian science, logic applied to 156
 Climate, a silver city with a golden. By Earl
 Sprague Bullock, M.D. 84
 Clinical wisdom, the acquisition of 277
 Clinic, Yale medical school's new 257
 Columbia College, a physician elected as a trustee
 of 74
 Comments on some new surgical methods 17
 Commission evil, the (exch.) 64
 Committee reports. See reports.
 Compulsory vaccination law 99
 Compulsory vaccination 84
 Conference, report of the committee on 308
 Congenital narrowness of the aortic system. By
 Joseph Burke, M.Sc., M.D. 286
 Congress, International Sanitary 189
 Congress, the fourteenth International Medical... 134
 Consumptives, legal restraint on 2
 Consumptives, new home for incurable 99
 Consumptives, hardships inflicted on 3
 Consumptives, for Maryland 16
 Consumptives at liberty, the treatment of. By
 J. L. C. Whitcomb, M.D. 41
 Contagious disease hospital for the Bronx 99
 Convalescents, a new home for 220
 Coronation honors for doctors 215
 Correction of deformities following osteitis of the
 knee, the 265
 County Associations:
 Albany 157
 Broome 136, 162
 Chautauqua 39, 302
 Cortland 39, 72
 Dutchess 40
 Erie 5, 96, 138, 159, 278
 Kings 38, 70, 97, 135, 159, 301, 334
 New York 4, 72, 94, 135, 157, 334
 Oneida 157
 Orange 5, 38, 71, 97, 136, 162, 194, 250, 278, 300, 334

Otsego 39, 334
 Saratoga 138, 157, 302
 Sullivan 138, 300
 Ulster 72, 138, 160
 Cuba, quarantine for passengers from 219

D

Dangers of self-drugging with proprietary medi-
 cines, prize essay on 166
 Death rate for 1901 248
 Defense, organized medical (exch.) 42
 Delinquent members 124
 Departure, a new 67
 Diabetes mellitus, prognosis and treatment of.
 By William H. Biggam, M.D. 152
 Diabetes mellitus, prognosis and treatment of. By
 Abraham Mayer 42
 Diabetes, the surgical aspects of. By Arpad G.
 Gerster 76
 Diagnosis, aids to 64
 Diphtheria, the heart in (exch.) 249
 Directory of N. Y., N. J. and Conn., Medical.
 See Medical Directory.
 Diseased immigrants 257
 Disinfect the small intestine in man, attempts to.. 196
 Doctors and blackmailers (exch.) 36
 Drinking cups are to be abandoned, public 74
 Durham tube in the right bronchus, a (illus.) By
 E. D. Ferguson, M.D. 297
 Duty of the hour, the 123

E

Echinococcus disease in North America, a review
 of. By Irving Phillips Lyon, M.D. 281
 Eclampsia, treatment of puerperal (exch.) 247
 Elmira, State Reformatory at 92
 Empire building by force and by methods of peace
 —A contrast 132
 Ergot, the blood therapeutic application of. Al-
 fred Livingston, M.D. 262
 Expectorators punished 134
 Experts in insanity, medical 3
 Eyestrain and epilepsy (exch.) 276
 Ethyl bromide and chloride, respectively, as surgi-
 cal anesthetics, with a description of an
 apparatus for their scientific administra-
 tion. By S. Ormond Goldon, M.D. 226

F

Feeding of infants, the 274
 Fevers upon application and while you wait
 (exch.) 165
 Fifth District Branch, address read at the special
 meeting of 5
 Financial end of the Saratoga meeting, the. By
 J. R. Sturtevant, M.D. 220
 Fixation of prolapsed kidney, technique of (illus.).
 By Augustin H. Goelet, M.D. 180
 Forceps, the use and abuse of obstetrical. By
 Edward A. Ayers, M.D. 119
 Fractures, the leucocyte count in. By William G.
 Le Boutillier, M.D. 183
 Future of obstetrics as a specialty in America... 189

G

Gangrene of the lungs, operative treatment of... 99
 Gastric ulcer, perforation of. By Lucius W.
 Hotchkiss, M.D. 141
 Genito-urinary surgery, the suprarenal extract in.
 By Edward L. Keys, Jr., M.D. 206
 Glanders in a man 68 years of age, report of a
 case simulating (illus.). By J. R. Sturte-
 vant, M.D. 229
 Gouty and rheumatic patients develop fatal pul-
 monary phthisis, what percentage of. By
 Thos. F. Reilly, M.D. 86
 Government report of hookworm disease 248
 Gunshot wounds of the intestine, with recovery,
 a case of. By Henry Van Hoeven-
 berg, M.D. 230
 Gunshot wounds of the hip joint by reduced cali-
 ber projectiles (illus.). By Louis A. La
 Garde, U. S. A. 21

Gynecology and obstetrics, use of suprarenal extract in. By George T. Harrison, A.M., M.D.	205	Legal restraint on consumptives.....	3
H		Legal status of osteopathy, the	195
Hardships inflicted on consumptives.....	3	Legislature, bills before the	37, 68
Health Board, National	99	Legislature at Albany, medical	72
Health Board, Camden	219	Legislature, the State	98
Health Department, summer work of the New York	217	Leprosy, a supposed case of	247
Health in the United States	91	Leucoplakia. By W. J. Cruikshank, M.D.....	208
Heart, surgery of the.....	92	Literature, the physician in. By Elias Lester, M.D.....	253
Heart and lungs, the use of suprarenal extract in diseases of. By Samuel Floersheim, M.D.	201	Logic applied to Christian Science.....	156
Heart in diphtheria, the (exch.).....	249	Lunacy bill, the	35
Higher education in the medical profession.....	132	Lungs, operative treatment of gangrene of the....	99
Hip joint, gunshot wounds of	21	Lungs, the use of suprarenal extract in diseases of the heart and. By Samuel Floersheim, M.D.	201
Hippocrates and his medical school.....	216	M	
Home for ophthalmic institute, new	186	McKinley's physicians to be paid	219
Home for convalescents, New York City, a new..	220	Malignant neoplasms of the large intestine. By James P. Tuttle, M.D.....	169
Honors to Dr. Lazear	91	Malignant disease of the nose and accessory sinuses (illus.). By Joseph S. Gibb, M.D.,	24 56
Honors for doctors, coronation.....	215	Malpractice suit fails	255
Hookworm disease, Government report of.....	248	Management of normal labor, the. Bernard Cohen, M.D.....	80
Hospital, the Ward damage suit against St. Vincent	183	Management and treatment of arteriosclerosis, the. By Egbert Le Fevre.....	47
Hospital annex, Minturn.....	99	Maryland consumptives, for	16
Hospital for the Bronx, contagious diseases.....	99	Maternity, precocious (exch.)	90
Hospital, Burrage, Boston Harbor.....	247	Meddlesome midwifery (exch.).....	99
Hospital for Crippled and Deformed Children, the New York State	156	Medical colleges to credit each other.....	55
Hospital, new	331	Medical defense, organized (exch.)	42
Hospital, an ideal.....	333	Medical directory for 1902, our	271
Hospitals, psychopathic.....	220	Medical directory of New York, New Jersey and Connecticut. By A. F. Myers, M.D., secretary	220
Hospitals, the nursery and child's New York.....	74	Medical directory. By William S. Wray, M.D....	220
I		Medical experts on insanity	3
Illegal practitioner fined	220	Medical inspection of schools, the daily. By Fred-eric William Loughran, M.D.....	222
Immigrants, diseased	257	Medical inspection of schools, the. By James Lee, M.D.	226
Infantile pneumonia, a differentiating sign in...	99	Medical profession, higher education in the....	132
Infantile bronchitis (exch.)	298	Medical profession, the organization of (exch.)..	73
Infants, the feeding of	274	Medical school's new clinic, Yale.....	257
Insane, care of the.....	331	Medical school, Hippocrates and his.....	216
Insane in New York, to treat the acutely.....	218	Medical society in the United States, the oldest..	247
Insanity, medical experts on	3	Medical standards, reciprocity and	244
Inspection of immigrants, the	91	Medical unity in New York State.....	332
Inspection of schools, the daily medical. By Fred-eric William Loughran	222	Medicine and matrimony (exch.).....	245
Inspection of schools, the medical. By James Lee, M.D.	226	Meeting of the Association, the nineteenth, 218, 299, 243, 271	
Institute, new home for ophthalmic	186	Meeting, the Saratoga	125, 187
Instruction in anesthetics (exch.).....	195	Meeting of the board of trustees. A. M. A.....	93
Insurance, tuberculosis and life (exch.).....	298	Memorial at Fort Mackinac, the Beaumont.....	156
Insuring against illness (exch.).....	248	Michigan falls into line.....	217
International Medical Congress, the fourteenth..	134	Minturn Hospital Annex	99
International Sanitary Congress	189	Modification in the methods of operative surgery, resulting from laboratory research. By Joseph D. Bryant, M.D.	254
Internes in the State hospitals, an opening for...	154	Mosquitoes and malaria	252
Interstate reciprocity	165	Montreal, vaccination and smallpox in.....	99
Intestine, a case of gunshot wounds of, with recovery. By Henry Van Hoesenberg, M.D.	230	Monument to Rudolf Virchow.....	331
Intestine, malignant neoplasms of the large. By James P. Tuttle, M.D.....	169	Myomectomy, vaginal versus abdominal.....	278
Intestinal toxemia to arteriorenal disease, the relation of. By Charles E. Quimby, M.D....	109	N	
J		National Health Board	99
Journal versus annual transactions, a monthly....	275	Naval school goes to Washington.....	198
Journalism, a new departure in medical (exch.)..	277	Navy, our new Surgeon-General of the.....	189
L		Newspaper publication of personal medical advertisements, abolition of the.....	166
Labor, the management of normal. By Bernard Cohen, M.D.	80	Nose and accessory sinuses, malignant disease of the	24, 56
Laboratories of New York City and their products, the public health	37	Nurses demand recognition	285
Laboratory, New York State	134	Nurses' movement for registration	166
Laryngeal paralyses and their importance in general medicine (exch.).....	247	Nursery and child's hospital, New York, the.....	74
Law, compulsory vaccination	99	O	
Law, the dispensary	155	Obituaries:	
Law, changes in medical	195	Asch, Dr. Morris J.....	323
Lectureship	329	Babcock, Dr. Moses T.....	140

Report of the Committee on Legislation.....	338	Surgical methods, comments of some new. By John A. Wyeth, M.D.....	17
Report of the Committee on Library, report of the Committee on Public Health and Medical Charities, report of the Committee on Publication.....	341	Surgical procedures for pulmonary tuberculosis..	15
Report of the Counsel.....	342	Sydenham Society, new.....	64
Amendments	343	T	
Report of the Auditing Committee.....	346	Temperance, bad physiology and bad (exch.)....	219
Report of the District Branches:		Tetanus following vaccination. By Joseph McFarland, M.D.....	41
First District Branch, Second District Branch, Third District Branch.....	347	Therapeutic application of ergot, the broad. By Alfred Livingston, M.D.....	262
Fourth District Branch, Fifth District Branch	348	Therapeutic uses of the suprarenal extract, the. By W. H. Bates, M.D.....	199
Review of the echinococcus disease in North America, a. By Irving Phillips Lyon, M.D....	281	Tobacco and sterility (exch.).....	247
Rheumatism of single joints (exch.).....	298	Toxemia to arteriorenal disease, the relation of intestinal. By Charles E. Quimby, M.D..	109
Rheumatism (exch.).....	298	Trachoma in the public schools.....	245
Rheumatic patients develop fatal pulmonary phthisis, what percentage of gouty and. By Thomas F. Reilly, M.D.....	86	Transactions, a monthly journal versus annual....	275
Rheumatism, pseudo. By James J. Walsh, M.D., Ph.D.	319	Transactions	331
S			
Salutatory	299	Tube in the right bronchus, a Durham (illus.) By E. D. Ferguson, M.D.....	297
Sanitary Congress, International.....	189	Tuberculin test, the.....	73
Saratoga meeting, the (illus.).....	125	Tuberculosis and products of the tubercle bacillus. By E. A. De Schweinitz, M.D.....	9
Saratoga meeting, the (A.M.A.).....	187	Tuberculosis, the treatment of pulmonary. By Charles E. Quimby, M.D.....	12
Saratoga special, the.....	155	Tuberculosis, surgical procedures for pulmonary..	15
Sepsis, puerperal. By Dudley R. Kathan, M.D..	241	Tuberculosis of the neck, conservative surgery for. By Parker Syms, M.D.....	83
Sign in chronic alcoholism, Quinquand's (exch.)	90	Tuberculosis, to fight.....	220
Skin diseases, radiotherapy in cancer and (illus.). By Charles Warrenne Allen, M.D.....	176	Tuberculosis and life insurance (exch.).....	298
Smallpox in Virginia.....	247	Turpentine as an antiseptic.....	101
Smallpox	94	Typhoid bacillus, life of the.....	249
Smallpox and its treatment. By S. Dana Hubbard, M.D.	102	Typhoid cholecystitis, four cases of, two followed by gall-stones. By Charles G. Stockton, M.D., and Albert T. Lytle, M.D.....	232
Smallpox in Montreal, vaccination and.....	99	Typhoid fever investigation.....	247
Smallpox versus Dr. Pfeiffer.....	66	Typhoid fever, a notable improvement in the therapy of.....	326
State Reformatory at Elmira.....	92	Typhoid not always water borne.....	246
State charities bill.....	150	Typhoid infection, report of an interesting case of. By A. W. Preston, M.D.....	316
State care of the insane.....	331	U	
Sterility, tobacco and (exch.).....	247	Uncinariosis	248
Stomach, the radical cure of cancer of the. By William J. Mayo, A.M., M.D.....	314	Unification of the profession.....	65
Substitution, the practice of (exch.).....	285	Unity in New York State, medical.....	332
Substitution by druggists.....	131	Urea at St. Joseph's Sanitarium, a brief preliminary report of the use of. By E. S. Bullock, M.D.....	220
Summer work of the New York Health Board....	217	Urologists, American Association of.....	91
Suprarenal extract in genito-urinary surgery, the. By Edward L. Keys, Jr., M.D.....	206	V	
Suprarenal extract in gynecology and obstetrics, uses of. By George F. Harrison, A.M., M.D.	205	Vaccination, compulsory.....	84
Suprarenal extract, the therapeutic use of the. By W. H. Bates, M.D.....	199	Vaccination, the present status of.....	68
Suprarenal extract in diseases of the heart and lungs, the use of. By Samuel Floersheim, M.D.	201	Vaccination law, compulsory.....	99
Surgeon-General of the army.....	188	Vaccination, what constitutes efficient. By Frank S. Fielder, M.D.....	107
Surgeon-General of the navy.....	189	Vaccination and smallpox in Montreal.....	99
Surgeons wanted, army.....	217	Vaccination, tetanus following. By Joseph McFarland	41
Surgery, benzine in (exch.).....	90	Vaginal versus abdominal myomectomy.....	278
Surgery of the heart.....	92	Venereal disease in the army.....	2
Surgery, modifications in methods of operative. By Joseph D. Bryant, M.D.....	254	Venesection and transfusion in puerperal eclampsia	249
Surgery of the stomach, for the relief of non-malignant pathological conditions. By A. J. Ochsner, M.D., Chicago.....	356	Ventrofixation, dystocia following.....	278
Surgery, the suprarenal extract in genito-urinary. By Edward L. Keys, Jr., M.D.....	206	Verdict for Dr. Moras.....	262
Surgery for tuberculosis of the neck, conservative. By Parker Syms, M.D.....	83	Virchow's recovery, Professor.....	91
Surgery, the use of paraffin in (illus.). By Edward Percy Robinson, M.D.....	150	Virchow, Rudolph.....	275
Surgical aspects of diabetes. By Arpad G. Gester	76	Virginia, smallpox in.....	247
Surgical infection, a case of fatal.....	195	W	
Surgical anesthetics, ethyl bromide and chloride as. S. Ormond Goldon, M.D.....	226	Ward damage suit against St. Vincent's Hospital, the	183
		"Water cure," origin of the (exch.).....	248
		Wisdom, the acquisition of clinical.....	277
		Wise, a word to the.....	155
		Women physicians exclusively.....	91
		Y	
		Yale Medical School's new clinic.....	257
		Yellow fever not found, cause of.....	248

A
Well-Tried
Remedy



BEECH
(*Fagus Sylvatica* L.)
Source of
Creosote, Guaiacol
and Thiocol Roche

Thiocol Roche

“Favorable Results,” was the early claim for *beechwood creosote* in coughs, tuberculosis and bronchitis.

“Good Results,” was soon the amended report in behalf of *guaiacol*—the efficient constituent of creosote.

“Excels All Others,” is now the verdict for **Thiocol Roche**—the perfected form of guaiacol.

Try **THIOLCOL ROCHE**

“Thiocol is a derivative of guaiacol, and sirolin is its syrup preparation. It possesses the properties of guaiacol without its disagreeable by-effects. * * Clinical experience is demonstrating its great value in the treatment of tuberculosis. * * Thiocol increases the number of red corpuscles and the proportion of hemoglobin. The leucocytes increase at the expense of the polynuclears. The thiocol further enhances the alkalinity of the blood, the serum albumin progressively increases in amount and it has an unmistakably favorable influence on the organic chemistry in general.”—Abstract in *Journal of Amer. Med. Assoc.*, Sept. 20, 1902, p. 731.

Dosage:

THIOLCOL ROCHE POWDER: 5 to 20 grains three times a day.

THIOLCOL ROCHE TABLETS (5 grain): 1 to 4 tablets three times a day.

SIROLIN (Syrup Thiocol Roche containing 6 grains to fl. dr.): 1 to 3 teaspoonfuls 3 times a day.

CLINICAL REPORTS ON REQUEST.

New York
University Place

MERCK & CO.

Chicago Branch
227 Randolph Street

COUGH

THE Sum of Clinical Experience Designates Glyco-Heroin (Smith) as a Respiratory Sedative Superior in All Respects to the Preparations of Opium, Morphine, Codeine and Other Narcotics, and withal devoid of the toxic or depressing effects which characterize the latter when given in doses sufficient to reduce the reflex irritability of the bronchial, tracheal and laryngeal mucous membranes.

The Problem

of administering Heroin in proper doses in such form as will give the therapeutic virtues of this drug full sway, and will suit the palate of the most exacting adult or the most capricious child,

Has Been Solved

in the pharmaceutical compound known as GLYCO-HEROIN (SMITH).

By "Glyco-Heroin (Smith)"

is meant a pharmaceutically exact solution of heroin in chemically pure glycerine in the proportion of one sixteenth of a grain to the fluid drachm, with the addition of Ammonium Hypophosphite, Henbane, White Pine and Tolu, to enhance the curative value of the compound, and of stomachics to counteract any sensitiveness on the part of the patient's stomach.

The results attained with GLYCO-HEROIN (SMITH) in the alleviation and cure of cough are attested by numerous clinical studies that have appeared in the medical journals within the past few years.

Scientifically Compounded, Scientifically Conceived, GLYCO-HEROIN (SMITH) simply stands upon its merits before the profession, ready to prove its efficacy to all who are interested in the advances in the art of medication.

NOTES.

GLYCO-HEROIN (SMITH) is supplied to the druggist in sixteen ounce dispensing bottles only. The quantity ordinarily prescribed by the physician is two, three or four ounces.

DOSE.

The adult dose of GLYCO-HEROIN (SMITH) is one teaspoonful, repeated every two hours or at longer intervals, as the case may require. Children of ten or more years, from a quarter to a half teaspoonful. Children of three years or more, five to ten drops.

MARTIN H SMITH CO.,

...Chemists...

NEW YORK CITY.

SAMPLES AND LITERATURE SUPPLIED ON REQUEST.

