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PUBLISHED MONTHLY

BY THE

Medical Society of the State of New York

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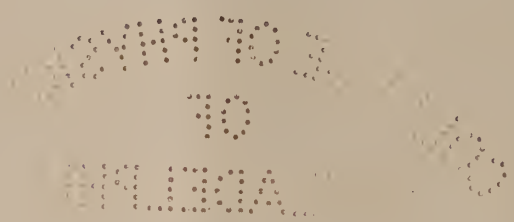
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MEDICAL SOCIETY OF THE STATE OF NEW YORK



The New York State Journal of Medicine.

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CONSOLIDATION OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK AND THE NEW YORK STATE MEDICAL ASSOCIATION.

At a special term of the Supreme Court, held at Rochester, December 9, 1905, Judge J. M. Davey signed the order consolidating the Medical Society of the State of New York and The New York State Medical Association, according to the terms of the Agreement prepared by the Joint Committee of Conference, and approved by both organizations at their annual meetings in 1905.

THE NEW YORK STATE JOURNAL OF MEDICINE will be continued as the official organ of the Society. Every endeavor will be made to make it attractive, interesting and worthy of the profession of the Empire State. It will publish the Transactions of the State Society, news items of interest, book reviews, and valuable original articles. Its aim will be to promote the best interests of the profession, to advance the science of medicine to elevate the standard of medical advertising and to assist in every way in upholding the honor and dignity of the Medical Society of the State of New York.

The policy of the JOURNAL in its advertising pages will be to publish the formula of all preparations presented to the profession, and see that no unwarranted or misleading statements are made in regard to the therapeutic value or properties of the articles advertised.

Many of the members do not thoroughly understand the advantages of membership in the State Society, and it will be the aim of the JOURNAL to clearly explain them. Many are not familiar with the Agreement of Consolidation, the new Constitution and By-Laws, and in this issue they have been printed in full, so that the County Societies may have the necessary knowledge to guide them in reorganizing under the plan of consolidation. The JOURNAL will not only contain the papers read at the annual meetings, but will enable the Society to keep its members in touch with proposed medical legislation and other matters of vital interest to the profession.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

Meeting of the House of Delegates of the Medical Society of the State of New York.

A regular stated meeting of the House of Delegates of the Medical Society of the State of New York was held in Albany, December 14, 1905, in the Albany Medical College, at 2.30 p. m.

Present: Dr. Joseph D. Bryant, president; Dr. Frederic C. Curtis, secretary, and Drs. William J. Nellis, Henry L. Elsner, Arthur G. Root, Frank Van Fleet, Parker Syms, Julius C. Bierwirth, Abraham Jacobi, Leo H. Neuman, Albert Vander Veer, Ogilvie DeVillo Ball, E. Eliot Harris, Alexander Lambert, George R. Fowler and Wisner R. Townsend.

Dr. Van Fleet stated that as he held two positions in the House of Delegates, one as chairman of the Committee on Legislation and one as a member of the House, by virtue of his membership on the Committee of Conference, he deemed it only right to resign from the Committee on Legislation, so that the House of Delegates would not be deprived of the chairman of the Committee on Legislation. Resignation accepted.

Dr. Arthur G. Root was nominated as chairman of the Committee on Legislation by Dr. Van Fleet. Elected unanimously. Dr. Root was sent for and joined the House of Delegates in their deliberations.

Dr. Leo H. Neuman was nominated as chairman of the Committee on Scientific Work. Elected unanimously. Dr. Neuman was sent for and joined the House of Delegates in their deliberations.

Dr. Wisner R. Townsend was nominated as acting assistant secretary. Elected unanimously.

Dr. Alexander Lambert was nominated as acting assistant treasurer. Elected unanimously.

The acting assistant secretary was directed to notify Dr. John L. Heffron that the Committee on Hygiene, in conformity with the new By-Laws, would hereafter be known as the Committee on Public Health.

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The acting assistant secretary then read the order of the court amalgamating the Medical Society of the State of New York and The New York State Medical Association. Moved, seconded and carried that a full copy of the court order be spread on the minutes. (See page 5.)

Moved, seconded and carried that the following extract from a letter to Dr. Townsend from Mr. Collin, the attorney who made the application for consolidation to the court, be spread upon the minutes: "As I wired you this morning, no further act is necessary for the complete consolidation of the Society and Association; by granting the entry of 'order,' the consolidation was wholly effected. The direction by the statute to file the certified copy of the order in the office of the Secretary of State is directory only, and not essential to the validity of consolidation. I will, of course, file such certified copy in that office as soon as possible."

Moved, seconded and carried that the secretary of the Society be directed to see that the certified copy is duly filed with the Secretary of State.

Dr. Ball, treasurer, reported cash on hand \$3,068.57, and that on January 1st there would be outstanding obligations of about \$500. He was informed that the State Association, after their obligations were paid, would turn over about \$2,700.50, which would leave in the bank January 1, 1906, about \$5,769.07.

The acting assistant secretary presented an estimate for the necessary expenses for 1906 to 1907, which showed that a per capita tax of \$3.00 would be necessary to meet the estimated expenses, and that with the revenue from publications and per capita tax, with careful management, there should be a small surplus at the end of the year.

Dr. Nellis, chairman Committee on Arrangements, presented a report. Accepted; placed on file. (See page 4.)

Dr. Neuman, chairman Committee on Scientific Work, presented a report. Accepted; placed on file. (See page 4.)

Dr. Van Fleet, chairman Committee on Legislation, reported progress.

Moved, seconded and carried:

Resolved, That the secretary of the Medical Society of the State of New York immediately notify the respective presidents and secretaries of each County Medical Society within the State of New York, that the order of consolidation of the Medical Society of the State of New York and The New York State Medical Association has been entered and filed, and direct them that in compliance with Section VI of the Agreement, which is made a part of the order of consolidation, each of such Medical Societies is hereby directed to call a meeting of all their members, including all members of the Association in good standing at the date of the consolidation, residing in the counties in which the meetings shall be held, respectively, for the purpose of effectuating

the plan of organization under the Constitution and By-Laws hereto annexed, and for the transaction of such other business as may come before the meeting, and that upon receipt of the enclosed certified copy of a list of members of the County Association in their county, such members shall be placed upon the list of County Societies without notice and without further action. (See paragraph third of the Agreement.)

Moved, seconded and carried:

Resolved, That the secretary notify the president and secretary of each County Association, in a county containing no County Society, that they shall forthwith change the name of such Association to Society, and forthwith effectuate the plan of organization of County Societies in compliance with the State Society By-Laws.

Moved, seconded and carried:

Resolved, That the secretary be directed to send a copy of tentative By-Laws to the County Societies, with the statement that these By-Laws were made by a sub-committee of the Committee of Conference, and were advisory and suggestive only; that they can be adopted as they stand, and would be perfectly acceptable to the Council; or they could be amended, altered or used as a guide in making new By-Laws by the counties. (See page 12.)

Moved, seconded and carried:

Resolved, That the treasurer of the Medical Society of the State of New York pay all bills of The New York State Medical Association, when bearing signature and audit of the treasurer of The New York State Medical Association, and that the bond of the treasurer be placed at \$5,000, the premium thereof to be a charge on the Society.

Moved, seconded and carried:

Resolved, That a Committee of Three be appointed by the chair to select an editor for the JOURNAL. And it is made the further duty of the committee to present the name of said editor to the House of Delegates for election at the annual meeting.

Moved, seconded and carried:

Resolved, That the president and acting assistant secretary be authorized to issue the JOURNAL for January and February, and to incur the necessary expenses for the same, and to sign all contracts for advertising that may come in during the months of December and January.

Moved, seconded and carried:

Resolved, That the Medical Society of the State of New York furnish to its members for the year 1906, the services of an attorney-at-law in actions brought for alleged malpractice, under certain conditions to be hereinafter provided, and that the president and acting assistant secretary be empowered to employ counsel to conduct the defense.

Moved, seconded and carried:

Resolved, That the president be empowered to procure for the secretary and treasurer such clerical assistance as may be necessary.

Dr. George Ryerson Fowler moved to amend

Article II, Section 1, of the Constitution, by inserting after the word "Society" on first line of section, the words, "except as hereinafter be provided."

Declared by the chair out of order as contrary to the Agreement.

Moved, seconded and carried:

Resolved, That the Medical Directory be continued.

Moved, seconded and carried:

Resolved, That an assessment be placed upon each member of the Medical Society of the State of New York, at a uniform per capita rate of \$3.00.

Moved, seconded and carried:

Resolved, That the County Societies be directed to levy such assessment and that the treasurers remit as promptly as possible to the State treasurer.

Moved, seconded and carried:

Resolved, That a Committee of Three be appointed by the chair to authorize and audit expenditures until the further order of this body.

Moved, seconded and carried:

Resolved, That the secretary call the attention of officers of County Societies to the requirement of Chapter IX, Section 8, of the By-Laws of the Medical Society of the State of New York.

"Each County Society may adopt a constitution and by-laws for the regulation of its affairs, provided that the same shall first be approved by the Council of this Society."

Moved, seconded and carried:

Resolved, That the secretary call attention of those who are to read papers at Albany, at the annual meeting, to Chapter X, Section 2, of the By-Laws of the Medical Society of the State of New York.

"All papers read before the Society or any of its sections shall become the property of the Society. Each paper, or a copy thereof, shall be deposited with the secretary after the same shall have been read."

In pursuance to the agreement of the Joint Committee of Conference, it was moved, seconded and carried:

Resolved, That the referendum proposition relating to the Principles of Medical Ethics of Section 7 of said Agreement be and hereby is referred to a special committee of five members of which the president shall be one, with the power to issue the call for the vote at the earliest practical time, canvass and report the results of the vote on the proposition to the House of Delegates at its next meeting thereafter.

Moved, seconded and carried:

WHEREAS, Article IV of the Constitution of the American Medical Association states:

"Those State and Territorial Medical Associations which have, or which hereafter may, become organized in accordance with the general plan of organization of the American Medical Association, and which have declared by resolution their allegiance to the said American Medical

Association, and which shall agree with other State and Territorial Medical Associations to the formation and the perpetuation of the House of Delegates of the American Medical Association shall be recognized as Constituent Associations."

Resolved, That the Medical Society of the State of New York, by virtue of having conformed to the requirements, declares its allegiance to the American Medical Association, and thereby becomes its constituent society in the State of New York.

Dr. Fowler gave notice that he would offer the following, to be acted on at the next meeting, as a substitute for Section 2 of Chapter X of the By-Laws:

"All papers read before the Society by its members shall become the property of the Society. Permission may be given, however, by the House of Delegates or the Council, to publish such paper in advance of its appearance in THE NEW YORK STATE JOURNAL OF MEDICINE."

Moved, seconded and carried:

Resolved, That the minutes be now approved, and when approved that they be published in the January issue of the JOURNAL.

Moved, seconded and carried:

Resolved, That the House of Delegates now take a recess, subject to the call of the chair.

FREDERIC C. CURTIS,

Secretary Medical Society of the State of New York.

Dr. J. D. Bryant, president of the Medical Society of the State of New York, has appointed the following committees:

Referendum: Drs. Joseph D. Bryant, Abraham Jacobi, George R. Fowler, Julius C. Bierwirth and Wisner R. Townsend.

Committee to Authorize and Audit Expenditures: Drs. H. L. Elsner, Alexander Lambert and Leo H. Neuman.

Committee to Select Editor: Drs. A. Vander Veer, P. Syms and E. E. Harris.

Dr. Egbert Le Fevre has been appointed to the vacancy in the Committee on Legislation, caused by the resignation of Dr. Van Fleet.

Mr. James Taylor Lewis has been appointed counsel to defend members who may be sued for alleged malpractice.

Among the advantages of membership in the Medical Society of the State of New York may be mentioned:

Membership in County, District Branch and State Society,

Defense in suits of alleged malpractice,

Receipt of THE NEW YORK STATE JOURNAL OF MEDICINE.

Receipt of the Medical Directory of New York, New Jersey and Connecticut,

Privilege of membership in the American Medical Association.



MEDICAL SOCIETY OF THE STATE OF NEW YORK.

You are invited to attend the One Hundredth Annual Meeting of the Medical Society of the State of New York, which will be held in Albany, January 30 to February 1, 1906.

This Centennial Meeting, for the fitting and appropriate celebration of which efforts have been in operation throughout the past year, will be one of unusual interest. To all members of the medical profession of the State of New York its importance as an anniversary will, however, receive a vast addition in that it will be the first meeting of a united profession, secured in the Judicial order of the Supreme Court on December 9, 1905, consolidating the two State medical bodies, which have existed separately for many years, under the name of the Medical Society of the State of New York. This culmination of long and anxious work will be an occasion of rejoicing on the part of all in the State and will make this Centennial Meeting the opening of a new era under fresh and vital methods and one in which many will wish to participate.

Among the special features are:

Orations on medicine, surgery and sanitation, by Drs. S. B. Ward, Roswell Park and Herman Biggs; in addition to which other papers of timely and scientific interest will be upon the program of the meeting, and a centennial banquet on Wednesday evening.

A History of the First Century of the Society is being prepared, and this, with the addresses and proceedings of the centennial celebration, will form a notable volume.

The general meeting will be held in Odd Fellows Hall on Lodge street, and the public addresses will be delivered in the Emanuel Baptist Church on State street.

A rebate in railroad fare can be obtained if, on purchasing a ticket a certificate is applied for which, on being viséd at the meeting, will entitle bearer to return at one-third fare.

Assistance in securing accommodation at hotels or boarding houses will be given by the Committee on Arrangements, who can be written to in advance.

The Committee on Arrangements also request that those who desire to attend the banquet send their remittances to the chairman of the Committee, Dr. W. J. Nellis, 210 State street, Albany, that places may be assigned as desired, so far as possible. The price of the dinner is \$5, and the sale of tickets closes January 29th, to allow of printing a table directory. The seating capacity of the dining-hall is limited, and to make sure of a place as well as to relieve the Committee of unnecessary care an early response is desired.

The banquet will be a notable social part of the occasion.

It is our anticipation that the physicians from all parts of the State will come in large numbers to honor the occasion, to enjoy what it offers, to participate in its congratulations, and to learn the plans which open for the future in society work.

JOSEPH D. BRYANT, President.
FREDERIC C. CURTIS, Secretary.

REPORT OF COMMITTEE ON ARRANGEMENTS.

The One Hundredth Annual Meeting of the Medical Society of the State of New York will be held in Albany, Tuesday, January 30, 1906, commencing at 9.30 A. M., and continuing until Thursday afternoon.

This Centennial Meeting will be fittingly and appropriately observed and will be one of unusual interest. The Medical Society of the State of New York and The New York State Medical Association were legally amalgamated on December 9th and this Centennial Meeting will be the first meeting of the united profession of this State in over twenty years.

The scientific meetings will be held in Odd Fellows Hall on Lodge street, and the public addresses will be delivered in the Emanuel Baptist Church on State street.

Ample accommodations at hotels and boarding houses can be reserved on application to the Committee on Arrangements.

A rebate in railroad fare can be obtained if a certificate is secured on purchasing a ticket, which will be viséd at the meeting, and then will entitle the holder to return at one-third fare.

The Centennial Banquet will be made worthy of the Society's history. A toast list of distinguished post-prandial speakers has been prepared and the dinner and appointments will befit the occasion.

The dinner will be served promptly at 7 o'clock in Odd Fellows Hall, thus giving ample time for the after-dinner speeches.

The price of the dinner is \$5 and as the seating capacity of the hall is limited, it is requested that those who desire to attend should send their remittances to the chairman of the Committee on Arrangements, in order that places may be assigned.

The sale of tickets will close on Monday, January 29th, in time to allow the printing of a table directory.

W. J. NELLIS.

Chairman of Committee on Arrangements, 210 State street, Albany, N. Y.

REPORT OF COMMITTEE ON SCIENTIFIC WORK.

The committee respectfully presents the following preliminary program:

Tuesday evening, address of welcome by the President, Dr. Joseph D. Bryant and other addresses to be delivered in the Emanuel Baptist Church.

Arrangements have been made for an oration

on Medicine, to be delivered by Dr. S. B. Ward, on Tuesday afternoon; also an oration on Sanitation, by Dr. H. M. Biggs; Wednesday afternoon there will be an oration on Surgery, by Dr. Roswell Park; Drs. McMurtry, Welch and other prominent speakers are expected. The orations will be delivered in the Emanuel Baptist Church.

Papers for the morning sessions, which will be held in Odd Fellows Hall, have been promised by the following:

"The Art and Science of Fitting Glasses," by A. E. Davis, M.D.

"Typhoid Fever," by Luzerne Coville, M.D.

"Rapid Method of Detection of Blood in Feces," by A. L. Benedict, M.D.

"Economy in Hospital Management," by John A. Wyeth, M.D.

"A Study of Results of Sanatorium Treatment of Pulmonary Tuberculosis," by J. H. Pryor, M.D.

"Report of a Case," by J. F. Whitbeck, M.D.

"Arterio Sclerosis," by J. M. Van Cott, M.D.

"A Point in the Technique of Breast Amputations for Cancer," by R. F. Weir, M.D.

"Induction of Hyperleucocytosis in Infections," by W. G. Macdonald, M.D.

"Notes on Factors which Further Convalescence Following Abdominal Section," by Frederick Holme Wiggin, M.D.

"Ex-Ophthalmic Goitre," by W. Gilman Thompson, M.D.

"The Role Played by the Medical Society of the State of New York Concerning Medical Education," by William Warren Potter, M.D.

"The Clinical Limitations of Eliminative Treatment," by Allen A. Jones, M.D.

"The Immediate and Early Treatment of Ocular Injuries," by Alvin A. Hubbell, M.D.

L. H. NEUMAN, M.D.,

194 State Street, Albany, N. Y.,

Chairman Committee on Scientific Work.

THE MEDICAL DIRECTORY OF NEW YORK, NEW JERSEY AND CONNECTICUT.

Volume VIII of this valuable Directory will be published by the Medical Society of the State of New York. Every endeavor will be made to make it a correct list in every particular. Members will confer a favor by notifying the Medical Society of the State of New York, 64 Madison avenue, New York, of any errors that they may find in the present volume. Changes of address, of office hours, of telephone numbers should be reported promptly. The value of a Directory depends upon the accuracy of the data it contains, and it is the duty of every member to assist the Society in making this book as nearly perfect as possible.

SUPREME COURT.

In the Matter of the Application of the Medical Society of the State of New York and The New York State Medical Association for an Order Consolidating the Said Corporations, Pursuant to Chapter 1 of Laws of 1904.

At a Special Term of the Supreme Court of the State of New York, held at the Court House in the City of Rochester, N. Y., on the 9th day of December, 1905.
PRESENT,

HON. JOHN M. DAVY,

Justice.

IN THE MATTER
OF

The application of the Medical Society of the State of New York and The New York State Medical Association, for an order consolidating the said corporations, pursuant to Chapter 1 of Laws of 1904.

On the 18th day of November, 1905, the petition of Medical Society of the State of New York and The New York State Medical Association, for an order consolidating said two corporations, pursuant to Chapter 1 of the Laws of 1904, duly verified and complying in all respects with the provisions of said Chapter 1 of the Laws of 1904, was duly presented to this Court at a Special Term thereof, held at the Court House in the City of Rochester, New York, on said 18th day of November, 1905. Upon the papers so presented and upon the application of Frederick Collin, Esq., attorney for said petitioners, it was then ordered, among other things, that the hearing upon the said petition and the prayer thereof, and of the application for the order consolidating said petitioners be at a Special Term of this Court, to be held in the Court House in the City of Rochester, New York, on the 9th day of December, 1905, at the opening of the court on that day, or as soon thereafter as counsel can be heard, and was further ordered that a copy of said order of November 18th, 1905, with notice of its granting and filing, and of the filing of the copies of the petition and papers thereto annexed, and that the application for the order consolidating said petitioners would be heard at the time and place above mentioned, be given to the medical societies and the medical associations and the colleges, universities, hospitals, medical schools, societies, academies, clubs, library associations and institutions named in said order and as provided in said order. Copies of all of the said papers presented to this Court at said Term held at the Court House in the City of Rochester, New York, on the 18th day of November, 1905, were on said 18th day of November, 1905, filed with said order in the office of the Clerk of the County of Monroe, as required and provided in the said order as appears from the records presented to this Court at this Term. At the Term above mentioned, to attorney, Frederick Collin, Esq., of Elmira, New York, wit, of December 9th, 1905, the said petitioners by their presented to this Court due proofs that a copy of said order of November 18th, 1905, with notice of its granting and filing, and of the filing of the copies of the petition and papers thereto annexed, and that the application for the order consolidating said petitioners would be heard at the above mentioned Term as provided and required by the said order of November 18th, 1905, have been duly served, except upon the Medical Society of Seneca County, which is duly proven to be non-existent.

THEREFORE, upon filing the said proofs of the service of the said order of November 18th, 1905, and of the notices as required thereby upon each and every of the parties as required thereby, and the original petition, and upon the application of Frederick Collin, Esq., attorney for the petitioners, the Medical Society of the State of

New York and The New York State Medical Association, and no opposition thereto being made.

IT IS HEREBY ORDERED that the petitioners, Medical Society of the State of New York and The New York State Medical Association, be and said petitioners are, pursuant to and subject to the provisions of Chapter One of the Laws of nineteen hundred and four, entitled "An Act to authorize the consolidation of the Medical Society of the State of New York and The New York State Medical Association," consolidated on the terms and conditions set forth in the approved agreement, dated October nineteenth, one thousand nine hundred and five, between the said petitioners, which agreement is incorporated in this order as a part thereof, and as prescribing the terms and conditions on which the consolidation of said petitioners is effected, and is in full as follows:

AGREEMENT.

WHEREAS, The Medical Society of the State of New York, hereinafter called the Society, and The New York State Medical Association, hereinafter called the Association, desire to consolidate and become one corporation under the name "Medical Society of the State of New York," pursuant to the terms of the Act, Chapter 1, of the Laws of 1904, entitled "An Act to authorize the consolidation of the Medical Society of the State of New York and The New York State Medical Association," of which said act a copy is hereto annexed marked Exhibit A,"

NOW, THEREFORE, the Society and the Association hereby agree as follows:

First: It is mutually covenanted and agreed that from and after the entry of an order of the Supreme Court for the consolidation of the Society and the Association, pursuant to the terms of said act, the Constitution and By-Laws, of which copies are hereto annexed, marked "Exhibit B," forming a part of this agreement, shall be the Constitution and By-Laws of the Society; subject, however, to amendment or repeal as therein or as by the laws of this State may be authorized; provided that for the purpose of inaugurating and completing the organization of the membership of the consolidated corporations in conformity with the requirements of such Constitution and By-Laws, and for transacting the business of the Society, the officers of the Society and the chairmen of standing committees in office at the date of the entry of the order for consolidation, and the members of the Joint Committee of Conference heretofore appointed to bring about the consolidation, namely, Dr. Henry L. Elsner, Dr. A. Jacobi, Dr. A. Vander Veer, Dr. George Ryerson Fowler, Dr. Frank Van Fleet, Dr. E. Eliot Harris, Dr. Julius C. Bierwirth, Dr. Alexander Lambert, Dr. Parker Syms and Dr. Wisner R. Townsend, shall be deemed to be severally and collectively, in accordance with the purpose and intent of this agreement, ad interim, the officers, the chairmen of standing committees, the House of Delegates and the Council of the Society, with the power and authority conferred upon the officers, House of Delegates, Council and chairmen of standing committees by said Constitution and By-Laws, and with the further power when sitting as the House of Delegates of appointing presidents of District Branches from among their own number, or from the membership of the Society at large; and from and after the date of the entry of an order consolidating the corporations, the said officers, House of Delegates, Council and chairmen of standing committees so constituted shall have and may exercise their respective powers and authority for the organization of the members of the consolidated corporation and the management of its affairs until the annual meeting of the Society, which shall take place on the last Tuesday of January, 1906, and for such further time as their powers and authority may be extended and continued by the vote of a majority of the members present and voting at any general or special meeting of the Society after the consolidation; and provided further, that in determining the eligibility of members of the Society for

office in the Society after the consolidation, the period during which such members shall have been members of the Association continuously at the date of the consolidation, shall be equivalent to membership in the Society for the same period.

Second: The Society and the Association each for itself covenants and agrees that it will employ expert accountants to determine accurately the amount of its assets and liabilities, and that their reports shall be submitted with this agreement upon an application for an order consolidating the corporations, and the Association agrees that upon the entry of such an order the property of the Association specified in the report of its experts shall be duly transferred to the Society; and the Society agrees that upon receiving the same it will assume and pay and discharge the liabilities of the Association specified in the said report.

Third: All members of the Society and all members of the Association in good standing at the time of the consolidation shall be entitled to membership in the county medical societies in the counties in which they may reside, without the payment of any initiation fee or other cost to them, except that the members of the Society who, at the time of the consolidation, shall not be members of any county society, may be required to pay the initiation fee regularly charged by the society which they may join. If there shall be no county society in the county in which a member of the Society resides, he shall be entitled to membership in the county society of an adjoining county, or else to membership in a society to be organized and chartered by the House of Delegates. Members of the Association shall be entitled to membership in county societies upon the certificate of the President and Secretary of The New York State Medical Association at the time of the consolidation that they are in fact such members, or upon the like certificate of the presidents and secretaries of their respective District Branches or county associations; and such members shall not be subject to the payment of dues or assessments to the respective county societies or District Branches, except from the date to which they shall have paid their dues in full to their respective county associations, after which date dues to the respective county societies or District Branches may be imposed or assessed upon them, and they may be collected, at the rate imposed or assessed upon all other members of their respective county societies or District Branches. Members of the Society who shall not be members of a county society at the time of consolidation shall be admitted to membership in the respective county societies upon like certificate signed by the President or Secretary of the Society. In counties in which there shall be a county medical association, but in which there shall be no county society in affiliation with the Society at the date of the consolidation, the said county medical association shall be deemed to be a county medical society in affiliation with the Society, subject to the Constitution and By-Laws hereto annexed; provided that all members of the county societies residing in such counties, and all members of the Society residing in such counties shall be admitted to membership in such county associations upon the like certificates of their membership in the Society or in their county societies, and upon the like terms with regard to the initiation fees and dues as are hereinabove prescribed with respect to the admission of members of the Association to membership in county societies, and the dues which may be imposed or assessed upon them; and provided further, that the names of all such county associations shall be changed to the County Medical Society of their respective counties in conformity with the nomenclature of county societies in affiliation with the Society; and it is hereby further expressly declared and agreed that upon the entry of an order for the consolidation of the corporations, all members of county medical societies in affiliation with this Society, or which, by virtue of the provisions of this agreement, shall be deemed to be in affiliation with this Society, and all persons who shall, upon consolidation, or thereafter be or become members of county medical societies in affiliation with

this Society, or which shall be deemed to be in affiliation with this Society, and all members of societies thereafter organized and chartered by the House of Delegates, shall by virtue of such membership, be members of the Medical Society of the State of New York.

Fourth: The Association agrees that upon the admission of its members to membership in the respective county societies to which they will become entitled under this agreement, the property and assets of the respective county associations in affiliation with the Association shall be transferred to the county society for the same county.

Fifth: The Society and the Association mutually agree that before the entry of an order for the consolidation of the corporations, notice of an application for the order shall be given to every county society and association. Such notice may be given by the Society or by the Association. Service of such notice upon any officer of a county society or association shall be deemed to be sufficient, and shall bind the societies and associations, provided that the length of time of the notice and manner of serving it may be determined by the order of the Court, upon the presentation of the petition for consolidation.

If the Court shall decline to order the consolidation pursuant to the terms of this agreement, or if for any other reason the joint Committee of Conference heretofore appointed shall deem it to be expedient to submit this agreement, or any question in connection therewith, for ratification or determination to their respective county societies and county associations, it shall order such submission. In that case the agreement shall not be binding upon the corporations parties hereto, until the same shall have been ratified by all such county societies and associations; and a certificate of the ratification of the agreement by any county society or association signed by the President and Secretary of the meeting shall be conclusive evidence thereof in any court or place; provided that for the purposes of this agreement no county society or association shall be deemed to be in existence which shall not have held a meeting since January first, nineteen hundred and one.

Sixth: The Society and the Association each for itself agrees that in order to facilitate the due execution of this agreement according to the terms thereof, it will prepare, or cause to be prepared and delivered to the Society, a roster containing the names and addresses of all its members in good standing at the date of the consolidation, and the Society agrees that as soon as practicable after the consolidation, meetings of the county societies shall be called on due notice to all their members, including all members of the Association in good standing at the date of the consolidation, residing in the counties in which the meetings shall be held, respectively, for the purpose of effectuating the plan of organization under the Constitution and By-Laws hereto annexed, and for the transaction of such other business as may come before the meeting.

Seventh: It is further covenanted and agreed by the parties hereto, that as soon as practicable after the entry of an order for the consolidation of the corporations, the following proposition shall be submitted by referendum to the vote of the members of the Society, namely:

"The principles of medical ethics of the American Medical Association, being suggestive and advisory, shall be the guide of members in their relations to each other and to the public."

Eighth: The Society agrees that it will petition the Legislature for the passage of such further act or acts as may be necessary, if any, to carry this agreement into effect.

Ninth: Neither the Society nor the Association shall be deemed to have incurred any liability under this agreement if the Court shall decline to order the consolidation of the corporations as herein provided.

Tenth: It is further mutually covenanted and agreed that whenever the Chairman and Secretary of the Joint Committee of Conference shall certify that the conditions precedent to an application to the Court have been

fully complied with, the Presidents of the respective corporations shall, and are hereby authorized and required in the name and behalf of their respective corporations, to petition the Supreme Court for an order to consolidate the corporations in accordance with the terms hereof, and the certificate hereinabove provided for shall be conclusive evidence of the fact stated therein in any court or place.

IN WITNESS WHEREOF, the Medical Society of the State of New York has caused these presents to be signed by its President, and its corporate seal to be hereunto affixed, at the City of Albany, in the State of New York, on this second day of February, one thousand nine hundred and five, and The New York State Medical Association has caused these presents to be signed by its President and its corporate seal to be hereunto affixed at the City of New York on the 19th day of October, one thousand nine hundred and five.



MEDICAL SOCIETY OF THE
STATE OF NEW YORK,
By JOSEPH D. BRYANT,
President.



THE NEW YORK STATE
MEDICAL ASSOCIATION,
By ALLEN A. JONES,
President.

"EXHIBIT A."

AN ACT

To Authorize the Consolidation of the Medical Society of the State of New York and The New York State Medical Association.

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

SECTION 1. The Medical Society of the State of New York, incorporated by or pursuant to chapter one hundred and thirty-eight of the laws of eighteen hundred and six, entitled "An act to incorporate medical societies for the purpose of regulating the practice of physic and surgery in this State," and continued by chapter ninety-four of the revised laws of eighteen hundred and thirteen, passed April tenth, eighteen hundred and thirteen, entitled "An act to incorporate medical societies for the purpose of regulating the practice of physic and surgery in this State," and The New York State Medical Association, incorporated under chapter four hundred and fifty-two of the laws of nineteen hundred, may enter into an agreement for the consolidation of such corporations, setting forth the terms and conditions of the consolidation and the mode of carrying the same into effect.

Each corporation, party to the agreement, may petition the Supreme Court for an order consolidating the corporations, setting forth in such petition the agreement for consolidation, and a statement of all its property and liabilities, and the amount and sources of its annual income. Before the presentation of the petition to the court, the agreement must be approved by a majority of the vote lawfully cast at an annual meeting of each corporation, separately, or at a meeting of each corporation separately and specially called pursuant to its by-laws for that purpose, and a certificate of such approval, verified by the president and secretary of the meeting shall be annexed to the petition.

On presentation of the petition, the certificate of approval and the consolidation agreement, and on such notice to interested parties as the court may prescribe, and after hearing such interested parties as desire to be heard, the court may make an order for the consolidation of the corporations on such terms and conditions as it may prescribe.

When the order is made and duly entered, the corporations, parties to the agreement, shall be one corporation under the name "Medical Society of the State of New York," which shall not be deemed to be a new corporation, but to be a continuation of the Medical Society of the State of New York, incorporated in eighteen hundred and six. A certified copy of said order shall be filed in the office of the Secretary of State. All the property belonging to the corporations so consolidated shall vest in the said Medical Society of the State of New York, which shall have all the powers, rights and privileges possessed by either corporation at or immediately prior to the consolidation, and which shall be subject to all of the liabilities of each corporation.

SEC. 2. This Act shall take effect immediately.

"EXHIBIT B."
CONSTITUTION.
ARTICLE I.

PURPOSES OF THE SOCIETY.

The purposes of the Society shall be to federate and bring into one compact organization the medical profession of the State of New York; to extend medical knowledge and advance medical science; to elevate the standard of medical education and to secure the enactment and enforcement of just medical laws; to promote friendly intercourse among physicians; to guard and foster the material interests of its members, and to protect them against imposition; and to enlighten and direct public opinion in regard to the great problems of State medicine.

ARTICLE II.
MEMBERSHIP.

SECTION 1. The membership of this Society shall include all members of county medical societies now in affiliation with this Society, and all members of other county medical societies to which charters shall be granted by the House of Delegates pursuant to the By-Laws of this Society, and any member ceasing to be a member of a county medical society shall cease to be a member of this Society.

SEC. 2. The term county medical society as used in this Constitution shall be deemed to include all societies which may be organized and chartered by the House of Delegates.

SEC. 3. The membership of the Society shall be divided into eight district branches, as provided in the By-Laws.

ARTICLE III.
OFFICERS.

SECTION 1. The officers of the Society shall be a President, three Vice-Presidents, a Secretary, a Treasurer, and one Councilor from each District Branch. They shall be elected annually by ballot for the term of one year, and the majority of the votes cast shall elect. The President, Vice-Presidents, Secretary and Treasurer shall be elected by the House of Delegates. Each Councilor shall be elected by the District Branch of the district in which he resides, and shall be the President thereof.

SEC. 2. No delegate elected to the House of Delegates shall be a candidate for office in the Society until after the expiration of the term for which he shall have been elected a delegate, and no person shall be elected to any office in the Society who shall not have been a member of the Society for the two years immediately preceding the date of his election.

ARTICLE IV.
HOUSE OF DELEGATES.

The House of Delegates shall be the legislative body of the Society, and shall be charged with the general management, superintendence and control of the Society and its affairs, and shall have such general powers as may be necessarily incident thereto. It shall have power to suspend or otherwise discipline county societies. It shall be composed of the officers of the Society and of the chairmen of standing committees, who shall

be ex-officio members thereof, and of delegates elected to the House of Delegates by county societies in affiliation with the Society. Each county society shall be entitled to elect to the House of Delegates as many delegates as there shall be state assembly districts in that county at the time of the election; except that each county society shall be entitled to elect at least one delegate; and except that whenever at the time of election, the membership of a county society shall include members from an adjoining county or counties in which there shall be no county society in affiliation with this Society, such county society shall be entitled to elect from among such members, as many additional delegates as there are assembly districts in the county or counties so represented in its membership.

The House of Delegates may provide for a division of the scientific work of the Society into appropriate sections, and for the organization of the District Branches; and it shall have such additional powers and duties not inconsistent with this Constitution, as the By-Laws may authorize or prescribe. It may adopt rules and regulations for its own government, and for the administration of the affairs of the Society, not repugnant to the Constitution and By-Laws of the Society; and it may delegate to the Council such power and authority as may be necessary to the efficient administration of the affairs of the Society, while the House of Delegates shall not be in session.

ARTICLE V.
COUNCIL.

The Council shall be the executive body of the Society. It shall consist of the officers of the Society and of the chairmen of standing committees. The Council shall be the Finance Committee of the Society, and shall have such additional powers and duties as the By-Laws may prescribe. It may adopt rules and regulations for its own government, and for the administration of the affairs of the Society within its control not repugnant to the Constitution and By-Laws of the Society, or to the rules and regulations which may be adopted by the House of Delegates.

ARTICLE VI.
MEETINGS.

SECTION 1. The annual meeting of the Society shall be held at Albany, beginning on the last Tuesday in January of each year.

SEC. 2. Intermediate stated meetings may be held at such time and place as the House of Delegates may appoint.

ARTICLE VII.
FUNDS.

Funds shall be raised by a per capita assessment on each county society, and the amount thereof shall be fixed by the House of Delegates. Funds may also be raised by voluntary contributions, by the sale of the publications of the Society, and in any other manner approved by the House of Delegates. No funds of the Society shall be appropriated for any purpose, except pursuant to a resolution of the Council.

ARTICLE VIII.
REFERENDUM.

SECTION 1. At any annual or stated meeting of the Society a majority of the members present may order a general referendum on any question in accordance with such general regulations respecting the manner of submission as the House of Delegates may prescribe. Members of the Society may vote thereon by mail or by roll-call in open meeting. The poll on the question shall be closed at the expiration of ten days after the general submission; and if the members voting shall comprise a majority of all the members of the Society, a majority of such vote shall determine the question and be binding on the House of Delegates.

SEC. 2. The House of Delegates may voluntarily, by the vote of a majority of its members present at any meeting, submit any question before it to a general

referendum, as provided in the preceding section, and the result shall be binding on the House of Delegates.

ARTICLE IX.

BOARD OF MEDICAL EXAMINERS.

Candidates for vacancies in the State Board of Examiners shall be selected by a committee of five, appointed by the President of the Society, their selection to be reported to the House of Delegates before being forwarded to the Board of Regents. In the event of any emergency making it necessary for the Board of Regents to request nominations from the Society between its annual meetings, then the committee shall report directly to the Board of Regents.

ARTICLE X.

AMENDMENTS.

No article of this Constitution shall be amended except by a two-thirds vote of the delegates present at any annual meeting, nor unless notice of the proposed amendment shall have been given at a previous annual meeting, and shall have been published twice during the year in the official bulletin or journal of the Society, or sent by order of the House of Delegates to each county society in affiliation with the Society at least two months before the meeting at which final action shall be taken thereon.

BY-LAWS.

CHAPTER I.

MEMBERSHIP.

SECTION 1. A copy of the roster of members of a county society, certified by the secretary of that society to be correct, shall be prima facie evidence of their right to membership in this Society; but the delegates of a county society which is in default in the payment of any dues or assessments imposed by the House of Delegates, or of any county society which shall be under sentence of suspension imposed by the House of Delegates, shall not be entitled to sit in the House of Delegates during the continuance of such default, or suspension; nor shall any person who is under sentence of suspension from a county society, be entitled to exercise any of the rights or privileges of membership in this Society during the period of his suspension.

CHAPTER II.

MEETINGS.

SECTION 1. Each member in attendance at the annual session of the Society shall enter his name and the name of his county society in the register, to be kept by the Secretary of the Society for that purpose. No member shall take part in any of the proceedings at an annual session until he shall have complied with the provisions of this section.

SEC. 2. All registered members may attend and participate in the proceedings and discussions of the general meetings of the Society and of the sections.

SEC. 3. The following shall be the order of business at all general meetings of the Society.

1. Calling the Society to order.
2. Address of welcome by the Chairman of the Committee on Arrangements.
3. Reading of the minutes of the last meeting.
4. Reports of special committees.
5. Special addresses.
6. President's address.
7. Reading and discussion of papers.
8. Miscellaneous business.

SEC. 4. Special meetings of the Society or of the House of Delegates shall be called by the President upon the request of twenty delegates or of fifty members; and in case of the failure, inability or refusal of the President to act, such meetings may be called by a notice thereof subscribed by twenty delegates, or fifty members.

CHAPTER III.

HOUSE OF DELEGATES.

SECTION 1. The House of Delegates shall meet annually in the evening of the day before the annual meet-

ing of the Society. It may adjourn from time to time as may be necessary to complete its business, provided that its meetings shall conflict as little as possible with the annual meeting of the Society.

SEC. 2. Thirty delegates shall constitute a quorum.

SEC. 3. The House of Delegates shall make careful inquiry into the condition of the profession in each county of the State, and shall have authority to adopt such methods and measures not in conflict with the Constitution and By-Laws of the Society as it may deem most efficient for building up and increasing the interest in such county societies as already exist; for organizing the profession in counties where societies do not exist; for organizing district branches, and for protecting the members of the Society against suits for alleged malpractice.

SEC. 4. It shall elect delegates to the House of Delegates of the American Medical Association in accordance with the Constitution and By-Laws of that body, and it may select or appoint such other delegates as in its judgment the interests of the Society may require, and it shall provide for the issue of credentials to all delegates.

SEC. 5. It shall, upon application, provide for the issue of charters to county societies in affiliation with the Society, and it shall hear and determine all appeals to this Society from the decisions of county medical societies by any member of any county medical society, or applicant for membership to such society feeling aggrieved at the action of said society.

SEC. 6. It shall have authority to appoint committees for special purposes from among members of the Society. Such committees shall report to the House of Delegates, and may be present at, and participate in the debates on their reports.

SEC. 7. It shall have authority to organize the physicians of two or more sparsely settled and adjoining counties into societies to be suitably designated so as to distinguish them from District Branches; and the societies so organized shall be entitled to all the rights and privileges of county societies and the members thereof to the rights and privileges of members of county societies.

SEC. 8. The following shall be the order of business at the meetings of the House of Delegates:

1. Calling the meeting to order.
2. Roll-call by the Secretary.
3. Reading of the minutes of the previous meeting.
4. President's report.
5. Annual report of the Council.
6. Report of the Treasurer.
7. Reports of standing committees.
8. Reports of special committees.
9. Unfinished business.
10. New business.

SEC. 9. The officers and committees of the Society to be elected by the House of Delegates shall be elected at an adjournment of the annual meeting of the House of Delegates, which adjourned meeting shall be held at a convenient hour on the first day of the annual meeting of the Society.

CHAPTER IV.

COUNCIL.

SECTION 1. The Council shall meet on the day before the annual meeting of the Society and daily during the session, and at other times, as occasion may arise, upon the call of the President or upon the request of three members of the Council. It shall meet on the last day of the annual session of the Society to organize and to outline the work for the ensuing year. It shall make an annual report to the House of Delegates.

SEC. 2. The Council shall provide for and superintend all publications and their distribution, and shall have authority to appoint an editor and such assistants as it may deem necessary. All moneys of the Society received by the Council shall be paid to the Treasurer of the Society. It shall audit the annual accounts of the Treasurer and Secretary, and other agents of the So-

ciety, and present a statement of the same in its annual report to the House of Delegates. The report shall also specify the character and cost of all publications of the Society during the year, and the amount of all property belonging to the Society under its control. In the event of a vacancy in the office of Secretary or Treasurer the Council shall fill the vacancy until the next annual election.

SEC. 3. The following shall be the order of business at meetings of the Council:

1. Calling the meeting to order.
2. Roll-call by the Secretary.
3. Reading of minutes and communications from the Secretary.
4. Communications from the Treasurer.
5. Communications from the chairmen of standing committees.
6. Unfinished business.
7. New business.

CHAPTER V.

CENSORS.

SECTION 1. The President, Secretary and the District Councilors shall be the Board of Censors of the Society until others shall be elected to fill their places, and shall hear and determine all questions involving the rights and standing of members, whether in relation to other members, to the county societies, or to this Society, except such as shall be heard and determined by the House of Delegates. All questions of an ethical nature brought before the House of Delegates, or the general meeting of the Society, shall be referred to the Censors, who shall report their findings thereon to the House of Delegates.

CHAPTER VI.

DUTIES OF OFFICERS.

SECTION 1. The President or one of the Vice-Presidents shall preside at all meetings of the Society, the House of Delegates, the Council and the Censors. The President shall appoint all committees not otherwise provided for. He shall deliver an address at the annual meeting of the Society, and he shall perform such other duties as custom and parliamentary usage may require. He shall be ex-officio a member of all standing committees.

SEC. 2. The Vice-Presidents shall assist the President in the discharge of his duties, and in his absence the Vice-President next in numerical order shall perform his duties. In the event of the President's death, resignation, removal, incapacity or refusal to act, the Vice-President next in numerical order shall succeed him.

SEC. 3. The Secretary shall attend all meetings of the Society, the House of Delegates, the Council and the Censors, and shall keep minutes of their respective proceedings in separate records. He shall be the custodian of the seal of the Society and of all books of record and papers belonging to the Society, except such as properly belong to the Treasurer, and shall keep an account of and promptly turn over to the Treasurer all funds of the Society which come into his hands. He shall provide for the registration of the members at all sessions of the Society. With the aid and cooperation of the secretaries of the county societies, he shall keep a proper register of all the registered physicians of the State by counties. He shall aid the Councilors in the organization and improvement of the county societies and the extension of the power and influence of the Society. He shall conduct the official correspondence, notifying members of meetings, officers of their election and committees of their appointment and duties. He shall affix the seal of the Society to all credentials issued to members of the Society elected or appointed by the House of Delegates, and to such other papers and documents as may require the same. He shall make an annual report to the House of Delegates. He shall supply each county society with the necessary blanks for making their annual reports to this Society. Acting under the direction of the Committee on Scientific Work, he shall prepare and issue all programs. The amount of his

salary shall be fixed by the Council. He shall be ex-officio a member of all standing committees.

SEC. 4. The Treasurer shall keep accurate books of account of all moneys of the Society which he may receive, and shall disburse the same when thereunto duly authorized by the Council; but all checks drawn by the Treasurer upon the funds of the Society shall be countersigned by the President, or by the Secretary of the Society. He shall give security for the faithful performance of his duties, which shall be approved and retained by the President, and he shall make an annual report to the House of Delegates. The Treasurer shall be a trustee of the Merrit H. Cash fund. His salary shall be fixed by the Council.

SEC. 5. Each district Councilor shall visit the counties of his district at least once a year. He shall make an annual report of his work and of the condition of the profession in each county in his district at the annual session of the House of Delegates. The necessary traveling expenses incurred by each Councilor in the line of his duty as herein defined may be allowed by the Council on a proper itemized statement; but this shall not be construed to include his expenses in attending the annual session of the Society.

CHAPTER VII.

STANDING COMMITTEES.

SECTION 1. The following shall be the standing committees of the Society:

- A Committee on Scientific Work.
- A Committee on Legislation.
- A Committee on Public Health.
- A Committee on Arrangements.

There shall also be such other standing committees as the House of Delegates may determine to be necessary.

All committees shall be elected by the House of Delegates, unless otherwise provided.

SEC. 2. The Committee on Scientific Work shall consist of three members, including the Chairman, and shall determine the character and scope of scientific proceedings of the Society for each session, subject to the instructions of the House of Delegates. Thirty days prior to each annual session it shall prepare and forward to the Secretary a program announcing the order in which papers, discussions and other business shall be presented.

SEC. 3. The Committee on Legislation shall consist of three members, including the Chairman. It shall keep in touch with professional and public opinion. Under the direction of the House of Delegates it shall represent the Society in procuring the enforcement of the medical laws of the State in the interest of public health and of scientific medicine, and in procuring the enactment of such medical laws as will best secure and promote the welfare of the whole people.

SEC. 4. The Committee on Public Health shall consist of three members, including the Chairman. It shall report upon and present to the Society such subjects as may seem to the committee to be of special importance in their relation to the public health.

SEC. 5. The Committee on Arrangements shall consist of eight members, including the chairman. It shall provide suitable accommodations for the meeting places of the Society and of the House of Delegates, Council and Censors, and shall have general charge of the arrangements for all meetings. The Chairman of the committee shall report an outline of the arrangements to the Secretary for publication in the program, and shall make such additional announcements during the session as occasion may require.

CHAPTER VIII.

DISTRICT BRANCHES.

SECTION 1. The First District Branch shall comprise the members of the medical societies of the Counties of New York, Westchester, Rockland, Putnam, Orange and Dutchess.

The Second District Branch shall comprise the members of the medical societies of the Counties of Kings, Queens, Nassau, Suffolk and Richmond.

The Third District Branch shall comprise the members of the medical societies of the Counties of Albany, Rensselaer, Schoharie, Greene, Columbia, Ulster and Sullivan.

The Fourth District Branch shall comprise the members of the medical societies of the Counties of St. Lawrence, Franklin, Clinton, Essex, Hamilton, Fulton, Montgomery, Schenectady, Saratoga, Warren and Washington.

The Fifth District Branch shall comprise the members of the medical societies of the Counties of Onondaga, Oneida, Herkimer, Oswego, Lewis and Jefferson.

The Sixth District Branch shall comprise the members of the medical societies of the Counties of Otsego, Delaware, Madison, Chenango, Cortland, Tompkins, Schuyler, Chemung, Tioga and Broome.

The Seventh District Branch shall comprise members of the medical societies of the Counties of Monroe, Wayne, Cayuga, Seneca, Yates, Ontario, Livingston and Steuben.

The Eighth District Branch shall comprise the members of the medical societies of the Counties of Erie, Niagara, Orleans, Genesee, Wyoming, Allegany, Cattaraugus and Chautauqua.

SEC. 2. Each District Branch shall elect annually a President, a Vice-President, a Secretary and a Treasurer.

SEC. 3. The President of the District Branch shall be the Councilor for that branch.

SEC. 4. Each District Branch may adopt a constitution and by-laws for its government, provided that the same shall first be approved by the Council of the Society.

CHAPTER IX.

COUNTY SOCIETIES.

SECTION 1. County societies shall be organized as soon as practicable in every county of the State in which no county society exists, but there shall be but one county society in each county.

SEC. 2. Full and ample opportunity shall be given to every reputable physician to become a member of the society in the county in which he resides, and if there be no such society, then in the county society of an adjoining county.

SEC. 3. Whenever a member in good standing in any county medical society removes to another county in this State, his name, upon his request, shall be transferred to the roster of the county society of the county to which he removes, without cost to him.

SEC. 4. At its annual meeting each county society shall elect a delegate or delegates to represent it in the House of Delegates of this Society in accordance with the Constitution and By-Laws of this Society.

SEC. 5. The Secretary of each county society shall keep a roster of its members and of all other registered physicians of the county, in which shall be shown the full name of such physicians, with their addresses, the colleges from which they graduated, and the date of graduation, the date of their license to practice in this State, and such other information as may be deemed to be useful. In keeping such roster, the Secretary shall note any changes in the personnel of the profession by death or removal to or from the county, and in making his annual report he shall account for every physician who shall have practiced in the county during the year.

SEC. 6. The secretary of each county society shall forward a copy of its roster of officers and members, list of delegates and list of other registered physicians of the county, to the Secretary of this Society thirty days before the date of its annual meeting.

SEC. 7. On or before the first day of June of each year the Treasurer of each county society shall forward to the Treasurer of this Society the amount of the assessment made upon it by the House of Delegates, which assessment shall be at a uniform per capita rate throughout the State, based upon membership.

SEC. 8. Each county society may adopt a constitution and by-laws for the regulation of its affairs, provided

that the same shall first be approved by the Council of this Society.

SEC. 9. The term county society, as used in these By-Laws, shall be deemed to include all societies which shall be organized and chartered by the House of Delegates.

CHAPTER X.

MISCELLANEOUS.

SECTION 1. No address or paper before the Society, except those of the President and orators, shall occupy more than twenty minutes in its delivery, and no member shall speak upon any question before the house for longer than five minutes nor more than once on any subject, except by consent.

SEC. 2. All papers read before the Society or any of its sections shall become the property of the Society. Each paper, or a copy thereof, shall be deposited with the Secretary after the same shall have been read.

SEC. 3. Any distinguished physician of a foreign country, or a physician not a resident of this State, who is a member of his own State Association, may become a guest during any annual session upon the invitation of the President or officers of the Society, and may be accorded the privilege of participating in all the scientific work of the session.

SEC. 4. The deliberations of the Society shall be governed by parliamentary usage, as contained in Roberts' Rules of Order, when not in conflict with the Constitution and By-Laws of the Society.

CHAPTER XI.

AMENDMENTS.

These By-Laws shall not be amended except by a majority vote of all the delegates present at a meeting of the House of Delegates, nor unless ten days' notice of the meeting and of the proposed amendment shall have been given to each member of the House of Delegates.

AND IT IS HEREBY FURTHER ORDERED that, as provided in and by said Chapter one of the Laws of one thousand nine hundred and four, when this order is duly entered, the petitioners, Medical Society of the State of New York and The New York State Medical Association, "shall be one corporation under the name 'Medical Society of the State of New York,' which shall not be deemed to be a new corporation, but to be a continuation of the Medical Society of the State of New York, incorporated in eighteen hundred and six. A certified copy of said order shall be filed in the office of the Secretary of State. All the property belonging to the corporations so consolidated shall vest in the said Medical Society of the State of New York, which shall have all the powers, rights and privileges possessed by either corporation at or immediately prior to the consolidation, and which shall be subject to all of the liabilities of each corporation."

E. H. S.

JAMES L. HOTCHKISS,
Clerk.

CERTIFIED COPY.

STATE OF NEW YORK, }
MONROE COUNTY CLERK'S OFFICE, } ss.
ROCHESTER, N. Y.

I, JAMES L. HOTCHKISS, Clerk of the County of Monroe, of the County Court of said County, and of the Supreme Court, both being Courts of Record, having a common seal, DO HEREBY CERTIFY, that I have compared a copy of an Order of Consolidation, hereunto annexed, with the original now entered and filed in this office, and that the same is a correct transcript thereof and of the whole of said original.

IN TESTIMONY WHEREOF, I have hereunto set my hand and affixed the seal of said County Court, this 11th day of December, A. D. 1905.

JAMES L. HOTCHKISS, Clerk.

[SEAL.]

BY-LAWS OF THE MEDICAL SOCIETY OF THE COUNTY OF

Adopted (month) (day) 190 . day of month of year.

This is to certify that the By-Laws herewith submitted are approved by the Council of the Medical Society of the State of New York in accordance with Chapter IX, Section 8, By-Laws of the Medical Society of the State of New York.

President.

CHAPTER I.

NAME OF THE SOCIETY.

SECTION 1. The name and title of this Society shall be the Medical Society of the County of

CHAPTER II.

MEMBERSHIP.

SECTION 1. Membership in the Medical Society of the County of , the District Branch and the Medical Society of the State of New York may be obtained by physicians in good standing, residing in the County of (or in an adjoining county if said county has no medical society), and duly licensed and recorded in the office of the County Clerk of County, State of New York, under the Constitution and By-Laws of the Medical Society of the State of New York, in the following manner:

SECTION 2. Application for membership shall be made on blanks (furnished by the Medical Society of the State of New York), signed by the applicant and indorsed by two members of the County Society. Such blanks shall be sent to the Secretary who shall present them, without delay to the *Board of Censors, for investigation and report.

SECTION 3. The application must be accompanied by the initiation fee, county dues and the State assessment for the current year, but if the application is made after the first day of November such county dues shall be credited as of the next year.

SECTION 4. The *Board of Censors may recommend such applicant for membership at any meeting of the society, after due publication, and provided all members are notified at least one week before such election is to be held. A two-thirds vote by ballot shall be necessary to elect. A candidate not elected shall have all moneys returned that he may have paid the society.

SECTION 5. Candidates duly elected shall qualify as members by signing the By-Laws of the society, District Branch and the Medical Society of the State of New York.

SECTION 6. All resignations shall be in writing and shall be sent to the Secretary and referred to the society at its first meeting after their receipt. If accepted, the member thereby severs all connection with the society, the District Branch and the Medical Society of the State of New York, and relinquishes all right and title to any share in their property. No resignation shall be accepted from a member owing dues or assessments or under charges.

SECTION 7. When a member in good standing removes to another county, his name shall be transferred to the roll of members in the county of his new residence.

SECTION 8. When a member removes from the State of New York permanently, he shall cease to be a member of the society and shall forfeit all right and title to any share in the privileges and property of the society, District Branch and the Medical Society of the State of New York.

SECTION 9. When a former member applies for reinstatement, he may be admitted to membership in the regular manner, provided that if dropped for non-payment of dues, he make good his indebtedness before he makes application for reinstatement. If not elected, all moneys paid for reinstatement shall be returned to him.

SECTION 10. Any applicant for membership whose name has not been acted upon within six months shall have the right of appeal to the Comitia Minora.

SECTION 11. A copy of this application should be sent to the Secretary of the Medical Society of the State of New York within ten days after a candidate has been elected to membership in the County Society.

SECTION 1. The officers of this society shall be a President, Vice-President, Secretary, Treasurer, and Censors.

SECTION 2. These officers shall constitute the Comitia Minora.

SECTION 3. All officers shall assume office on January 1st, and serve for the ensuing calendar year, or until their successors have been elected and qualified.

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*In large counties a Committee on Membership may be chosen or applications could be sent to the Comitia Minora.

SEC. 9. When a former member applies for reinstatement, he may be admitted to membership in the regular manner, provided that if dropped for non-payment of dues, he make good his indebtedness before he makes application for reinstatement. If not elected, all moneys paid for reinstatement shall be returned to him.

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FORM OF APPLICATION BLANK FOR USE BY COUNTY SOCIETIES.

To the Medical Society of the County of I, M.D., indorsed by the Regents of New York State University in the year , registered at the County Clerk's office in the County of under date of day of year, desiring to become a member of the Medical Society of the County of the District Branch and the Medical Society of the State of New York, agree, if elected, to comply with all By-Laws, rules and regulations of the county of the District Branch, and the Medical Society of the State of New York.

Witness my hand this day of , M.D. (Signature of candidate.)

- 1. I was born at on the day of .
2. My preliminary education was obtained (State if common school or collegiate. If the latter, give name of college and date of degree.)
3. I graduated in medicine from (Give name of college in full.) on the day of 1
4. I am a member of the following medical societies:
5. Hospital and Dispensary connections, past and present.
6. I have practiced at my present location years, and at the following places for the years named: (Name location and give dates.)
7. I served in the Army or Navy. (State duration of service, with dates, also rank held.)
8. I am (State "general practice" or indicate specialty.)
9. My office is in city or town, at street; residence at street. Office hours Telephone number Summer address day of (month) 190

To the Medical Society of the County of The undersigned being personally acquainted with Dr. of No. street City, a graduate of in the year recommends for membership in the Medical Society of the County of M.D. M.D.

This application when filled, to be sent with Dollars, State Assessment and \$ County dues to the Treasurer of the Medical Society of the County of

Cheques should be made payable to

SECTION 11. A copy of this application should be sent to the Secretary of the Medical Society of the State of New York within ten days after a candidate has been elected to membership in the County Society.

CHAPTER III.

OFFICERS.

SECTION 1. The officers of this society shall be a President, Vice-President, Secretary, Treasurer, and Censors.

SECTION 2. These officers shall constitute the Comitia Minora.

SECTION 3. All officers shall assume office on January 1st, and serve for the ensuing calendar year, or until their successors have been elected and qualified.

CHAPTER IV.

DUTIES OF OFFICERS AND DELEGATES.

SECTION 1. President. It shall be the duty of the President to preside at all meetings of the society and of the Comitia Minora, to prepare a program for the meetings of the society with the aid of the Comitia Minora, and to appoint all standing committees. At the annual meeting of his official year, he shall deliver an address before the society. He shall call special meetings of the society, at the request of a majority of the Comitia Minora, or at the written request of members. He shall call meetings of the Comitia Minora at the written request of of its members. He shall appoint inspectors of election when elections are held, shall sign Delegate certificates and such other papers as the society may direct, but shall not sign any warrant upon the treasury, except by the direction of the Comitia Minora. He shall enforce the laws of the society and perform such other duties as usually pertain to the office.

SEC. 2. Vice-President. The Vice-President shall assist the President in the discharge of his duties, and in the event of his death, resignation, removal, incapacity or refusal to act, shall succeed him.

SEC. 3. Secretary. The Secretary shall make and preserve minutes of the meetings of the Society; shall conduct its correspondence; shall issue all notices of meetings, shall notify candidates of their election and members of their appointment on Committees or of their election as Delegates. He shall supply applicants for membership with the necessary blanks. He shall keep a roster of its members and of all other registered physicians of the county, in which shall be shown the full names of such physicians, with their addresses, the colleges from which they graduated, the date of graduation, the date of their license to practice in this State, and such other information as may be deemed to be useful. In keeping such roster the secretary shall note changes in the personnel of the profession by death or by removal to or from the county, and in making his annual report he shall endeavor to account for all physicians who shall have practiced in the county during the year. He shall forward a copy of the roster of officers and members (list of delegates and list of other registered physicians of the county), to the Secretary of the Medical Society of the State of New York thirty days before the date of its annual meeting, and shall perform such other duties as pertain to the office. He shall remit promptly to the Treasurer all moneys received from applicants for admission or other sources. Clerical assistance, when necessary shall be provided by the Comitia Minora.

SEC. 4. Treasurer. The Treasurer shall collect all county dues, State assessments and other moneys due the society. He shall deposit and disburse such moneys in accordance with the order of the Comitia Minora. He shall pay out no moneys except on order of the Comitia Minora, countersigned by the President.

He shall, on or before January 1st, of each year mail to each member a bill for his dues and assessments for the ensuing year, ending December 31st. He shall, on May 1st notify all members of their arrears. He shall keep proper books of account, which shall at all times be open for examination by the Comitia Minora. He shall make an annual report to the society, and monthly reports to the Comitia Minora.

Upon payment of county dues and State Assessments, each member shall be entitled to a proper receipt upon a form to be furnished by the Treasurer of the State Society.

On or before the first day of June of each year the Treasurer shall forward to the Treasurer of the Medical Society of the State of New York, the amount of the assessment made upon it by the House of Delegates, which assessment shall be at a uniform per capita rate throughout the State based upon membership. He shall be under bond to an amount fixed by the Comitia Minora. Clerical assistance, when necessary, shall be provided by the Comitia Minora.

SEC. 5. No officer, Censor, Committee, Delegate or Member of the society shall incur any expense or financial obligation chargeable against the society without first obtaining the sanction of the Comitia Minora.

SEC. 6. Board of Censors. The Board of Censors, after their election and previous to the next stated meeting of the Comitia Minora shall organize by electing a chairman and a secretary. The Censors shall perform the duties directed by the By-Laws and resolutions of the society. They shall meet previous to each meeting of the society to consider such applicants for membership as may be placed in their hands by the secretary. They shall satisfy themselves concerning the moral and professional standing of each applicant and the chairman or acting chairman shall return a report to the Secretary of the society days before the next meeting. They shall once every three (3) months cause an inspection to be made of the register of physicians at the County Clerk's office, and shall report to the society all registrations made during intervals between meetings. If they are satisfied that any registration is illegal or of doubtful character, they shall promptly report such to the society, and take such further action as the society may direct.

They shall secure the enforcement of the laws regulating the practice of medicine in the County of and have immediate supervision over the Counsel of the society and his work.

SEC. 7. They shall take cognizance of all charges preferred against a member. Charges against a member shall be presented to the President in writing and by him referred to the Censors, who shall meet, examine the same and the evidence thereon.

SEC. 8. If the majority of the Censors shall be of the opinion that the charges are well founded, they shall serve a copy of them upon the accused and call for his attendance at a given date before the Censors; of this meeting the accused shall have at least ten days' notice.

SEC. 9. After the investigation of the charges they shall report their findings to the society at its next meeting.

SEC. 10. Any member failing to obey a summons of the Board of Censors, without a satisfactory excuse shall be liable to discipline.

SEC. 11. Charges brought against a member of the Board of Censors shall take the course above described, except that the society shall hear evidence and pass judgment.

SEC. 12. Clerical Assistance, when necessary, shall be furnished by the Comitia Minora.

SEC. 13. There shall be three degrees of discipline: censure, suspension and expulsion, which shall be imposed upon members by a majority of the votes cast at a regular or special meeting of the society convened for that purpose.

SEC. 14. Censors shall constitute a quorum.

SEC. 15. They shall make an annual report to the society, giving the names of all applicants and the action taken thereon.

SEC. 16. Delegates. All delegates from this society shall obey and perform the duties prescribed by the laws of the State and the By-Laws, resolutions and instructions of this society when the same are not in conflict with the laws of the State or of the Medical Society of the State of New York.

SEC. 17. All delegates shall assume office on January 1st, and serve for the ensuing calendar year or until their successors have been elected and qualified.

CHAPTER V.

ELECTION OF OFFICERS.

SECTION 1. All officers shall be elected by ballot at the annual meeting and hold office for one year from January 1st, or until their successors have been elected and qualified.

SEC. 2. No one shall be eligible for any office, or

¹These duties are to be performed by the Committee on Membership when there is such Committee.

entitled to vote for any officer or Delegate who has not paid his dues and assessments for the current year.

SEC. 3. Nominations for officers and delegates shall be made at meeting, and a ballot containing all nominations sent to each member with the notice for the annual meeting.

SEC. 4. The poll for the annual election shall remain open one hour, or until every member present has had an opportunity to vote, after which the poll shall be declared closed by the president and no additional votes shall be received.

SEC. 5. At the close of the poll, the inspectors of election shall immediately proceed to canvass the votes and report the result to the President, who shall announce it to the society. If upon the first ballot no choice shall be made the balloting shall be repeated until all the offices shall be filled. At the second and each succeeding ballot, the name of the candidate receiving the least number of votes shall be withdrawn. A majority of the votes cast shall be necessary for an election.

SEC. 6. In the event of a vacancy occurring in any elective office of the society composing the Comitia Minora, such vacancy may be filled by a majority vote of the Comitia Minora, except where otherwise ordered in the By-Laws.

CHAPTER VI.

TRANSFER OF PROPERTY.

SECTION 1. At the expiration of his term of office each officer of the society shall transfer to his successor all property of the society in his charge and shall be given a receipt for the same.

CHAPTER VII.

STANDING COMMITTEES AND THEIR DUTIES.

The Standing Committees shall be:

1. Comitia Minora.
2. Public Health.
3. Legislation.
4. Committee on Membership (for large counties).

The Comitia Minora shall for all legal purposes be the trustees of the society. It shall make all arrangements for the meetings of the society and perform such other duties as may be assigned to it by the society. members shall constitute a quorum. It shall meet regularly within the ten days preceding each annual and regular meeting of the society and at such other times as business may require.

SEC. 3. It shall have power to direct the expenditure of the funds of the society, appropriated at the Annual Meeting or at any regular or special meeting, and shall present to the society at such times estimates of the amounts needed to carry on the business of the society.

SEC. 4. It shall submit at the annual meeting a report of the work done during the preceding year.

COMMITTEE ON LEGISLATION.

The Committee on Legislation shall be appointed annually by the President. It shall consist of members, including the Chairman. It shall be the duty of the Committee to inform itself in regard to pending medical and sanitary legislation and to make a report to the society at its annual meeting. members shall constitute a quorum.

COMMITTEE ON PUBLIC HEALTH.

The Committee on Public Health shall be appointed annually by the President. It shall consist of members including the Chairman. It shall be the duty of this Committee to investigate all questions relating to

local public health and to make a report to the society at its annual meeting. members shall constitute a quorum.

The Committees on Legislation and Public Health shall cooperate with the State Society Committees.

COMMITTEE ON MEMBERSHIP.

The Committee on Membership shall meet previous to each meeting of the society to consider such applicants for membership as may be referred to it by the Secretary. It shall satisfy itself concerning the moral and professional standing of each applicant, and the chairman or acting chairman shall return a report to the Secretary of the society, days before the next meeting.

CHAPTER VIII.

DELEGATES.

SECTION 1. One delegate for each assembly district in the County shall be elected at the annual meeting, to represent the society in the House of Delegates of the Medical Society of the State of New York.

SEC. 2. One delegate for each hundred members or fraction thereof shall be elected at the annual meeting to represent the society at the annual meeting of the District Branch.

SEC. 3. The delegates shall be elected by ballot and the same By-Laws shall apply as in the election of officers.

SEC. 4. At the first election held after the adoption of these By-Laws, half the delegates shall be elected for one year, and half for two years, and thereafter delegates shall serve for two years. In counties entitled to but one delegate, he shall be elected to serve two years. Where a county society is entitled to an odd number of delegates, the odd number shall be elected for two years.

CHAPTER IX.

MEETINGS.

SECTION 1. Regular meetings shall be held on day of month, except during the months of

SEC. 2. The annual meeting shall be held on day of month each year, in the City of , at its office or place of transacting its official affairs, or elsewhere in the City, as may be selected by the Comitia Minora at which time officers, Chairmen of Standing Committees, delegates to the Medical Society of the State of New York and the District Branch shall be elected. The notice of the meeting shall state the date, place and hour, and shall be mailed to each member at least ten (10) days before said meeting. The affidavit of mailing by the Secretary of the society to the last-named address of the member, shall be deemed sufficient proof of the service of such notice upon each and every member for any and all purposes.

SEC. 3. Special meetings shall be called at the written request of members. Notice of all special meetings shall be mailed to every member at least ten (10) days before said meeting and shall state the date, place, hour and purpose of the meeting. No other business at any special meeting shall be conducted except such as is stated in the call. The affidavit of mailing by the Secretary of the society to the last-named address of the member shall be sufficient proof of the service of such notice upon each and every member for any and all purposes.

SEC. 4. Members shall constitute a quorum.

SEC. 5. The order of business shall be:

1. Reading the minutes of the last meeting.
2. Report of the Comitia Minora.
3. Election of officers.
4. Election of candidates.
5. Reports of officers and committees.
6. Unfinished business.
7. New business.

*See Chapter IV, Section 1.

*See Chapter III, Section 2.

8. Scientific program: 1. Presentation of patients.
2. Paper of the meeting. 3. Presentation of specimens and instruments. 4. Reports of cases.
9. Adjournment.

CHAPTER X.

DUES.

SECTION 1. Each member shall pay annually the sum of _____ dollars, which shall be due on the first day of January. At the same time he shall pay the amount of the per capita State assessment fixed by the House of Delegates for the current year.

SEC. 2. All members who have not paid their annual county dues and State Assessments on or before the first day of May of each year shall be placed in the list of members in arrears for dues and assessments, and so reported in the society at its next meeting, and shall not receive the publications, or notices of meeting, or defense for alleged malpractice until their dues are paid.

SEC. 3. All members who fail to pay their arrears on or before December 31st, shall be dropped from the roll of members.

CHAPTER XI.

RULES OF ORDER.

The deliberations of this society shall be governed by parliamentary usage, as contained in "Roberts' Rules of Order," when not in conflict with the Constitution and By-Laws of the Medical Society of the State of New York.

CHAPTER XII.

SEAL.

SECTION 1. The seal of the society shall be as follows:

CHAPTER XIII.

AMENDMENTS.

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

BIOGRAPHICAL CARD INDEX AND DIRECTORY OF THE AMERICAN MEDICAL ASSOCIATION.

Since the American Medical Association began the work of accumulating personal information from the members of the medical profession for the biographical card index and the American Medical Directory, many inquiries regarding these new lines of activity have been received. Physicians all over the country have asked, "What is the biographical card index and what is its purpose? How will the American Medical Directory differ from other medical directories?" The following is presented to answer these and other questions relating to the subject and to obviate the necessity of replying to each individual inquiry.

In order to understand the object of this work, it is necessary to examine carefully the present condition of the medical profession from a social

and economic standpoint. The last century, and particularly the last twenty-five years, have witnessed a remarkable progress in medicine and in the allied sciences. This progress will unquestionably continue, and the army of observers and investigators now at work in every branch of medical science can safely be trusted with the technical side of a physician's work. But all thoughtful members of the profession admit that there are many practical questions relating to the training, the work and the life of the individual physician, as well as to the community in which he lives, that require careful study and consideration, as well as intelligent and conservative regulation. The improvement of the preliminary training of prospective medical students, of medical schools and of medical courses; higher standards for licensure by State authorities; reciprocity, and mutual cooperation between State boards; protection of the ignorant and the sick from the quack, the faker and the charlatan; improvement of the social and financial conditions of the physician; stimulation of the desire to improve his own condition and to increase his knowledge and usefulness—all these much-needed lines of agitation and reform are blocked in the beginning by a lack of knowledge regarding the individual members of the medical profession.

As already stated, detailed information in all technical lines has increased a hundredfold in the last half century. Along practical and sociologic lines, there is little more known than there was fifty years ago. No one knows how many individuals are at present engaged in the practice of medicine in the United States. Estimates vary from 110,000 to 140,000. Of this indefinite number, no one knows how many are properly licensed by the licensing body of the State in which they live. In many States, owing to the condition of the records, the State board itself cannot tell whether a certain individual has a right to practice medicine or not. Information obtained by one State board at considerable expense and trouble is not utilized by others. Knowledge possessed by one society is not shared with other societies. Statements regarding college and year of graduation, as well as regarding State licensure, are in many cases most difficult of verification. If one desires data regarding a physician, there is no central bureau that can furnish it to him, no general clearing-house for information. Licensing bodies are continually met by the fact that they are unable to obtain reliable information whereby they may verify statements made by an applicant. There is not in existence to-day a list of the physicians of the United States whose legal qualifications to practice medicine have been verified. Out of the fifty-four State and territorial licensing bodies, only twenty-one have ever published a list of physicians legally qualified to practice medicine within their jurisdiction.

Information regarding members of the profession is difficult to obtain when desired for iden-

tifying, locating or tracing an individual physician for personal notices, biographical sketches, obituary notices, and all other purposes for which such information is desired. What has long been needed is an accurate compilation of data, made up of information obtained from official sources, such information then to be carefully edited and classified and kept corrected up to date, for the use and information of licensing bodies, and for any responsible person desiring information for legitimate purposes.

While the necessity for such classified information has been long recognized, until recently, conditions have not been favorable for its establishment and maintenance. Now with organization more or less completed, such is possible. In his annual report at the Portland session, the General Secretary of the American Medical Association said:

"It has long been recognized that a permanent biographical card index of American physicians, giving data in regard to preliminary education, medical education, previous locations, etc., would be of great value to the Association and to the profession. Such an index would be of value in tracing a physician through various localities, making up matter for directories and in compiling statistics in regard to the profession. This work has been begun and is now being carried on along two different lines, namely, first, the accumulation and indexing of biographical data in regard to the member of the profession now engaged in active practice; second, the accumulation of similar data in regard to graduates of the current year and of recent licentiates of State boards of health. This has been carried on through the assistance and cooperation of medical colleges and secretaries of State licensing boards. The amount of information on hand is considerable and is steadily increasing."

This was approved by the Committee on Reports of Officers and adopted by the House of Delegates, with instructions to the General Secretary to continue the work of collecting and classifying biographical information.

In accordance with this action, a biographical card index of the medical profession has been established, and it is hoped that very soon this index will contain a card for every physician in the United States. On the card will be recorded name, place and date of birth, preliminary education, medical college and year of graduation, State license and data, medical societies, college and life insurance positions, school of practice, and specialty, if any. In connection with this fundamental information, provisions are made for recording removals, positions held and other matters that may occur in the life of the individual that are of sufficient medical interest to note. Such information is pouring into the general offices of the Association from State and county societies, from licensing bodies, from newspaper clippings, the last alone averaging over one hundred and fifty a day. Through the cooperation

of medical colleges and State boards, certified lists of graduates and licentiates, together with most of the personal information requested, have been obtained and are now being properly classified. There is now in possession of the Association a fairly complete list of graduates of American medical colleges from 1860 to 1901. This list has been supplemented and brought up to date through the cooperation of registrars and secretaries of medical colleges. Copies of the official records of more than three-fourths of the licensing bodies have been secured. The remaining records are now being copied and will soon be completed. Blanks for reports both of colleges and of licensing boards have been prepared.

Each year a supplementary list of recently graduated and licensed physicians will be procured and added to the general index. There will thus be formed a list of all medical graduates, as well as of all legally qualified practitioners, made up from official records, and carefully corrected and revised each year. Information lacking regarding individuals will be constantly added. Thus it will be seen that the information asked for is primarily intended for this index. As a reliable and official list of legally qualified practitioners, it will be of great value and will undoubtedly aid in securing general reciprocity among licensing bodies.

The second reason for desiring this information is for use in compiling a reliable and accurate directory. The directory, however, is only incidental to the other work. From the index will be drawn information, either personal or official, for compiling, revising and correcting the directory, for the one now in preparation, as well as for subsequent editions.

The American Medical Directory will differ from directories heretofore issued in three particulars: First, it will be a directory of the American medical profession published and owned by physicians themselves. Second, information regarding college and year of graduation and date of licensure will be verified from official sources. Third, it will furnish the same information regarding each physician, whether he be a subscriber to the directory or not. No paid-for information will be included. It will also combine in one volume the purpose of a general medical directory, as well as a medical society blue book, since the names of all members in good standing of the constituent State associations and their component branches will appear in capital letters, as a distinctive mark of such membership. Information contained in the directory regarding each physician will include name in full, year of birth, college and year of graduation, office address and office hours.

The assistance and cooperation of all physicians, and especially all members of the organized profession, is earnestly requested in carrying on and developing this work. The greatest service that any physician can render at the present time is to furnish, promptly and accurately, information

regarding himself. For the purpose of obtaining this information a blank has appeared in successive numbers of *The Journal* for the last six weeks. About 20,000 of these have been filled out and sent in.

A number of physicians have written saying: "You will find full information regarding me in the _____ Directory." As practically all directories are copyrighted works, it will be readily seen that such information is not available for the purposes desired. Other physicians have replied, saying, "You will find my complete record in the Transactions of the _____ Medical Society for the year _____." A moment's reflection will show the difficulty in tracing up the personal record in this way. The time required for a physician to fill out and return these blanks is infinitesimal; the time required for the directory office force to trace each individual is great. If each reader of *The Journal* will furnish at once, without further solicitation, the personal information regarding himself, the work of accumulating the data will be greatly simplified.

WHAT ORGANIZED MALPRACTICE DEFENSE DOES FOR THE PROFESSION AND THE PUBLIC.¹

BY JOHN TAYLOR LEWIS,
New York.

Mr. President and Gentlemen:

IT is unnecessary for me to thank you for this opportunity to speak upon a subject which is very near to me, and to express my appreciation of the compliment that is implied in this invitation.

In the few minutes allowed me it would be hopeless to attempt to discuss exhaustively a subject of such magnitude as the defense proposition, one that means to the public far more than the narrow questions suggested by the malpractice suit, for it is a subject which strikes directly at scientific advancement along every line of medical and surgical progress. It seeks to safeguard a profession, which has always given freely of its time to the treatment of the poor as well as of the rich.

It has been thought that organized malpractice defense originated in the minds of members of the State Medical Association. It may have been so, but there had existed in the medical societies of England, before this defense was taken up, a similar defense proposition which had also been successfully carried on. In 1897, at the time when The New York State Medical Association was reorganized, this subject was discussed with the writer by Dr. Frederick Holme Wiggin and Dr. E. Eliot Harris, of New York. Various methods of procedure were considered, and finally the one now in use in this State was decided upon. The question of means to carry on the same was a matter of serious consideration,

¹Read before The New York State Medical Association, at the Twenty-second Annual Meeting, New York, October 16-19, 1905.

and it was thought by the writer that if one of the large insurance companies would undertake this defense with their legal department fully equipped it might prove a most satisfactory plan, but after consultation with the attorneys and officers of these companies it was found that the expense would be too great, and that the policy issued by these companies would not be accepted by the entire membership of the Association. It then resolved itself into an attempt to defend the members of the Association who were sued for alleged malpractice without adding anything to the dues of the members, and under these conditions the malpractice defense proposition was first introduced at a meeting of the Medical Association and was overwhelmingly and decisively refused and discarded unconditionally. Thus ended the first attempt at assistance offered to the members of the Association, but those who had really studied the matter felt sure that the subject was not sufficiently understood by the members who had voted against it, and in the following year at the annual meeting the defense project was again brought forward by Dr. Wiggin, and was as decisively and overwhelmingly adopted. Since that time continuously this defense has been carried on.

At the time of the beginning of this defense, statistics in this State showed that one physician in every 150 was sued for malpractice. Statistics, so far as they can be gathered at present, show that in the past year one physician in every 275 was sued for malpractice. In New York State there are, according to Volume VII of the Medical Directory of New York, New Jersey and Connecticut, 11,923 physicians. Despite the fact that the number of physicians is to-day over 10 per cent. greater than when the malpractice defense was undertaken, the number of suits has been diminished by nearly 50 per cent. If the figures are correct, and we believe they are, over 40 suits were instituted last year against physicians in this State for alleged malpractice. It is interesting and gratifying to be able to report that of 27 cases where the State Association undertook the defense of the member, only one has been decided in favor of the plaintiff and that has been appealed. When a litigant or his attorney is promptly notified upon presenting a claim for alleged malpractice that the member will be defended by his State Medical Association many cases are dropped and the physician not only saved worry and annoyance but money. One method of forcing a physician to settle such claims is by constantly calling and threatening a suit, and accompanying such threats with the offer of a settlement. Many physicians have paid small and even large sums to stop this worry and the frequent calls of the lawyer or his client, despite the fact that they were innocent of any wrongdoing and had been most unjustly accused.

This shows something of the effect of persist-

ent and organized defense of malpractice suits by a reputable medical organization. But this is not the point I desire to emphasize, because there is nothing in this argument that shows that the professional man is bettered in an honorable way, but it simply shows the effect which the organized defense has had upon the blackmailing litigant. I desire to refer more to the ethical effect upon members of the profession as such, and in addition, to the direct benefit which such defense has upon the public health.

You all know that surgeons, no matter how skilful and no matter how satisfactory the result of their operations may be, so far as they are concerned, never feel sure but that with the healing of the break or wound some evidence may remain which in the mind of the litigious patient might become a subject for discussion with the shyster lawyer. This fear in the mind of the medical man necessarily stands in the way of his best efforts. Perhaps the most forcible illustration of this is in the action brought for a so-called X-ray burn. No other single scientific discovery has proven itself of such benefit to the public as that of Professor Roentgen, and nothing is more uncertain than its effects.

One of the most prominent surgeons in the city, a man who had given much time and study to the use of this unknown ray, and who had furnished one of the hospitals of our city with the result of his labors and had purchased a full set of implements and contributed them, was the first against whom an action was brought for burning with the X-ray. Even now protection from these rays is uncertain, but the public must be, and of course is, indebted to the medical profession for this great light; yet there will be found those who are willing, under the advice of a shyster lawyer, to prosecute, no matter how careful the surgeon may be. Still, we are thankful to say that such ingratitude is confined to the very few, and I refer to this class of cases simply as illustrative of the point I am endeavoring to make clear—that when the medical profession realizes that it is not to be hampered by the ever-present horror of a malpractice suit, then the public may expect to receive the benefit of the best judgment of the best minds along the lines of honest and earnest experimentation.

The reports show that about 97 per cent. of these so-called malpractice cases are brought for blackmail purely and without any idea of whether there is a bona fide claim or not, and when reached for trial are abandoned. With the successful continuance of this work these cases will surely decrease. There will always remain a very small percentage of cases where there is a proper legal question to be decided by a court and facts to be decided by a jury.

Of the cases which are honestly brought I have found that most of them are the result of attempted repair of fractures which have come into the hands of others for completion, and damages are claimed for unnecessary suffering by reason

of delay or non-union or for deformity following improper union. It often happens, sometimes unintentionally, that the second medical attendant lets slip some derogatory remark or an expression criticizing the work done by his predecessor, which suggests to the patient the idea of bringing an action, and these remarks should be carefully avoided.

The legislation committee should consider the introduction of a bill in our State Legislature compelling malpractice litigants to file security for costs when action is brought. This will cause the blackmailing variety to diminish.

There are two classes of malpractice litigants who attack the medical man; one is the patient who, when threatened with suit for the doctor's bill, threatens a malpractice suit in defense; the other is the scoundrel who relies upon the natural timidity which pervades the medical profession when its professional standing is attacked, and which makes the doctor an easy prey to such a character. Scores of cases never reach the eye of any court, and I presume there are members of the Association who have been threatened with suit in reply to a bill sent, who rather than endure the publicity of a suit, even though the Association stands ready to uphold any honest endeavor on the part of the member in the treatment of his case, settled such cases instead of standing up and fighting for their rights and those of their professional brothers.

The theory under which this defense was worked out was that if insurance companies could afford to pay counsel in various parts of the country, employ agents to secure defense insurance premiums, hire expensive offices, pay large salaries to officers, and then pay a large dividend to the stockholders of the company when they would charge only \$10 for the premium on a policy of defense, surely a great representative medical organization with all the conveniences of proper defense at hand, should be able, upon an economical basis, to defend its members, for a very small annual charge.

The success of the defense and the enormous influence which it has exerted on the mind of the profession and on the mind of the public is due to the fact that it is purely a defense. The public has come to know, and shyster lawyers have been given to understand, that no money will be paid to avoid a lawsuit. It is understood that when the defense of a member is once undertaken by the Association his defense will be continued to the court of last resort, which is an extremely tiresome proceeding for the shyster lawyer to contemplate. The member, of course, understands that the Association stands ready to uphold him, if what he has done is proper and he has made the best use of an enlightened judgment. This is what the law requires and what the council of the State Medical Association has demanded. It is not organized to defend those who commit illegal acts.

The success of this plan of defense conducted

by one's own friends, when the doctor feels that he has the support of his fraternity and of a great medical organization, is bound not only to benefit the public, but with a few continuous years of this defense stamp out once and for all one of the great stumbling blocks in the way of scientific medical and surgical experimentation, and thus allow earnest and honest study and practice within limits, to take the place of this ever-present fear in the mind of the medical practitioner of one of the greatest evils with which the medical profession has to deal.

I refer to continuous effort especially, because occasional fits and starts in any new movement does harm as well as good. People get the idea when the novelty is temporarily abandoned that it is considered unfortunate or ill-advised; then follows reaction, and the attacks are brought on with renewed vigor; but it is with this continuous and unrelenting pressure that great evils are overcome.

REMARKS ON THE MACROSCOPIC DIAGNOSIS AND GENERAL INDICATIONS FOR TREATMENT OF CANCER OF THE LARYNX.¹

BY JOHN NOLAND MACKENZIE, M.D.,
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THERE is no chapter in the book of laryngology that needs more careful revision than the chapter on cancer of the upper air passages. Indeed, it will have to be entirely rewritten. We are passing through a crisis in the history of this subject in which the same old battle is being fought that has raged around every other organ of the body where cancer dwells. Here, as elsewhere, we have much to learn, much to unlearn.

In responding to your courteous invitation to take part in this symposium, I think I can perhaps best utilize the limited time (twenty minutes) which has been placed at my disposal, by calling attention, as briefly as possible, to two phases of the cancer problem in the larynx, which, in view of the unsettled state of the question, seem to me of most pressing and immediate importance.

In the present state of our knowledge, there are three principal methods of diagnosis in laryngeal cancer. These are, in the order of their practical usefulness and importance: (1) The naked eye method, or diagnosis by direct inspection, supplemented by clinical phenomena; (2) thyrotomy, and (3) the microscope. Of the three methods, the second is often included in, and therefore ancillary to, the first. Take it all in all, the first method is by far the most practicable and satisfactory of the three. I shall consider briefly only one of its different phases.

For some time past, inspired by the work in the surgical department of the Johns Hopkins Hospital and guided by my own personal observation in the matter, I have become more and more im-

pressed with the possibilities of naked eye inspection, or macroscopic diagnosis, in malignant disease of the upper air passages. Although for a long time entertaining strong convictions on the subject, I first gave definite and public expression to them in some remarks made at the opening of the debate on Cancer of the Larynx at the Congress of the American Laryngological Association held in the City of Washington in 1900.² My object then, as it is now, was to stimulate study in the direction of the macroscopic diagnosis and pathology of laryngeal growths and the examination of the fresh specimen or material with the naked eye.

Much has already been accomplished by this method in the field of advanced surgical pathology, so that the general surgeon is to-day coming less and less to rely upon the pure pathologist for diagnosis and to seek the aid of the microscope only as a court of the very last resort. To use the words of Bloodgood, who has done most excellent and painstaking work in this field, the surgeon must, in the majority of cases, make the correct diagnosis of tumors "not on the clinical history and examination, but in all those cases which are not clinically positive, he must base his diagnosis on the naked eye appearance of the diseased tissue, exposed by the knife at the exploratory operation." (International Clinics, Vol. I, 14th Series, 1904, p. 237.) This observer, in a careful analysis of over 1,300 cases of tumor in Halsted's clinic at the Johns Hopkins Hospital (in which the benign stood to the malignant in the proportion of 1 to 3), comes to the conclusion that it is possible, in the majority of cases, to recognize the character of the growth by the naked eye appearance alone. From this study also it is shown that it is not only possible, as a rule, to differentiate the benign tumors from the malignant at the exploratory incision, but to recognize in the malignant the different groups of varying malignancy, and in the benign, growths which have a tendency to become malignant.

In Halsted's clinic at the Johns Hopkins Hospital more reliance is placed on the naked eye diagnosis than on the frozen section. It is claimed that even with the use of recent improved methods of preparing the latter, the naked eye method furnishes more accurate diagnostic information; and although the frozen section undoubtedly holds its own as a most valuable means of diagnosis, still, it is often misleading and more confusing than the macroscopic image of the cut surface.

It is difficult, if not impossible, to satisfactorily depict the macroscopic appearances of tumors by means of language. A's description would be perfectly unintelligible to B; B's account would have little or no meaning for C; while C's picture would be utterly bewildering to D—and so on to the end of the alphabet. I cannot possibly emphasize this point better than by quoting the

¹Read before The New York State Medical Association, at the Twenty-second Annual Meeting, New York, October 16-19, 1905.

²See Transactions of the American Laryngological Association for 1900.

words of Halsted in his illuminating address on the Training of the Surgeon, delivered last year at Yale:³ "I am sure that much of the material for surgical pathology can be correctly described only when it is perfectly fresh. It cannot be painted, because in less than a minute, in a few seconds often, the appearance of a freshly cut surface is greatly changed. Only those who are well trained as macroscopic pathologists, who have naturally a discriminating eye for color, a good sense for form and some talent for expression can properly describe the fresh material. Many, if not most, of the descriptions are worthless or at best serve only as reminders to those who can distinctly recall the case. The descriptions, by two trained men, of ordinary fresh material may differ so greatly that one could not believe they pertained to the same specimen. Color photography might be employed, it seems to me, with great benefit, for recording the appearance of fresh specimens."

I cannot insist too strongly on the application of the naked eye method of diagnosis in the case of malignant tumors of the larynx. Every resource and refinement of clinical diagnosis, including the exclusion of syphilis by the iodide and tuberculosis by tuberculin, should be resorted to, before an appeal to the microscope is made. By following the lead of the general surgeon, with the means of clinical diagnosis already at our command, together with more exact information concerning the naked eye appearances of the cut surface of laryngeal neoplasms, we will soon be in position where we will be more and more independent of the pure pathologist for help in diagnosis.

Every tumor of the larynx, no matter how benign it may appear, should be examined with the greatest possible care. Some of the most fatal diseases known to man make their first appearance in the larynx in the guise of great benignity. Thus the presence of cancer and tuberculosis in the individual is often first proclaimed by the discovery of an apparently simple papillomatous excrescence in the larynx. By the careful study of every case coming under our observation, we will some day, among other things, clear up the mystery which surrounds the genesis of papilloma and approach more closely the earliest possible recognition of some of the most deadly diseases of the larynx.

This brings me to the consideration of the question of the partial extirpation of laryngeal cancer for microscopic diagnosis.

The objections which I have repeatedly urged against the indiscriminate removal of tissue for examination (especially when done through the natural passage) are as follows: (1) It subjects the patient to the dangers of autoinfection at the point of incision and to metastasis elsewhere; (2) it stimulates the local growth of the cancer; and (3) finally, the method is often inconclusive,

misleading, and sometimes practically impossible.

The moment the continuity of the growth is broken, in that moment is opened the pathway for self-poisoning, and an unfavorable influence is excited on the local process. If ulceration has already taken place, a portion of the growth can be taken, if skilfully removed, for microscopic examination; but, as Bloodgood has pointed out, in the majority of cases, the tumor is "buried," and an exploratory incision for purpose of microscopic diagnosis means two operations, and if the tumor is malignant, opens the way for general dissemination.

If I interpret aright the general sentiment of those laryngologists who are qualified to speak with authority on the subject and who have declared themselves on this phase of the question, it is practically to the effect that attempts at incomplete removal (whether for diagnostic or curative purposes) of malignant growths of the larynx has little or no irritating or stimulating effect upon the local disease. In view of the established and glaring fact that the growth of cancer elsewhere in the body is stirred into greater activity by incautious manipulation of the local lesion, it seems well-nigh incredible that any disagreement of opinion in the matter should exist in the case of cancer of the larynx. And yet, strange as it may seem from the standpoint of the modern conception of cancer, the universal sentiment of authority is to-day practically unanimous in advising indiscriminate and immediate removal of portions of a suspected neoplasm as an early and routine means of diagnosis. Even the best of laryngeal surgeons lose no time in procuring pieces of a supposed cancerous growth of the larynx for examination under the microscope before they have gone carefully into the history of the case and endeavored to make the diagnosis with the naked eye alone. In the light of my own experience, I do not hesitate to declare that cancer in the larynx behaves in precisely the same way under incautious irritation or manipulation as it does in other organs of the body. Not to multiply examples, I well remember the method of treatment of laryngeal cancer in my earlier days (at the Golden Square Hospital in London), which consisted in the performance of tracheotomy and the subsequent removal, piecemeal, of the growth through the natural passages. By this process, which to-day in enlightened surgical communities would be considered as a means of slow murder, the growth was stimulated at once into much greater activity, the patient naturally became worse and worse and was sent to his long home much earlier than if he had been left severely alone. As I have said on another occasion, when I look back through the years in which I have seen cancer of the larynx maltreated and in which I have unconsciously maltreated it myself, I am simply appalled at the retrospection.

I am sorry, too, that my personal experience

³Bulletin of the Johns Hopkins Hospital, September, 1904.

does not agree with that of some of my laryngological friends, who deny the possible dangers of autoinoculation and metastasis after incomplete attempts at the removal of laryngeal cancer. The position, it seems to me, is axiomatic and does not call for debate. If all the cases of metastasis following incautious operations on laryngeal cancer were to be placed on record, their number would appear in the form of a revelation. Such cases do not usually find their way into print.

And just here let me say if any one wishes to know in what sense I use the term metastasis, let him consult the nearest medical dictionary for a definition of the term. To charge, at least by innuendo, as one of my critics has done, that by "metastasis" I mean the inhalation into the lungs or the deglutition into the stomach of detached fragments of the growth is simply unmitigated nonsense.

As to the question of direct inoculation of the laryngeal tissue by constant contact of opposing broken or unbroken surfaces, I can only say that, while not denying the possibility of its existence in cases in which the foul discharge from the cancerous mass may come in contact with an abraded or ulcerated surface, I have never met with an authenticated case of the kind in literature nor have I ever seen this accident in practice. Such a phenomenon is common and characteristic and of important diagnostic significance in tuberculosis—in cancer of the larynx its occurrence is as yet unknown and problematical. To confound such a phenomenon with the phenomenon of metastasis, however, with which it has nothing in common and to which it bears no resemblance, would be an inconceivable blunder had it not already been committed.

An interesting fact in connection with this part of the subject is the great difference in the tendency to metastasis after cauterization and after incision of cancerous tissue. In the former (when done, for example, by fire or escharotic), while metastasis may and does occur, there seems to be only a slight tendency to dissemination, while on the other hand, when the knife is used, metastasis is almost sure to follow. Thus, out of hundreds of cases of breast cancer in Halsted's clinic not a solitary patient has been cured in whom the tumor had been previously incised or operated upon by surgeons outside of the hospital. There have been several in which a cure has been effected after recurrence, the original operation having been done in the hospital, but not a single case of cure in which the patient was operated on before entering the institution.

I need not dilate upon the difficulties in the way of the microscopic diagnosis of cancer of the larynx. They are multitudinous. That the very best pathologists make mistakes (especially in the diagnosis of tumors) is a matter of common observation. The surgeon, through no fault of his, and even the pathologist, may be easily misled, and therefore only such testimony should be accepted as final as comes from an expert

specially versed in the histological differentiation of tumors.

In closing this part of my subject permit me to correct a wrong impression that seems to have been created in the minds of some of my colleagues both at home and abroad as to my views on microscopic evidence in the diagnosis of suspicious-looking neoplasms of the larynx. According to my critics, I reject completely the use of the microscope in the diagnosis of malignant growths of the larynx, and therefore would recommend the complete operation for that disease in the presence of doubt as to its nature—as one of them puts it, "I kick the microscope into the dust heap." No one but a congenital fool would refuse in doubtful cases the aid of the microscope, and no one outside of an asylum would advise a radical operation (such as the one suggested by me) without a certainty of diagnosis. There are some things that go without saying and which ought to be obvious to the dullest apprehension, and I cannot think that any one who knows me can believe me guilty of such insanity. My original remarks made in 1900, which have called forth such a storm of abuse and misrepresentation, dealt in general principles of diagnosis, and no attempt at elaboration was made. My position, as then stated, is simply that the microscope should be the court of last resort—the final method of appeal. Hands off the growth until the last. Then if microscopic examination is necessary, let both patient and surgeon be prepared for immediate operation. As I said on the occasion referred to, "before resorting to thyrotomy in general, especially if a portion of the growth is to be removed for examination, it should be clearly understood beforehand with the patient that if the disease should prove to be cancerous, the surgeon shall be at liberty, if in his judgment it seems best, to proceed at once to operation." I took this stand in order to check, if possible, the reckless and indiscriminate removal by laryngologists of suspected tumors for microscopic examination, and from what I hear and read I may be pardoned if I say that the warning has not been given in vain.

What the future has in store for the treatment of cancer can only be a matter of conjecture. Serumtherapy will doubtless some day play a conspicuous part in the treatment of this disease. For surgical treatment, to be sufficiently radical, involves the sacrifice of so much tissue that the time must surely come when surgery will be supplanted by simpler and more certain means; and with the discovery of the agent of infection will come its antidote. But with the possible future discovery of a serum, with perhaps the ultimate development of the fact that cancer is due to chemical changes in the blood, and therefore beyond the reach and uninfluenced by surgical procedure—with these and other possibilities we are not as yet confronted. The knife is our only weapon to-day. How can we best employ it?

I do not propose, nor have I the time, this after-

noon to go into any unprofitable discussion of the relative merits of the various operations done for laryngeal cancer, but will simply ask attention in a general way to the chief indications for, and the nature of, the operation to be performed for that disease. The indications for operation may be conveniently considered under three principal heads, *viz.*, (1) the size; (2) the situation and extent, and finally (3) the character of the growth.

1 *Character*.—Of these the last is by far the most important, and its discussion brings us to the consideration of an immensely important phase of the question, *viz.*, the possibility that the rapidity and certainty of metastasis in laryngeal cancer probably depends not so much upon the situation or even size of the growth, but upon its character. In other parts of the organism, some forms of cancer, as is well known, tend to form metastasis quicker than others—in others metastasis takes place at a much later period. Examples of the first class are the spined-cell tumors and of the second the group of basal-cell growths. It is very possible that this is true in regard to tumors of the larynx, and that there are in this organ forms of carcinoma of varying degrees of malignancy and with marked difference in their tendency to metastasis. If then, in the future evolution of our special knowledge along these lines it shall be indisputably shown by specially directed study and observation, that some laryngeal cancers are clinically more malignant than others and that, on the other hand, there are some hitherto thought to be specially malignant which for all surgical purposes are practically benign, then in considering the indication for and character of the operation to be performed, the two conditions of size and situation of the neoplasm become matters of relatively secondary importance.

2 *Size*.—A specially malignant type of growth (such as, for example, a scirrhous or medullary cancer), no matter what its size or appearance, no matter whether it is situated inside the larynx or outside of the larynx, would demand the most drastic surgical procedure, while in the case of a less malignant and dangerous tumor (as, for example, the basal-cell cancer), a less radical operation might possibly be called for.

Laryngologists have heretofore committed the common error of grouping together into one class all malignant and quasi-malignant laryngeal growths without making those finer histological distinctions which are so necessary to the proper conception of the relative malignancy of the tumor and the manner of its removal. This finer anatomical differentiation of malignant larynx tumors is a fertile field for future laryngological study and research. The uncertain or quasi malignancy of some tumors may possibly furnish the explanation of non-recurrence after incomplete removal of the laryngeal structures.

3 *Situation*.—I do not believe that any other than the most radical operation should be under-

taken in cases in which the disease is medianly situated (as, for example, at the anterior commissure or on the posterior wall of the larynx), or in which it occupies both sides of the larynx, or in which, being unilaterally situated, it approaches at all closely the middle line. Equally hazardous would be an incomplete operation in cases in which the disease appears as a diffuse infiltration, especially if fixation has occurred (no matter where situated or to what extent the larynx is visibly involved).

I may say in passing that whatever may be thought of other incomplete operations for the cure of laryngeal cancer, there are two methods of procedure which in future narratives of this disorder will be referred to as matters of purely historical interest—the operation through the natural passages and subhyoid pharyngotomy.

It is amazing what a hold the intralaryngeal operation still retains on the minds of some of the world's best laryngologists. It is a curious fact that the practice of removing malignant neoplasms of the larynx through the mouth obtains in intelligent quarters even at the present day. And yet the operators who resort to it are simply following the lead of some of the most prominent laryngologists all over the civilized globe. High authority not only sanctions but adopts it as an unquestioned method of treatment. Even in Germany it still has its supporters. The author of the chapter on malignant growths of the larynx in Heymann's Handbook not only advocates it, but also recommends (at least in the early stages of cancer), the endolaryngeal method, devoting seven pages to its consideration, and only two to the more radical measures. While I am quite willing to admire and applaud the skill with which some of these operations are performed, nevertheless, for reasons which I have repeatedly given elsewhere, I cannot too emphatically condemn such a method of procedure. No amount of skilful endolaryngeal manipulation should justify or palliate such an uncertain and perilous operation, especially (for obvious reasons) when the growth is situated in the infraglottic region. Removal of cancer of the larynx by the endolaryngeal method therefore should never come within the range of serious consideration. The risks, even in the earliest cases, are too many and too great. It is a dangerous game in which both surgeon and patient take the gambler's chance.

The same may be said of subhyoid pharyngotomy. The number of cases in which it would be even indicated is excessively small, while the risks of the operation far outweigh any advantage to be gained by its performance.

In approaching the treatment of laryngeal cancer, we have to face the following facts:

1. It is impossible to limit the extent of the disease laryngoscopically.

2. It is often equally impossible, even after preliminary division of the thyroid, to map out with certainty the whole area occupied by the disease. This is especially true in the case of diffuse infiltration, or where the epithelioma

originates in the deep-seated tissues and does not approach the surface until a late stage of the disease. The loose tissue beneath the mucous membrane in many places, and its wealth in lymphatics, often favor from a small focus of infection infiltration of, and crossing to, other portions of the larynx, and sometimes with great rapidity. Diffuse infiltration, especially if there be fixation of the parts, even though confined to a small area, should always awaken suspicion of the existence of the disease elsewhere in the organ, even though no apparent signs of its presence exist.

3. Even after removal of the entire larynx the disease may be apparent in one side of the organ and not in the other, and yet the microscope show extensive carcinomatous deposit in the seemingly normal side. We can never be sure, even in cases in which the cancer appears to be distinctly circumscribed, whether dissemination in other parts of the larynx has not taken place.

4. Cancer in the larynx grows with greater rapidity than it does in other regions of the body. This is due not alone to the histological structure of the organ but also, and chiefly, to the fact that its physiological mechanism is in ceaseless operation.

5. Investigations in the study of cancer in other parts of the body have developed the fact that the amount of lymphatic involvement bears no definite relation to the size and extent of the local lesion. Thus a small local focus of infection may be attended with most extensive metastasis to the glandular adnexa, while on the other hand, the latter may not be markedly involved even in extensive invasion of the primary disease. One or two illustrations will suffice. It has been shown, for example (Wertheim,⁴ Sampson⁵), that in the case of cancer of the uterus there is no relation between the size of the primary growth and the presence or absence of involvement of the pelvic lymphatic glands, and that we can never therefore tell clinically whether or not metastasis has taken place. And to come nearer to our subject, a notable example of the disproportion between the size and extent of the local lesion and the lymphatic involvement is furnished in the case of the lip. Not infrequently cases are brought to the surgical clinic in which masses of enormously enlarged neck glands have been removed under the impression that the condition was the original disease, when, as a matter of fact, a small, unnoticed, inconspicuous abrasion or ulcer of the lip has been the primary focus of infection.

These are facts not only of great practical prognostic significance, but also, if shown to apply to the larynx and its lymphatic supply, of overwhelming importance in the surgical treatment of cancer occurring in that organ. It will be the task of the future to determine whether in more or less advanced stages of this affection or even in its earlier history, the disease may not already lurk in the neighboring lymphatics,

as has been demonstrated in the case of cancer elsewhere in the body.

In practically all fatal cases of larynx cancer death is due to metastasis. In neighboring organs (the neck and mouth), metastasis takes place with great certainty and at an early date. It is, therefore, *a priori*, probable that the neck glands are affected in the case of cancer of the larynx—although perhaps not recognizable by the senses of sight and touch—at a much earlier period than is generally supposed. It is, at all events, safer to assume this to be the fact, than to accept the statement, unsupported by definite anatomical proof, that cancer in the interior of the larynx remains for a more or less indefinite period as a purely localized disease and does not get into the neck lymphatics until a late stage of the affection.

This is a fundamentally important phase of the question upon which as yet little or no light has been shed. Until more exact knowledge concerning it be forthcoming, it behooves the surgeon to move with caution even in cases in which the disease is apparently a distinctly localized affection. In the presence, therefore, of the fact that it is often impossible to limit the diseased area by inspection and the sense of touch, and in the light of the revelations of the microscope, it becomes a serious question whether we accomplish any lasting good, in the majority of cases at least, by any operation short of complete excision of the larynx and the neighboring lymphatics and glands.

On this subject, however, there is much honest difference of opinion. I am not here to discuss it. The whole question, as I have tried to indicate, resolves itself into two special lines of study, *viz.*: (1) The relative malignancy of tumors of the larynx, and (2) the determination of the glandular involvement in the case of various kinds of tumors as well as various situations of tumors. Investigation along these lines must determine largely the manner of future operative procedure. Whatever operation is done, it should be forever borne in mind that we are dealing with cancer; that no matter how minute the original lesion may be, the area of possible poisoning is practically boundless; and that, if the slightest doubt exists as to the character and circumscription of the growth, the complete operation should be done.

Let us, finally, look forward to the day, which in my humble judgment has not yet arrived, when it shall be definitely shown beyond all human doubt that cancer of the larynx, taken in its earliest stages, while yet a purely localized affection, can be permanently cured by simple surgical measures; but in the meantime, in the present state of our knowledge at least, in view of the uncertainties which the problem before us presents and in the light of the modern conception of the treatment of cancer, let the surgeon be prepared to take no chances, but in the forceful, if not elegant, words of Gross, let him "cut out the very atmosphere of the damned thing."

⁴Archiv. für Gynäkologie, 1900, vol. LXI, No. ?

⁵Journal of the American Medical Association, Oct. 29, 1904, and Albany Medical Annals, May, 1905.

CARCINOMA OF THE LARYNX.¹

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THE surgical treatment of cancer of the larynx can no longer be considered a new subject.

Since the early attempts of Watson, in 1866, many methods have been devised and many operators have undertaken by the radical removal of the disease to save the lives of its unfortunate victims. Some of the surgeons who have undertaken the work have been men of exceptional professional eminence. Many have not. The results of the operative work have sometimes been exceedingly brilliant. More often they have shown a degree of failure at once surprising and disheartening. While many improvements in existing methods are unquestionably possible, the time has arrived when, with the material at our command, we may critically review the situation and fairly weigh the value of the surgical treatment of laryngeal cancer.

In the attempted treatment of laryngeal cancer by surgical intervention, four general methods have been proposed:

1. Removal of the disease by intralaryngeal measures.
2. Division of the thyroid cartilage followed by excision of the diseased soft parts and, if necessary, by a limited removal of the larynx itself (thyrotomy; partial laryngectomy).
3. Removal of the entire larynx (laryngectomy) with as much of the surrounding tissues and connecting lymph nodes as necessary.
4. Tracheotomy, to relieve dyspnoea in advanced disease.

With the first and last of these we need not concern ourselves. Intralaryngeal treatment stands absolutely condemned and has long ago been abandoned by all intelligent men. Tracheotomy is used merely to palliate a symptom. It has never been even supposed to be curative.

It interests us, therefore, to deal in this discussion only with those operations intended to effect the radical removal of the disease—thyrotomy, partial laryngectomy and complete laryngectomy. And here let me say that the time is ripe for the announcement of a contention which I believe has never been made before, namely, that, in view of the present condition of affairs in this department, and in the light of the opinions held by the leading authorities of the world, there are to-day no serious differences of opinion as to the main principles which should govern the surgical treatment of cancer of the larynx.

While here, as everywhere else, much discussion has been raised upon various points con-

nected with the subject, I venture to say that most of the labor expended has been thrown away. If we were to insist that all theoretical speculation be set aside and that the subject be considered strictly from the light of actually demonstrated facts, there would be little room for controversy.

How true this is may be seen from a glance at some of the chief points at issue. Thus, the diagnosis of laryngeal cancer by visual examination has always been, and still remains a matter of great difficulty. Where doubt exists, the differential diagnosis should be made by every possible means, including examination for tuberculosis and a short course of potassium iodide. Diagnosis through the aid of the microscope is most desirable, if the histological conditions are such that a correct diagnosis can be made by this means. Repeated attempts to remove the growth, however, whether for purposes of diagnosis or for treatment, are to be strongly condemned.

In the face of a few supposed cures the weight of evidence here, as elsewhere, is overwhelmingly against irritation of a suspected epithelial growth.

The most radical advocates of latitude in this particular have been obliged to yield their ground and to admit that, when tissue is removed from the larynx in a suspected case, it should be with the distinct understanding that if the case prove malignant, operation be immediately submitted to.

Again it is contended by some that degeneration of a benign laryngeal growth into a malignant one never takes place. Practically this is a hairsplitting proposition, for if early diagnosis of the growth is impossible, and irritation of it sure to result in harm, what difference does it make in the final result whether an apparently innocent growth was really malignant from the start or whether it became so at a later stage of its progress?

The most important question apparently now at issue is as to the choice between partial removal of the larynx and complete laryngectomy.

In every department of surgery it is being urged that cancer should be early diagnosed and early operated upon in order to obtain the best results. As has long and eloquently been insisted by Mr. Butlin, this is especially true in the case of the larynx. Late operation could never be done from choice, but in the hope of prolonging life. The question, however, as to the necessity for complete removal of the larynx in early cases, when the disease is confined to the interior of the organ, is a burning one. It may be asked: "Is carcinoma at any stage of its progress confined to the interior of the larynx?" We contend that it is and that numerous examples of a similar nature may be found in other parts of the body, as, for instance, the auricle of the ear. Any experienced dermatologist will admit the curability of certain superficial cancers, and in the early stage many laryngeal cancers are pretty certainly superficial.

Eliminating these considerations, however, as

¹Read before The New York State Medical Association, at the Twenty-second Annual Meeting, New York, October 16-19, 1905.

possibly theoretical, one grand argument presents itself in favor of limited operation in suitable cases and that is the overwhelming weight of statistics.

Thus, in laryngectomy, recent general statistics assume that 15 to 16 per cent. of patients operated upon have remained well over a period of three years.

In thyrotomy, with removal of the diseased soft parts the permanent cures in general are estimated at about 44 per cent., while of twenty patients operated upon by Mr. Butlin about 70 per cent. lived for more than three years. Making allowance for several fallacies which may arise in estimating the reliability of these figures, it still remains that the partial operations suitably applied, have demonstrated that they may rightfully claim our respectful consideration. We would say, save the patient if you can by means of the less serious operation. If not, save him even at the expense of radical and complete removal of all offending tissues, *but save him*.

If the treatment of every given case were to be studied in the light of what has already been proved and announced by those of best experience, and if it were to be managed in strict accordance with what have now become well-established rules, it is safe to say that fewer patients would be sacrificed to shock, to sepsis and to pneumonia.

In my experience with operators many beginners have seemed unwilling to accept valuable information, even neglecting to study the easily obtainable classics of the subject; in witness whereof they have unnecessarily used a tracheal cannula after operation, they have placed the patient upright in bed, or they have provided inexperienced nurses, commonly with fatal result.

Laryngeal operations of this class are at the best difficult operations. They are not at all of the same class with ordinary surgical procedures. They never have been and perhaps never will be within the reach of the average operator. First attempts in any direction are never apt to be as successful as later ones, and the history of laryngectomy clearly shows that operators have improved with experience. Until something better shall have been proposed, surgical means seem to remain our only reliance.

Let such operations be done, therefore, but only by men of experience and under rules and conditions most likely to save the patient and to bring to him a maximum of comfort, usefulness and length of days. The question of metastasis is the most important one brought out in this discussion. As I have said above, whatever theoretical arguments may be adduced in favor of extensive resections of the larynx and the communicating lymph nodes the contrast of the actual surgical results of cases so operated upon with those wisely dealt with upon the principle of early partial operation will give overwhelming testimony in favor of the latter course. The statistics are before us. Let them speak for themselves.

DISCUSSION.

Dr. Emil Mayer, of New York City, said the subject of cancer of the larynx and its early recognition was to the laryngologist what the early diagnosis of typhoid fever was to the general practitioner or early operation in appendicitis was to the surgeon. In other words, the most important question was the early diagnosis.

Quite recently, Dr. Mayer said, he saw in consultation a patient who suffered from laryngeal stenosis, apparently a post-typhoidal condition. Daily stretching of the parts was resorted to, but as that failed to give relief, a tracheotomy was done. Subsequently, a laryngotomy was deemed advisable, and upon opening the larynx a growth was found which upon microscopical examination proved to be malignant. That patient was still alive.

Dr. Robert C. Myles, of New York City, said he did not know of any department of medicine in which there was greater confusion than in that relating to carcinoma of the larynx. Laryngologists were too willing to ensconce themselves behind the lack of early diagnosis, and when an operation was finally undertaken, in the later stages, it usually not only shortened the life of the patient but also greatly increased his suffering. Aside from the difficulty of the operation itself, it required the greatest care and skill to safely tide these patients through the post-operative stage. Early diagnosis and early operation were the important factors. As regarded the choice of methods, Dr. Myles said he preferred the external operation.

MEDIASTINAL TUMORS.¹

BY WILLIAM FRANCIS CAMPBELL, M.D.,
Brooklyn.

NO satisfactory appreciation of these tumors can be had without a clear understanding of their location and the important structures with which they are in intimate contact. It is the pressure effects upon these structures that give us the group of symptoms characteristic of mediastinal growths.

In no organ of the body do we find structures more intimately associated with the vital processes or where effects of pressure could be more destructive than these associated with this class of tumors; hence, we shall first consider these tumors from a regional standpoint.

Anatomical Considerations.—The thoracic cavity may be divided into three irregular compartments. Two of these compartments are occupied respectively by the right and left lungs with their pleural investments. The remaining compartment is the mediastinal space and lodges the remaining thoracic viscera.

¹Read before The New York State Medical Association, at the Twenty-second Annual Meeting, New York, October 16-19, 1905.

It will thus be observed that the boundaries of this space are *laterally* the mesial pleura of the lungs; *in front*, the sternum; *behind* the vertebral column; below the diaphragm and above the superior opening of the thorax corresponding to a plane passing through the top of the sternum, the first rib and the first dorsal vertebra.

The middle of this mediastinal space is occupied by the heart and its pericardial investiture. While the subdivision of this space is purely arbitrary, yet for purposes of description it is convenient and rational to consider the pericardium as occupying the middle of this space or *middle mediastinum*. The part above the pericardium is the *superior mediastinum*. In front of the pericardium is the *anterior mediastinum*, and that behind the *posterior mediastinum*.

Except the middle mediastinum the structures of most importance are found in the superior and posterior mediastinum. They are the trachea, the esophagus, the great vessels connected with the heart, the pneumogastric nerves with the left recurrent, the phrenic and cardiac nerves, the thymus gland or its remains, bronchial lymphatic glands and the thoracic duct.

The *anterior mediastinum* merely contains some lymphatic glands and alveolar tissue.

Lymphatics of the Mediastinum.

In a discussion of the neoplasms of any region the lymphatics play an important part. The glands of the mediastinum are very numerous and very important, and according to Delamere may be divided into an anterior group (those in the anterior mediastinum), a middle group (the peri-tracheo-bronchial glands), and a posterior group (those in the posterior mediastinum).

Those in the anterior mediastinum lie in front of the pericardium behind the sternum. They receive lymphatics from the anteromedian portion of the diaphragm and from the lower internal mammary glands.

The peritracheal and bronchial glands are placed between the divisions of the bronchi and about the bifurcation of the trachea. These glands are frequently enlarged because of the frequent infections to which they are exposed.

The posterior mediastinal glands are scattered about the esophagus.

A gland of considerable importance in its bearing upon tumor formation is the thymus, a vascular gland situated in the superior mediastinum. Like the thyroid and suprarenals, it secretes a substance which passes directly into the circulation, the nature of which we do not know.

It differs, however, from other glands in the fact that it is a transitory organ pertaining essentially to fetal and embryonic life. It begins to atrophy at the age of two, and at the twenty-fifth to the thirtieth year we find but a vestige of it. The remains are represented by a fatty mass of tissue with some particles of thymus tissue persisting, and in this is developed undoubtedly certain of the mediastinal tumors.

Origin of Mediastinal Tumors.

A mediastinal tumor is one which has its origin in structures situated within the mediastinal space. We therefore exclude tumors arising from adjacent structures and trespassing upon this space.

The remnants of the thymus, the bronchial glands, the fat and connective tissue, the pericardium, are frequent sites of neoplastic degeneration.

Letulle (arch. gen. de Med. 1890 7 ser.) after reporting eight cases sums up his conclusions as follows: "The upper part of the anterior mediastinum [the superior mediastinum in our classification] is the favorite seat for primitive cancers of the mediastinum; with the exception of ganglionic tumors the primitive cancers develop at the expense of the thymus or of its atrophic debris.

"The embryonic region of the thymus explains perfectly the different varieties of primitive cancers.

"The general life of the thymus and its biological autotomy explains perhaps the great frequency of the neoplasms' degeneration."

From the cases reported and the deductions of other observers, as well as from the additional fact of the situation of the principal glands and especially the vestiges of the thymus, we conclude that the superior mediastinum is more frequently affected than other portions. Ingalls states that tumors are found four times as often here as in the remaining mediastinal regions.

Varieties of Tumors.

Among the benign tumors are found hypertrophic thymus, endothoracic goiter, lipomata, fibromata, dermoid cysts, teratomata, and lymphadenomata; sarcomata and carcinomata represent the malignant varieties.

As to the frequency of these respective varieties Hare in a study of 520 cases concludes that cancer is more frequently found in the mediastinal space than any other morbid process. In frequency he rates them as follows: Cancer first, abscess second, sarcoma third, lymphoma fourth, dermoid cyst fifth, hydatid sixth, and fibroma seventh. While a study of the cases reported to date does not entirely conform to this order of frequency, we may state in a general way:

1st. That there are few benign tumors compared with malignant ones.

2d. Neoplasms of the mediastinum occur more frequently in the male than in the female at a ratio of three to one.

3d. They usually occur between the ages of twenty and thirty, rarely at an advanced age.

4th. By far the larger number of new growths in the mediastinum are sarcomatous or carcinomatous.

5th. That sarcoma is twice as frequent as carcinoma.

6th. The confirmation of Loomis' statement that almost all sarcomata are primary; when secondary they usually follow sarcoma of the pleura.

Symptomatology.

Keeping in mind the arrangement of the structures within the mediastinal space, the general trend of the symptomatology is easily understood.

The primal cause of all the symptoms is pressure. The new growth invades the space occupied by the thoracic viscera, gradually encroaches upon their domain, literally crowding them to the wall—the bony unyielding wall of the thorax. Thus symptoms are all referable to disturbances of respiration, circulation or innervation.

More especially we may enumerate:

1st. Dyspnea due to pressure upon the trachea, bronchi, lungs.

2d. Cough, expectoration and hemoptysis—from same cause.

3d. Cyanosis and embarrassment of circulation from pressure on heart.

4th. Differences in the radial pulse, one side being enfeebled by pressure upon the innominate artery (Nelston & Walshe).

5th. Dilation of the veins of the chest due to constriction of the large venous trunks and development of a collateral circulation.

6th. Circumscribed edema from venous obstruction.

7th. Pulsation in the tumor from transmitted heart impulse.

Pressure upon the nerves gives us an interesting variety of phenomena:

1st. Pain; this is not so severe as the discomfort arising from embarrassment of respiration and circulation. It is frequently referred to the region of the diaphragm—due to pressure upon the phrenic.

2d. Hoarseness or loss of voice, pressure upon the left recurrent laryngeal, giving paralysis of vocal cords.

3d. Hiccough, compression of phrenic.

4th. Retarded pulse early, palpitation late, due to compression of the vagus.

5th. Dysphagia due to paralysis of the vagus or actual compression of the esophagus.

6th. Asymmetry of pupils—pressure upon sympathetic.

7th. Exophthalmos—caused in the same way.

In addition we may, as a late symptom, find an actual bulging of the chest wall. Sometimes it is possible to palpate the tumor behind the upper margin of the sternum.

Malignant tumors may even penetrate the chest wall and present on the surface as an external growth.

Emaciation and cachexia follow in the wake as malnutrition and absorption of the toxins progress.

Apropos of the slowness of benign growths and how even the vital structures in the mediastinum may adapt themselves to extreme conditions provided the period of adjustment be sufficiently long, we find a case reported in which autopsy revealed a tumor of the mediastinum the size of a child's head which produced no symptoms during life.

It is the malignant growths which present an acute symptomatology and terminate rapidly and fatally. In repeated instances sudden death has occurred before a diagnosis was made.

Let me at this point cite a case which in view of the foregoing symptomatology presents a clinical picture of unusual interest.

In April, 1905, there was referred to me for operation a farmer twenty-one years old, with a diagnosis of goiter. He gave the following history: Always enjoyed good health, no previous illness till two months ago when the first symptoms he noticed was hoarseness, loss of voice power; this continued till one month later, when a swelling appeared in the region of the thyroid. His breathing became troublesome, he could not sleep lying down, his appetite was very poor and it hurt him to swallow. This was the statement of the case from the patient's standpoint, presenting a sequence of symptoms as follows: Loss of voice, swelling just above sternal notch, embarrassment of respiration, and difficult deglutition. A study of these symptoms elicited from the patient is exceedingly interesting, for they are symptoms all associated with goiter. The point of interest is not the symptoms unrelated, but the sequence of the symptoms. Observe that the very first symptom was loss of voice; this led me to doubt the previous diagnosis, for in goiter loss of voice is a late symptom, not an early one; in goiter the appearance of the tumor is first and loss of voice secondary. Here the loss of voice was first and the appearance of the tumor secondary. Convinced therefore that the explanation of these symptoms would be found elsewhere than in the thyroid, a more extended examination gave the following findings: The patient presented a good muscular frame, skin pale, breathing labored, voice hoarse, lips slightly cyanotic, right pupil dilated, left normal, both react to light, sclera pale. Mouth, pharynx and spine negative. Projecting above the suprasternal notch is a tumor half the size of a lemon, lying between the two sterno-mastoid muscles and in front of the thyroid cartilage, pushing the larynx and hyoid bone upward and backward, evidently not attached to the larynx or involving the thyroid gland. It is moderately firm on pressure, non-pulsating, gives no thrill or murmur, and no tracheal tug on elevation of the larynx.

The cervical and submaxillary glands on the right side are not enlarged, but the glands in the left lower cervical region are enlarged to the size of a small almond.

The tumor is dull on percussion; this dullness is continuous with marked dullness over the first piece of the sternum and is continuous with heart dullness, but this appears to be more marked in the upper half of the cardiac area.

There is no pulsation, thrill or murmur over the first piece of the sternum.

The left border of the heart percusses one-half inch to the right of the nipple line.

The sounds at the apex are moderately distinct; no murmurs are heard at this point.

There is marked dulness in the right of the sternum in the second space for two inches; this continues down as far as the fifth space, where it becomes continuous with liver dulness.

Over the upper half of the heart the sounds are very faint and no murmurs are heard. Both radial pulses are synchronous, but the left is a little smaller than the right; over both lungs the breathing is feeble: inspiration is shallow and quick. Loud bronchial sounds are transmitted through the lungs.

Paroxysms of coughing occur every few minutes and with each effort one or two ounces of mucopurulent material is ejected.

I do not wish to weary you with the details of this case, but the clinical picture is so perfect that its detailed consideration is not without profit.

I desired to X-ray the thorax and sent the patient to the hospital for this purpose and for further observation. On the second night after entering the hospital he was sitting as usual by the open window. This was his most comfortable method of resting. He arose to get something; after walking several steps he fell and expired.

Autopsy showed a tumor of the mediastinum involving the pericardium and extending into the sac. It extended backward and upward into the neck and was about the size of the head of a seven months fetus.

Pathologist reported it a lymphosarcoma.

The diagnosis of these tumors is always difficult; they are seldom diagnosed definitely.

In the Roentgen rays we have an excellent means of verifying our percussion outlines. We can sometimes palpate the tumor behind the sternal notch, as in the case reported. Enlarged lymph glands in the neck and axilla are of great diagnostic importance. Rapidity of growth and cachexia enables us to differentiate between malignant and benign tumors.

It will not be difficult to differentiate aneurism when we consider that aneurism never causes as many or as severe symptoms of pressure as a mediastinal tumor.

It is unnecessary to weary you with a discussion of treatment of these tumors, as we have seen benign tumors may attain a large size without producing any symptoms. They are sometimes diagnosed sufficiently early for successful removal. The surgeon has invaded the mediastinal space and recovery has followed operative interference, but when we consider that malignant tumors of the mediastinum are hopeless, that when they have attained a size sufficient to produce symptoms, they have already invaded chains of lymphatics that elude the surgeon's knife, the treatment must as yet remain a problem which each must solve for himself.

THE PROTECTION OF THE NEW YORK MILK SUPPLY.¹

BY WALTER BENSEL, M.D.,
New York.

STATISTICS of New York City show that children under five years of age constitute about one-third, and infants under one year about one-sixth of all deaths, and that a large proportion of these infant deaths is due to intestinal diseases.

When we consider that cows' milk in some form is used during a considerable part of almost every child's life, and that, owing to the ignorance or carelessness of the larger number of milk-producers, milk is notoriously filthy, we at once realize the importance of the enforcement of most stringent regulations concerning its production, transportation and sale.

During the past thirty years New York City has engaged in an active warfare against impure milk. Until 1902 this warfare was waged entirely with the wholesale and retail dealers in the city, no attention being paid to the sources of supply. In May, 1902, two of the Department of Health milk inspectors were appointed State inspectors by the State Commission of Health, and an investigation of the sources of supply was begun.

The City of New York is supplied with about one million five hundred thousand quarts of milk daily, of which about two hundred thousand quarts are produced from dairies within the city limits. Handling this enormous quantity of milk are some 450 creameries and about 9,000 dairies. To inspect these creameries and dairies the Department of Health employs two inspectors, more being unavailable through a lack of appropriation. Nevertheless, an enormous amount of work has been done. A large proportion of the creameries has been visited once or twice and most of the bad conditions therein have been corrected, but the dairies remain as yet practically untouched.

According to the Sanitary Code milk is adulterated when it contains more than 88 per cent. of water, when it contains less than 12 per cent. of milk solids, when it contains less than 3 per cent. of solids, when it contains less than 3 per cent. of fats, when it is drawn from animals within fifteen days before or five days after parturition, when it is drawn from animals fed on distillery waste, or any substance in a state of fermentation or putrefaction or any unwholesome food, when it is drawn from cows kept in a crowded or unhealthy condition, when any part of its cream has been removed, when any foreign substance whatever is added to it, and finally when it is at a higher temperature than 50 degrees Fahrenheit.

Within the confines of New York City thirteen inspectors are continually at work hunting for milk which contains too much water, too little solids, any foreign substance, more particularly a preservative, or which has too high a tempera-

¹Read before The New York State Medical Association, at the Twenty-second Annual Meeting, New York, October 16-19, 1905.

ture. The city expends in salaries for these thirteen men about \$17,000 per annum; the milk business, which we attempt to control, aggregates about \$10,000,000 per annum. A few figures may be of interest as showing what an enormous amount of work is accomplished by the Department in spite of its small number of inspectors, and which speak in the highest way of the general efficiency of this corps:

In the first three-quarters of 1904 about 35,000 milk inspections were made, and 4,000 samples taken for chemical analysis; during a similar period of 1905, 75,000 milk inspections were made, and nearly 5,000 samples taken. During the first three-quarters of 1904, 368 arrests were made for selling adulterated milk, and as a result of these arrests \$2,130 was collected in fines; during the similar period of 1905, 700 arrests were made, and \$13,150 obtained in fines. In 1904, 28,000 quarts, and in 1905, 38,000 quarts of milk were destroyed, principally because of too high a temperature.

In the inspection of dairies, both within and outside of the city limits, the Department has found conditions of improper feeding and care of the animals, of general filth, lack of ventilation and light, which are almost indescribable. In the creameries improper conditions were often found, but, in general, cleanliness was much more prevalent than among the farmers.

Many farmers have no idea whatever of cleanliness as applied to the handling of milk, and more than a few, apparently, have not the slightest desire to learn.

The City of New York has at the present time ample power to prevent the sale of adulterated or unclean milk within its limits, whether produced within or without its boundaries. As the months and years roll on, all milk dealers, whether producers, carriers, wholesalers or retailers, who evince a disposition to handle only a clean, honest product, in accordance with the rules and regulations of the Department of Health, will be given every aid the Department can give. Those who, through ignorance, carelessness or neglect, show no such disposition will be gradually prevented from bringing their products into the city.

RELATIONS OF APPENDICITIS TO DISEASES OF THE UTERINE ADNEXÆ AND VICE VERSA.¹

BY HARVEY P. JACK, M.D.,
Canisteo, N. Y.

THE story has not been told, nor the last word spoken regarding appendicitis and adnexal disease, until confusion of diagnosis and resultant failure to institute early the proper treatment has become seldom instead of all too frequent. The fact, that in one of the cases upon which I recently operated, an attending physician, after making a diagnosis of appendi-

citis, and treating the case as such through two or three attacks, suddenly changed his diagnosis to appendicitis and strongly advised against operation, I suppose because the attacks were concomitant with the menstrual flow, has brought it home to me that the profession, general practitioner and specialist as well, needs to give this subject very careful study. In this case a very densely adherent retroappendix was found which contained a hard concretion the size of a lima bean.

Disease of the adnexæ may be caused by appendicitis, or appendicitis may cause adnexal disease, or they may exist as independent affections in the same case having no causative relation to each other. An infection originating in the appendix may form an abscess which through contiguity of parts may infect one or both tubes and ovaries, the right alone much more frequently than the left. Recent literature has contained many references to some anatomical condition, lymphatic or blood communication, between the appendix and ovary which would account for the association or the sequence of these diseases from one to the other. Clado and others have attempted to demonstrate an appendiculo-ovarian ligament through which appendix and ovarian blood mingled. Kelly positively denies such blood communication, and of many other observers very few have found an appendiculo-ovarian ligament, and the consensus of opinions is that this so-called ligament is nothing but a fold of peritoneum which cannot often be demonstrated. The development of the ovary and appendix is entirely different and so is their circulation blood and lymphatic as well, which Kelly has so conclusively proven. There are a few rare instances in which there is communication between the spermatic or ovarian and the appendicular vein, but the circulation in the appendix is exactly the same in the female as in the male.

Robinson has found the pelvic position of the appendix in the female more frequent than in the male, and on this all authorities are agreed and account for the fact by reason of the more roomy pelvis in the female and the broader psoas muscle in the male.

Adnexal disease as caused by appendicitis is not nearly so frequent as appendicitis caused by adnexal disease, and in the former, when found, the history of a frank and typical case of preceding appendicitis can usually be obtained. However, many interesting cases are reported in which either a pelvic abscess was formed or adhesions and tubo-ovarian abscess with resultant sterility or dysmenorrhœa have followed. I have had one case in which there was a history of an attack of appendicitis, and no previous pelvic disease. An abscess formed in the iliac fossa became pelvic, and finally ruptured into the rectum, and I was consulted for the septic condition and the sinus opening into the rectum. At examination the right tube and ovary (the tube could be felt at the uterine cornu on the right side), were found

¹Read at the Sixth Annual Meeting of the Keuka Lake Medical and Surgical Association, July 14-15, 1905.

embedded in a mass of adhesions, and a tumor could be outlined in Douglas pouch and to its right. The abscess was opened through the vagina and at the time it was noted that gauze packer took an oblique direction from the vagina toward the right iliac fossa. The abscess was a large one and was packed with gauze.

The sinus into the rectum finally healed and the dense adhesions of tube, ovary and uterus to the right pelvic wall finally became absorbed and the case is to-day in perfect health, the pelvic symptoms of dysmenorrhœa, leucorrhœa and pain having disappeared. The frequency with which adherent retrodisplaced uteri are associated with appendicitis has been noted.

Appendicitis as caused by adnexal disease consists, as a rule, in light adhesions to tumors, or to the uterus or its stump, or to the stump of an ovary or tube, if it has been removed, but instances of severe inflammation are reported. I have had a case which I believe is illustrative of this form of pelvic appendix disease. She presents the following history at 38: Family history negative, except one son died in infancy (5 years) of appendicitis; personal history negative, except slow recovery and slight fever and offensive discharge following birth of a child six years before. At that time the perineum was lacerated nearly to the rectum.

Present condition: She has had ten attacks of appendiceal colic, so diagnosed and characterized, in one of which I saw her with fever 102°, muscle spasm in iliac region; vomiting and severe pain; these attacks have recurred with increasing frequency since the lying-in period, and patient says she is never free from pain in iliac region. Bowels only move by enema. Physical examination reveals a large subinvolted uterus in retro position, pronounced relaxation of vaginal outlet; and what is believed to be a thickened enlarged ovarian tube is felt to the right of the uterus. Boro-glycerine tampons for a few weeks, followed by a pessary, relieve all these symptoms, except that the bowels are still only moved by the aid of injections. There has been no pain or discomfort or appendiceal symptoms since the pessary was worn for two years, and the uterus is now retrodisplaced, though it remained in position for three years. This set of facts surely points to a previous adhesion of the appendix to a uterus retroposed and dragging on a lightly adherent appendix, the adhesion to which has become absorbed. I have a case now awaiting operation in the interval in which I have demonstrated the gonococcus microscopically, which presents symptoms of appendicitis associated with a known pelvic disease of retroversion, and both right and left side thickening with a great preponderance of the symptoms of pain and tenderness on the right side. A fact which points very strongly to primary pelvic disease in this case is that there is no history of appendicitis previous to the demonstration of the gonococcus.

Kelly relates a case which illustrates the im-

portance of looking at the appendix in all pelvic operations, in which, after he had removed the pelvic disease, pain in the right side persisted, which was only relieved after an appendectomy by Dr. John B. Deaver, when a chronically inflamed appendix was removed.

The most important question of all in these cases is the diagnosis. This is only made by consideration of a most careful history, aided by the side-lights of clinical microscopy and confirmed by physical examination. Where the diagnosis is of the utmost importance is in the acute cases in which the treatment differs so completely. If appendicitis the golden opportunity may be lost by failure to operate; if acute salpingitis the palliative treatment is indicated; hence, the great importance of a diagnosis. As a rule, this is not difficult if we bear in mind that appendicitis is *appendicitis*, and occurs just as frequently in women as in men. For this purpose we must first have in mind a clear picture of appendicitis, pain and pain *preceding* vomiting, fever and rigidity and tenderness over McBurney's point. Pain and the kind of pain; here the history is almost a *sine qua non*, beginning as diffuse and becoming localized at the appendix. It is colicky and intense, or steady and severe; if the former, we should think of appendicitis; if the latter, of pelvic infection. Is it right-sided, left-sided, or both-sided? The inference is manifest. Is it deep and in the inguinal region, and extending down the thighs? Again, did it precede an attack of indigestion and sudden illness in perfect health like a cloud or thunderclap in a clear sky, or has there been a long, ill-defined sickness, and a yellow vaginal discharge? Have there been attacks of similar pain, vomiting, fever and tenderness in the past? Have any other members of the family, so far as known, suffered from similar attacks? For it has been demonstrated that there is in families a predisposition to lymphatic disease, such as tonsillitis and appendicitis. All these questions must be asked and their answers returned, and when these answers are returned, if clear and unqualified, we can often make a diagnosis as between right-sided, adnexal disease and appendicitis before we have made the physical examination. At this examination in adnexal disease the tenderness and pain are most intense in the region of Poupert's ligaments, therefore situated more deeply in the pelvis. Sometimes the sudden appearance of nausea and vomiting does not help us much as they may, though it is the exception that they do appear as suddenly and as clearly in adnexal disease as in appendicitis.

We should find further in the vaginal examination in adnexal disease a point of exquisite tenderness and induration on one or the other side of the uterus, and if more pronounced on the left side, it argues strongly in favor of adnexal disease.

There is a class of cases, however, in which the appendix occupies the pelvic position, and may

even extend to the left side. In these even the best diagnostician may make a mistake, but seldom should if the history is well remembered, and it should be written, so that no point, however trivial, may be overlooked. The occurrence of menstruation at this time has caused many fatal delays in spite of the fact that the coincident occurrence of menstruation in appendicitis has been noted time and again. The appearance of menstruation as a differential fact should be at once and forever eliminated in the consideration of these cases. Here the careful history comes in again: the colicky pain of appendicitis in contradistinction to the steady and less intense pain of adnexal disease. The patient, as a rule, I think, presents the appearance of greater illness in appendicitis than in adnexal disease, and especially will this be true if the infective agent is the gonococcus, which usually tends so early to limit its work to small areas. Kelly well says that, "The development of pelvic inflammation in a young girl, or an unmarried woman of good character should always arouse suspicion of primary appendicial disease even when bimanual examination shows definite disease of the adnexa on one or both sides." Here in the absence of a history as to the woman's character a microscopic examination of the cervical or vaginal discharge as to the presence or absence of gonococci may often help us, and as it has done so far, for me in one case, I believe it should always be made.

Tumor is not present in the early stage of either affection, and when it is, its location and the fact that, if pelvic, the thickened tube can often be made out, are of great importance. After a spreading peritonitis is once set up, an accurate diagnosis is usually impossible, but from the history a tentative one can usually be made, but here it has passed beyond the stage when a differential diagnosis is of great importance. "Confusion of diagnosis between appendicitis and ovarian cyst with torsion of the pedicle is very common." The knowledge of the previous existence of a tumor and the character of the pain are very important; again the colicky, intense pain of appendicitis as opposed to the more diffuse and continuous pain of cyst with twisted pedicle. The cyst is often small and its existence unsuspected, but a careful vaginal or rectal examination may show the well-defined tumor if intrapelvic. Abdominal, palpation is the most valuable means of arriving at an early diagnosis when the tumor can be made out. Tumor is seldom present in the early stage of appendicitis, and it is not well defined if it is. On account of tenderness, palpation is often unsatisfactory, and here percussion will help. In the event of peritonitis, that of appendicitis is more severe as a rule, and characterized by more pronounced constitutional symptoms. Nausea and vomiting may be present, and in general we depend upon the history, previous knowledge, palpation, rectal or vaginal examination and percussion to arrive at a conclusion. As

Kelly remarks, as in either event operation is imperative, the differential diagnosis is not of great importance, except as a guide to the location of the incision. Confusion of diagnosis between ruptured tubal pregnancy and appendicitis ought never to occur, and, as Kelly remarks, "The most important point in arriving at a correct diagnosis is the recognition of the fact that confusion may exist." Here, and here alone, the menstrual history is important in the differential diagnosis of appendicitis and adnexal disease. This history, the collapse, pallor and vaginal examination should settle the matter. A history of period skipped, then irregular hemorrhages, or that it has been delayed for a week or two, then irregular, slight hemorrhages, is very significant and on bimanual examination the enlarged tube is almost always readily palpable. The coexistence of appendicitis and adnexal disease usually consists of light adhesions of the appendix to tumors, but the adhesions may be very dense indeed, instances being reported in which the appendix has been unwittingly removed with a tube ovarian mass and the fact only ascertained at post-mortem. As in ovarian cyst, with twisted pedicle, one of the chief reasons why a diagnosis is desirable is for the purpose of determining the location of the incision, for operative interference is usually indicated if case is getting worse, even in acute cases. An exploratory incision is better than to wait until certain, in cases of doubt, and it should be an exploratory incision and nothing else as far as the tubes and ovaries are concerned, in the acute cases, as these structures often recover under palliative treatment, and it is a crime to needlessly sacrifice them. As far as the appendix is concerned, if it occupies the pelvic position near these inflamed structures at exploratory laparotomy, I believe it should be removed, whether diseased or not, in view of what is quite likely to happen in the future if it remains. The exploratory incision must not be overworked here, and should never be made except when backed by the strongest of tentative diagnosis, and then only by a surgeon of judgment, skill and experience—one who has a full conception of nature's beautiful lines of defense, of his own onerous responsibility, and possessed of the skill to get in and out quickly and safely without disturbing these lines and initiating, it may be, a spreading peritonitis.

Regarding the treatment, there is little to be said beyond general surgical principles, but there are some points of special interest. If known two-sided pelvic disease exists, and appendicial complications are suspected, or in the case of tumors, the median incision is best. If appendicial adhesions be light, they may be severed and the tumor removed and then the appendix, and this should always be removed if adherent, even though the adhesions be light. If the diseases are diagnosed and are right-sided, the semilunar incision gives a good exposure.

If tubo-appendiculo-ovarian abscesses are deep

in the pelvis they should be drained by vaginal incision, and later the appendix or what is left of it removed if possible. In adnexal surgery, if a raw surface is left, it must be carefully covered in order to prevent adhesion of the appendix to the raw surface, which has been frequently noted.

Finally, in a review of this subject there are certain things that appear very important, among them the imperative necessity of examining the appendix in all intraabdominal pelvic operations in women, and the fact that there should very seldom be any doubt as between appendicitis and right-sided adnexal disease, and when there is, the pelvic disease is the cause of the symptoms in the vast majority of cases; that appendicitis is appendicitis in women as in men, and is just as frequent. We have seen the inestimable value of a careful, complete history, of a recognition of the different characters of abdominal pain, and the absolute necessity for the knowledge, experience and energy to correctly interpret them, lest, in the words of that eloquent orator of American medicine, that prince of surgeons, John B. Deaver, of Philadelphia, we be sometimes compelled to stand idly by, chained by the ignorance or neglect that has let the golden moment pass, and see our patient sink, sink, sink beneath the pestilential blast of peritoneal inflammation.

INTERNATIONAL CLINICS. A Quarterly of Illustrated Clinical Lectures and Especially Prepared Original Articles on Treatment, Medicine, Surgery, Neurology, Pediatrics, Obstetrics, Gynecology, Orthopedics, Pathology, Dermatology, Ophthalmology, Otolaryngology, Rhinology, Laryngology, Hygiene and other topics of interest to students and practitioners, by leading members of the medical profession throughout the world. Edited by A. O. J. Kelly, A.M., M.D. Volume III. Fifteenth Series. Philadelphia and London: J. B. Lippincott Company, 1905.

The Therapeutic Uses of the Röntgen Rays, or Radiotherapy, by George C. Johnston, of Pittsburg, the opening paper of this volume, deserves a place beside those by Bie, on Phototherapy after Finsen's Method (International Clinics, Vol. III, 11th Series), and Metzbaum, on the Value of Radium in the Treatment of Lupus, etc. (Vol. IV, 14th Series). It is conservative, scholarly, and instructive. The sections devoted to Frequency of Treatment and to Toxemia, the result of overirradiation, should be well digested by every radiographer. Many illustrations add to the value of the paper. The concluding aphorisms are unique. "Experience is better than theory, and both combined are wisdom"; "A good agent must never supersede a better"; "Knowledge of the use of any apparatus does not accompany it, even if it seems to be included in the purchase price," are examples.

The Action of Metallic Ferments on Metabolism, and Their Effects in Pneumonia, is the title of a paper by Robin, of Paris. It is little more than a preliminary report of experimental work, but, according to the author, the vista of possibilities appears to be vast. Further investigations of the subject will be of great interest. Huchard, of Paris, writes on the Musculo-Tonic and Diuretic Action of Formic Acid and the Formiates. The findings of Clément, regarding the remarkable tonic effects of formic acid, have been fully substantiated by Huchard, and the formates undoubtedly will occupy a valuable place in therapeutics from this time forward.

The Symptomatic Treatment of Tuberculosis is by Barnes, of Washington, and Opotheric Treatment of

Renal Insufficiency by Tissier, of Lyons, France. This paper is distinctly valuable. The administration, hypodermatically, of extract of kidney substance in various forms of nephritis is not new, but this author's investigations appear to have been carried on along somewhat original lines, and his results have been remarkably encouraging. Wainwright, of New York, writes on Serumtherapy, and writes well. His paper would serve as an historical résumé of all that has been done with animal serums since their introduction into the scheme of practice. It would be a valuable contribution to one of the standard Year-Books.

Mucous Colic, or Membranous Colitis, is by McPhedran, of Toronto. The opening sentence: "Cases of mucous colic vary very much in the severity of their symptoms," gives a reviewer the shivers. He dreads what may come next. The author neglects to give high saline injections the exalted place they deserve in the treatment of this affection. Injuries and Lesions Following the Toxic Use of Alcohol is by Crothers, of Hartford.

Robinson, of Chicago, reports several cases: Ulcer of the Stomach; Cerebral Hemorrhage and Lumbar Puncture, and Curable Albuminuria, and Wells, of Chicago, contributes a clinical lecture on Addison's Disease. The latter contains about 4,000 words; about 2,000 of these are superfluous. Weber and Michels, of London, jointly report an interesting case of Enlargement of the Liver Due to Carcinoma, and Wight, of Brooklyn, contributes an article on Fractures of the Patella, which is illustrated with radiograms. Broeckaert, of Ghent, France, writes on Paraffine Injections by the Cold Process. It would be advantageous for him and for his readers were he to study Luckett's papers on the same subject.

Ethyl Chlorid: Its Value as a General Anesthetic, is by Luke, of Edinburgh. This paper is good.

Tuffier, of Paris, contributes a clinical lecture on The Differential Diagnosis of Tumors of the Right Hypochondrium, and Brown, of Chicago, writes on Acute Poliomyelitis with Special Reference to the Stage of Invasion. Brower, also of Chicago, gives us a clinical lecture on Paralysis Agitans; Hemiplegia; Combined Sclerosis and Ataxic Paraplegia; Locomotor Ataxia; Acute Confusional Insanity, and Ohmann-Dumesnil, of St. Louis, writes on Syphilitic Necrosis of the Frontal Bone. Dumesnil writes entertainingly, but it gives the reader an unfortunate impression to be told that "In Fig. 2 the left eye is destroyed and the sight is gone."

Knight, of New York, contributes Notes on the Treatment of Hay Fever and Asthma.

Shoemaker, of Philadelphia, writes on Major Trauma of the Eye in General Practice. Every physician should read this paper. Sym, of Edinburgh, contributes an interesting article on Gonorrhoea and Conjunctivitis, and Kretz, of Vienna, one on Cirrhosis of the Liver, which completes the list of contributions.

The verdict, after studying this volume of International Clinics, is distinctly favorable, but one cannot but be impressed by the radically different methods adopted by foreign and American writers. The former go straight to the point every time and do not waste words; the latter, almost without exception, pad their contributions fatiguingly.

BOOKS RECEIVED.

PATHOGENIC MICRO-ORGANISMS, INCLUDING BACTERIA AND PROTOZOA. A practical manual for students, physicians and health officers. By William Hallock Park, M.D., Professor of Bacteriology and Hygiene, University and Bellevue Hospital Medical College, and Director of the Research Laboratory of the Department of Health, City of New York. Assisted by Anna W. Williams, M.D., Assistant Director of the Research Laboratory. Second edition, enlarged and thoroughly revised, with 165 engravings and 4 full-page plates. New York and Philadelphia: Lea Brothers & Co., 1905.

AMERICAN MEDICAL ASSOCIATION

Next Annual Meeting at Boston, Mass., June 5-8, 1906.

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Centennial Celebration Committee.

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Committee on Prize Essays—A. Jacobi, New York.

Annual Meeting of the American Medical Association, Boston, June 5 to 8, 1906.

Delegates: Everard D. Ferguson, Wisner R. Townsend, E. Elliot Harris, J. W. Grosvenor.

Alternates: Charles G. Stockton, Frank D. Reese, John A. Fordyce, Wm. G. LeBoutillier.

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THE CENTENARY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

With the present annual meeting held at the end of January and the beginning of February, the Medical Society of the State of New York celebrates the centenary of its establishment by the Legislature. It is a source of profound pleasure to all those who have the best interests of the medical profession of the Empire State at heart that this celebration takes place with the New York profession once more, after more than a score of years of division a single united body. There is no doubt that the reunion which has taken place will make medical interests, not only professional but also communal, in New York State much better taken care of than in the past. The disunion has been a distinct source of loss of influence, especially as regards legislation, and the community as well as the physicians themselves has suffered thereby. It would seem almost providential that union comes at so propitious a moment, for indeed the foundation of the State Medical Society deserves to be celebrated with all honor by every medical man in our great State.

From the very beginning the New York State Medical Society succeeded in making its influence felt for the good of the community and very soon proved a model for other State medical associations. It may be considered that this is not only what might have been expected of the Society representing the profession of the Empire State, but it must not be forgotten that in the early years of the nineteenth century New York by no means held the position of preponderance among the States which she does at the present time. Just after the Revolution even North Carolina was far ahead of New York in population. A hundred years ago our State was scarcely more than fourth in the number of inhabitants, and circumstances were such that other States, notably Massachusetts, Pennsylvania and Virginia, might

very well have been expected to be leaders. New York had perhaps the most mixed population of any of the States and was more in the condition in which the Northern and Eastern States are at the present time than any of the others. Many of the immigrants landed at her port and stayed there. It was this very mixture of her population that somehow seemed to afford her the initiative that made her a pioneer in all medical progress.

New York secured the legal regulation of the practice of medicine very thoroughly, considering the disturbed condition of affairs as regards medical education and the necessities of country practice. It was in this matter particularly that other States learned to follow her example until the Empire State soon realized the position of leadership it had come to occupy. It was not long, then, before there began to be discussed within the councils of the State Society various measures for the amelioration of professional conditions throughout the country. Distinctly medical and scientific improvements much to be desired met with frank recognition and prompt endeavor to progress. The Society was scarcely more than ten years old when there originated in it the resolution and the appointment of a committee which was ultimately to secure the publication of the United States Pharmacopœia. Of how much service this has been to the practicing physicians of this country it is needless to speak.

Very shortly, too, the Medical Society of the State of New York attracted attention by the liberality of the prizes offered for essays on subjects of general interest to medical practitioners. Competitors from nearly every one of the then States in the Union entered these competitions during the third, fourth and fifth decades of the nineteenth century. None of the essays that have been preserved is nearly as far behind the age as the ordinary modern medical reader might think, but, on the contrary, many of them represent distinct anticipations of some of the most modern subjects of importance, especially in

matters of diagnosis and of therapeutics. The most advanced adherent of the value of iodine for nearly all the chronic conditions to which human nature is heir has never been more enthusiastic over his subject than the writer of the essay on iodine which received the prize from the New York State Medical Society about the beginning of the third decade of the nineteenth century. Some very interesting things with regard to bathing for typhoid fever are contained in another essay. Some anticipations of the open-air treatment for tuberculosis are in a third. The necessity for better living quarters for the poor, if the city's death-rate is to be kept down and the awful power of contagious disease kept in check, are discussed in the fourth. When we add that the fifth one of these early prize essays contains an excellent clinical description of the various forms of delirium tremens with a discussion of many of the methods of treatment that are still the subject of our medical society program, and that it was written by a physician from Kentucky (!), there will be no doubt of the value of the work thus accomplished under the encouragement of the Medical Society of the State of New York.

Just forty years had passed after the foundation of the Society when, as the issue of many discussions and the expression of many hopes and fears, a definite plan was entered upon for the foundation of a National Medical Association. The original idea was to secure an improvement in medical education by bringing about a definite program of studies in the various medical schools throughout the country and the union that would enforce this. When the delegates came together, however, it was realized how much more than this might be accomplished and should be attempted if professional interests were to be properly consulted. Accordingly a definite plan of organization that would unite the various State Medical Associations was agreed upon and the present American Medical Association came into existence.

At the time of the discussion as to the membership and scope of the national medical organization which was to be founded, it was at first suggested that this should be rather in the nature of an academy than of a national representative body. It was proposed that the membership should be limited to a definite number not too large, and that members should be admitted because of their acknowledged scientific attainments or original work of high character. It was urged by those who suggested this plan of organization that the proceedings of such a body would be of much more scientific character than those of an elective delegate body, and that this itself would prove a very important educational influence for the profession of the country, since the discussions would be shared by presumably the best men from the various States and the actual status of knowledge with regard to medical questions could thus be readily ascertained by

the general practitioners of the country. It was mainly through New York's influence that this plan of a select body was rejected in favor of a representative organization.

All during her century of history the Medical Society of the State of New York has been a leader in the movements for the benefit of the common weal as well as for the profession. It was because of the deep interest of members of the Society that inebriate asylums were established in New York on the broad philanthropic principle that inebriety was a disease to be treated rather than an evil to be condemned and let go. The history of the efforts of members of the Society to alleviate the lot of the insane is one of the most interesting chapters in its history. Over and over again the influence of the State Society with the Legislature has been appealed to successfully in order to promote progress and secure advancement in this important matter. The old county asylums or insane departments attached to the poorhouses were here earliest abandoned and a rational scientific system of taking care of the insane instituted.

Medical education was constantly the uppermost thought in the minds of members and the most frequent subject of discussion in the councils of the Society. It was in order to improve medical education that the idea of founding the National Association was originally taken up.

Since the Medical Society of the State of New York has accomplished so much that is memorable in the century just passed, it is not too much to expect that under constantly improving conditions much more shall be accomplished in the second century of her existence just beginning. There is no incentive equal to the feeling that one must not fall below a standard set by forefathers. *Noblesse oblige* is one of the greatest springs of action in the human heart. Surely the members of the united profession in New York who will now join fraternally in celebrating the hundredth anniversary of the Society will feel all of the force of this historical tradition.

It is not difficult to foresee how much can and surely will be accomplished in this new century by the united profession of the Empire State. Let us hope that nothing shall arise to mar the precious prospect and that the fulfilment shall equal the promise. For this all depends on the interest that individual members will take, and this means not only those who may have their eye upon official preferment but all the members of the organization. It has been noted often enough in the past that some of the most effective suggestions for professional progress have come not from members of the Society dwelling in the larger cities but from those of the smaller towns and even the country places. There is no reason why this should not continue to be the case and why all of the many thousand physicians of the Empire State should not work shoulder to shoulder for the advancement that will mean so much for this and subsequent generations.

THE ANNUAL MEETING OF THE HOUSE OF
DELEGATES OF THE MEDICAL SOCIETY
OF THE STATE OF NEW YORK.

The annual meeting of the House of Delegates was held in the Albany Medical College, Albany, January 29, 1906; the President, Dr. Joseph D. Bryant, in the chair.

Meeting called to order at 5.30 P. M. On roll call by the Secretary the following answered to their names: Drs. Bryant, Nellis, Elsner, Lambert, Ball, Bierwirth, Heffron, Jacobi, Curtis, Syms, Harris, Townsend, Root, Neuman, Ainsworth, Vander Veer.

Moved, seconded and carried:

WHEREAS, At the last meeting the minutes were read and approved;

Resolved, That the reading of the minutes be now omitted.

The annual report of the Secretary was presented by Dr. F. C. Curtis. Accepted and ordered placed on file. (See page 47.)

The annual report of the Treasurer was presented by Dr. Ball. Accepted and ordered placed on file. (See page 50.)

The annual report of the Committee on Scientific Work was presented by the Chairman, Dr. Neuman. Accepted and ordered placed on file. (See page 55.)

The annual report of the Committee on Legislation was presented by the Chairman, Dr. Root. Accepted and ordered placed on file. (See page 49.)

Moved, seconded and carried:

Resolved, That the Committee on Legislation be allowed \$100 for a clerk.

The annual report of the Committee on Public Health was presented by the Chairman, Dr. Heffron. Accepted and ordered placed on file. (See page 51.)

By unanimous consent Dr. F. Park Lewis was asked to present his views on the subject of The Prevention of Unnecessary Blindness. (See page 53.)

Moved, seconded and carried:

Resolved, That the question presented by Dr. Lewis be referred to the Committee on Public Health for further consideration.

Dr. Nellis, Chairman of the Committee on Arrangements, stated that he could not make his report until after the close of the meeting.

Dr. Jacobi, Chairman of the Committee on Prize Essays, said his committee had received no essays.

Dr. Vander Veer, as Chairman of the Committee to Select an Editor, made the following report. Accepted and ordered placed on file. (See page 60.)

Dr. Bryant, as Chairman of the Committee to Select Counsel, to defend suits of alleged malpractice, made the following report. Accepted and ordered placed on file. (See page 55.)

Dr. Lambert, Chairman of the Committee to Authorize and Audit Expenditures, stated that his committee had held regular meetings and authorized and audited the expenditures of the Society.

The Committee on Referendum reported progress, and stated that the vote would be taken as soon as the State Society could get corrected lists of County Society members.

Dr. Jacobi, Chairman, presented the report of the Committee on Centennial Celebration. Accepted and ordered placed on file. (See page 56.)

The annual report of the State Board of Examiners was received by mail. Accepted and ordered placed on file. (See page 57.)

Dr. Styles, Chairman of the Committee to Select Candidates for Vacancies in the State Board of Examiners, reported that the names selected were: Dr. W. W. Potter, of Buffalo; Dr. W. S. Ely, of Rochester; Dr. M. J. Lewi, of New York; Dr. W. J. Nellis, of Albany; Dr. E. D. Fuller, of Utica; Dr. Arthur W. Booth, of Elmira.

Moved, seconded and carried:

Resolved, That the Secretary be authorized to forward these names to the State Board of Regents.

The Secretary read the following correspondence from the American Medical Association.

LOUISVILLE, Ky., Dec. 19, 1905.

DR. F. C. CURTIS, *Secretary Medical Society of the State of New York, Albany, N. Y.:*

Dear Doctor—Having been apprised by Dr. Joseph D. Bryant, president of the Medical Society of the State of New York, that the last detail of procedure in the consolidation of The New York State Medical Association and the Medical Society of the State of New York has been completed, I take occasion to extend, through you, an official invitation to the society to appoint a proper quota of delegates, at the annual meeting next month, to the next annual meeting of the American Medical Association, to be held in Boston, next June.

As I understand it, the society formed by the consolidation of the two societies has all the rights and privileges of the former State association. One of these rights and privileges is that of being the constituent branch of the American Medical Association in the State of New York.

With assurances of cordial esteem and regard,
I am, Doctor,

Sincerely yours,

LEWIS S. McMURTRY,

President American Medical Association.

LOUISVILLE, Ky., Dec. 22, 1905.

DR. JOSEPH D. BRYANT, *President of the Medical Society of the State of New York, New York, N. Y.:*

Dear Doctor—I have the honor to acknowledge your communication conveying official notice that the final details of procedure in the consolidation of The New York State Medical Association and the Medical Society of the State of New York have been completed. I beg to congratulate you on this consummation, which has been long desired by the profession of the United States. Since the organization formed by the union of these two societies becomes the constituent branch of the American Medical Association in the State of New York, I beg to extend, in be-

half of the American Medical Association, a cordial greeting to your society and a welcome to the councils of a united profession.

With much respect, I am,

Very sincerely yours, LEWIS S. McMURTRY,
President of the American Medical Association.

CHICAGO, Ill., Dec. 24, 1905.

DR. F. C. CURTIS, *Secretary Medical Society of the State of New York, Albany, N. Y.:*

Dear Doctor Curtis—Since all details have been completed for the amalgamation of The New York State Medical Association with the Medical Society of the State of New York, and since the Constitution of the American Medical Association regarding constituent branches has been complied with, the society of which you have been secretary for so many years is now the constituent branch of the American Medical Association for the State of New York.

I wish to take this opportunity to congratulate you, and the medical profession of New York and of the whole country, on this union. I sincerely hope that the results of this consolidation will prove not only a united profession in name, but a united profession in fact, one that will work together for the best interests of the public, of the medical profession, and of each individual member of the profession in the Empire State.

With the compliments of the season, I am,

Very truly yours, GEORGE H. SIMMONS,
General Secretary American Medical Association,
103 Dearborn avenue, Chicago.

CHICAGO, Ill., Jan. 3, 1906.

DR. F. C. CURTIS, *Secretary Medical Society of the State of New York, N. Y.:*

Dear Doctor Curtis—Yours of December 29th has been received. In this you formally notify me, as secretary of the American Medical Association, that the House of Delegates of the Medical Society of the State of New York, at a meeting held at Albany, December 14th, adopted resolutions in accordance with Article IV of the Constitution of the American Medical Association, thereby becoming its constituent branch in the State of New York. Your letter will be placed on file.

Meanwhile, permit me to suggest that at the coming meeting of the Medical Society of the State of New York, the House of Delegates should elect representatives to the House of Delegates of the American Medical Association, in the proportion of one to each five hundred, or major fraction thereof, of your membership.

As you understand, the American Medical Association, through a committee, apportions a certain number of delegates to each State society, such apportionment to carry over for three years. The last apportionment was made at Atlantic City in 1904, but New York was left in abeyance and the following action taken:

"That the General Secretary shall on May 1, 1905, obtain from the secretary of the constituent association of the State of New York, the

number of members belonging to that organization, and shall apportion to that State a delegate for each five hundred of its actual active members and minor fraction thereof, which apportionment shall prevail for the years 1905 to 1907."

This action was taken under the presumption that a union would be brought about in 1904, but it was not. Consequently, at the meeting held last July in Portland, the following action was taken:

"Dr. Craig, Pennsylvania, speaking for the Reference Committee on Amendments to Constitution and By-Laws, stated that in the case of the State of New York the Committee on Re-apportionment has made an exception to that State and has limited that exception to a term which expired May 1, 1905. He moved that this term be extended to May 1, 1906. Seconded and carried."

Your House of Delegates, therefore, should elect a sufficient number of representatives to fill out the quota that will probably be required. Then, on May 1st, the apportionment can be made, which will be based on the number of members in good standing at that time.

Very truly yours, (Signed) GEORGE H. SIMMONS,
Secretary American Medical Association.

Moved, seconded and carried, that it be spread in full on the minutes.

Under new business, it was moved, seconded and carried that a committee of five, the President to act as Chairman, be appointed to pass upon By-Laws presented by County Societies for approval.

The chair appointed Drs. Bryant, Townsend, Harris, Jacobi and Syms.

Moved, seconded and carried, that County Society Secretaries be requested to refer all applications for membership in the American Medical Association to the Secretary of the Medical Society of the State of New York.

Moved, seconded and carried:

Resolved, That the Medical Society of the State of New York adopt the following application blank, and that the same be supplied to County Medical Societies, and that they be requested to use these only (See page 12, Volume 6, No. 1, January, 1906.)

Moved, seconded and carried:

Resolved, That the County Treasurers be requested to use a uniform bill and receipt; the same to be supplied to the County Societies by the State Society.

Moved, seconded and carried:

Resolved, That the Committee on Audit be authorized to employ Mr. Wicks, Certified Public Accountant, to audit the books quarterly at an expense not to exceed \$200.

Moved, seconded and carried:

Resolved, That Chapter X, Section 2, of the By-Laws be amended by striking out the section and substituting therefor the following:

"All papers read before the Society by its members shall become the property of the Society.

Permission may be given, however, by the House of Delegates or the Committee on Publication to publish such paper in advance of its appearance in THE NEW YORK STATE JOURNAL OF MEDICINE."

The Secretary presented the following letter from the Medical Society of the County of Kings in regard to the JOURNAL and books received for review, etc. The President at the same time presented an agreement, drawn up by the attorney to place the matter in proper form for action by the House of Delegates:

January 10, 1906.

DR. JOSEPH D. BRYANT, *President, and the House of Delegates of the Medical Society of the State of New York:*

Gentlemen—As a Committee of the Council of the Medical Society of the County of Kings, we are directed to address to you this memorial, concerning the interests of this County Society in its relations to the Medical Society of the State of New York.

In the amalgamation of the medical societies of this State the position of our County Society is a peculiar one. We have a library building which cost between \$90,000 and \$100,000. In this building are our meeting rooms, library, and reading rooms. There is a mortgage indebtedness of \$35,000 upon the property. To meet the interest upon this mortgage and to defray its running expenses consumes all the income which the Society has from the \$10 annual dues received from each of its 730 members, and leaves no balance which can be expended for the purchase of books for subscriptions to periodicals and for the binding of volumes. Amalgamation adds \$3 more to the dues of each member.

Since 1888 our Society has published the *Brooklyn Medical Journal*, which each member has received free of charge. The books which this journal receives for review, and the periodicals which it receives in exchange, constitute the chief supply of material which our library receives. This represents yearly about 125 books and several hundred foreign and domestic periodicals. To subscribe for these periodicals would cost about \$1,200 yearly. This is one of the important and practical values of our medical journal. It is a main support of the library of a Society which is already burdened to its limit with the expenses of maintaining its property.

We beg to call your attention to the effects which these interests will suffer through amalgamation. THE NEW YORK STATE JOURNAL OF MEDICINE, the organ of the State Society, will probably lead to the discontinuance of the *Brooklyn Medical Journal*, for reasons which are obvious. Thus amalgamation and its attendant conditions threaten to our library an injury which is already becoming a matter of serious concern to our members.

Of all the County Medical Societies in the State, ours is the only one confronted by these peculiar conditions. We are the only one of the County Societies supporting a library, a building,

and conducting a medical journal; and we are the only County Society sacrificing its medical journal and the interests of its library in the cause of amalgamation.

To offset the injuries which amalgamation would otherwise inflict upon us, we ask that the books received for review, and the periodicals received in exchange by THE NEW YORK STATE JOURNAL OF MEDICINE, shall be deposited in our library in lieu of those lost to us by the cessation of the *Brooklyn Medical Journal*. Certainly, these books and periodicals should be deposited in some library; and neither the State Society nor any of its affiliated County Societies has a fire-proof library building, with all the facilities for caring for a library, such as Kings County offers. This library is under the management of a directing librarian, who must be a member of the State Medical Society, and whose office is an elective one. We also employ a professional librarian and an assistant librarian.

We further offer, similarly, to accept under our care and custody such books as are already the property of the Medical Society of the State of New York, and which should properly become a part of a medical library.

Upon the adoption of the above propositions we will place the resources of our library within the reach of all the members of the State Society. We will send, upon request, to any member of the State Society, in any part of the State, books from our library, carriage to be paid by the borrower, and the State Society to be held responsible for the property. These are the conditions under which books are now loaned from the library of the Surgeon-General's office in Washington.

By these means we give to the whole State the benefits of an organized medical library. Fortunately, this library is situated in the metropolis of the State; but, if it were not, we should still regard this proposition as practicable and beneficent. Very respectfully,

GEORGE RYERSON FOWLER,

Trustee.

JAMES MACFARLANE WINFIELD,

Directing Librarian.

JAMES P. WARBASSE,

Censor.

Committee of the Council of the Medical Society of the County of Kings.

PROPOSED AGREEMENT.

WHEREAS, It is the desire of the Medical Society of the County of Kings to cooperate with and assist the Medical Society of the State of New York in the successful publication of THE NEW YORK STATE JOURNAL OF MEDICINE, a publication conducted by the Medical Society of the State of New York,

KNOW ALL MEN BY THESE PRESENTS, That the Medical Society of the State of New York, party of the first part, and the Medical Society of the County of Kings, party of the second part, for

and in consideration of the mutual covenants and agreements herein contained, and in consideration of the sum of one dollar each to the other paid, the receipt whereof is respectively acknowledged, do hereby agree and covenant as follows:

First.—The Medical Society of the County of Kings hereby agrees to withdraw from publication and circulation the medical journal known as the *Brooklyn Medical Journal*, now owned and conducted by the party of the second part, at a date not later than December 31, 1906.

Second.—The Medical Society of the County of Kings hereby agrees to help, aid, assist and cooperate with the Medical Society of the State of New York in the successful publication and circulation of THE NEW YORK STATE JOURNAL OF MEDICINE, now conducted, owned and circulated by the Medical Society of the State of New York.

Third.—The Medical Society of the State of New York hereby agrees to deliver into the custody of the Medical Society of the County of Kings, each and every book, exchange, publication or other literary medical pamphlet or magazine received by the party of the first part in exchange for its publication hereafter to be published, with convenient speed after its receipt by the party of the first part, until this agreement is terminated, as hereinafter provided.

Fourth.—The Medical Society of the County of Kings promises and agrees, within six months from the date hereof, to place each and all of the volumes contained in its library in the City of New York, Borough of Brooklyn, as a circulating library, at the disposal of the members of the Medical Society of the State of New York, wheresoever situate in the State of New York, and shall provide for and prescribe rules and regulations for the proper and satisfactory distribution of all the volumes in said library contained, or which may be hereafter purchased or received from any source whatsoever. And the party of the second part hereby agrees to furnish a suitable book-plate on which shall be inscribed the source of all volumes delivered by the Medical Society of the State of New York, and shall cause to be attached to each periodical a suitable distinction showing the source of the receipt of such periodical as may be delivered to the party of the second part by the party of the first part.

Fifth.—It is hereby mutually agreed and understood by and between the parties hereto, that this agreement may be terminated at the option of the party of the first part upon notice in writing to the party of the second part of its intention so to do, upon failure of the party of the second part to carry out any of the covenants herein agreed to be performed by it, or upon failure of the party of the second part to remain in affiliation and to continue a constituent part of the Medical Society of the State of New York, or if after five years from the execution of this agreement any other County Medical Society in affiliation with and which is then a constituent part of

the Medical Society of the State of New York shall offer to the party of the first part a more satisfactory and acceptable arrangement for the disposal of such books and pamphlets received as herein described. If at any time such agreement shall be terminated for any reason, then, and in that case the party of the second part may, at its option, either return the volumes so delivered, and in the custody of the party of the second part to the Medical Society of the State of New York, or at the option of the party of the second part the party of the second part may pay for, purchase and retain the volumes or periodicals so delivered, at fifty per centum of their value at the time of the termination of this agreement, such value to be established and determined by the appointment of suitable appraisers to pass upon the same in such manner as shall be prescribed by mutual agreements of the parties hereto.

Sixth.—It is mutually covenanted, agreed and understood by and between the parties hereto, that if the party of the second part fails to provide proper means to complete the circulating library system herein provided, within the period of six months after the execution of this agreement, or to withdraw the *Journal* of the party of the second part from circulation and publication, then and in that case this agreement shall be and become in all respects void and of no effect, and all books, pamphlets and periodicals received from, shall be immediately returned to, the party of the first part.

Seventh.—The president or secretary of the respective parties hereto are hereby authorized to execute the within agreement for and on behalf of the Medical Society of the State of New York and the Medical Society of the County of Kings, and to affix thereto the respective corporate seals.

IN WITNESS WHEREOF, The respective parties hereto have affixed their hands and seals this day of February, in the year one thousand nine hundred and six.

Medical Society of the State of New York,
by

.....
President.

Medical Society of the County of Kings, by

.....
President.

The following letter was read from Mr. James Taylor Lewis, counsel, who drew up the above agreement:

January 29, 1906.

DR. JOSEPH D. BRYANT, *President Medical Society of the State of New York, 32 West 48th Street, New York:*

My Dear Doctor—On the eve of this important meeting of the ad interim House of Delegates and of the members generally of the State Society, I consider it a duty to sound just a word of caution to the ad interim House of Delegates

through you as its presiding officer. This feeling is suggested by the proposed agreement with one of the constituent county organizations, but refers to actions generally by the House of Delegates, and not especially to this particular contract.

This must be borne in mind that the so-called ad interim House of Delegates is in reality but a large committee incidentally created by the necessities of the case for the purpose of tiding over a period which connects the old plan of organization of the State Society with the new representative plan of organization, and was created to prevent complications and to carry on the wishes of all members of the Society, as expressed in the Constitution and By-Laws under which you act. It therefore seems to me that it would be unfortunate to enter into any arrangements, contracts or agreements whereby property or interests of the members should be in any respect interfered with, disposed of or impaired, especially so in reference to any subject which the entire profession has not had ample opportunity to investigate and intelligently decide.

To exchange such books, periodicals and pamphlets as may be received at the editorial office of the JOURNAL in return for the withdrawal of the *Journal* now published by the Medical Society of the County of Kings for a limited period, would not in my judgment be such a disposal or impairment of any interest or property of the members as could be a subject of subsequent criticism, but to absolutely and unconditionally perpetuate such an arrangement for all time would, in my judgment, be a matter of criticism, and even the possibility of having the action of the ad interim House of Delegates reviewed or severely criticised.

A representative committee to be appointed from the membership at large to consider this proposition, with power to act after sufficient investigation, might disarm criticism and would certainly remove the responsibility from this present House of Delegates, and place the onus of affirmative action with the entire State membership.

Either of these alternatives seems to me to remove the possibility of criticism of the ad interim House of Delegates, and I have drawn the contract in conformity to the limited term.

With best wishes, faithfully yours,
JAMES TAYLOR LEWIS, Counsel.

Moved, seconded and carried:

Resolved, That the agreement be adopted as read.

A letter from the Health Officer of Rockland County, Dr. Toms, was referred to the Committee on Public Health.

The secretary presented the following letter from Dr. W. P. Spratling, of Sonyea:

"AT SONYEA, January 17, 1906.

"To the House of Delegates, the Medical Society of the State of New York:

"Gentlemen—In my judgment New York State should enact a law designed to prohibit the mar-

riage of epileptics, imbeciles and feeble-minded in cases where the woman is under 45 years of age. I am pleased to attach to this communication some printed matter bearing on laws of this nature in force in Connecticut, Ohio and Michigan. I have sent out several hundred of these circulars and have received scores of favorable responses.

"It would help the matter immensely if the Medical Society of the State of New York would approve a resolution indorsing the enactment of such a law. May I beg to request that the society be asked to indorse, if in its wisdom it should deem it best to do so, the following resolution:

"*Resolved*, That the Medical Society of the State of New York approves the enactment of a law in New York State designed to prohibit the marriage of epileptics, imbeciles and feeble-minded in cases where the woman is under 45 years of age."

"Thanking you in advance for your kind offices in the matter and bespeaking your support of the proposition, I am, very truly yours,

"(Signed) W. P. SPRATLING, M.D.,
"Medical Superintendent."

Moved, seconded and carried:

Resolved, That the Medical Society of the State of New York approves the enactment of a law in New York State designed to prohibit the marriage of epileptics, imbeciles and feeble-minded in cases where the woman is under 45 years of age.

Moved, seconded and carried:

That the Committee on Legislation be requested to cooperate in securing such legislation.

Moved, seconded and carried:

That the following tentative by-laws for district branches be printed. (See page 62.)

Moved, seconded and carried:

That the Medical Society of the State of New York heartily indorse "An Act to amend the Public Health Law by providing for the proper labeling of proprietary and other medicinal preparations containing alcohol or narcotic or other potent drugs, and for the inspection, analysis and regulation of the manufacture and sale of the same," and request the Committee on Legislation to cooperate with other bodies to secure its enactment by the Legislature. (See page 60.)

The following letter was read from Dr. Lucien Howe, of Buffalo:

BUFFALO, N. Y., January 29, 1906.

DR. JOSEPH D. BRYANT, *President of the Medical Society of the State of New York:*

My Dear Dr. Bryant—The custom of offering prizes for original work, already established in our society, and so frequent in Europe, has always seemed to me of decided value. I have long thought it might be desirable to make the State Society the trustee of another prize, and this centennial meeting seems to be an auspicious occasion for offering it. Accordingly you find enclosed a check for fifteen hundred dollars. If the

Society cares to accept this, it would be on the following conditions:

First.—The interest on this amount, or any which may be added to it, shall be used by the Society for a prize, either in money or in the form of a suitable medal for the best original contribution to our knowledge of some branch of surgery—preferably of ophthalmology.

Second.—This principal sum, together with all other amounts which may be added to it, in any way shall be kept separate and apart from any other funds of the Society. No portion of the principal or of any addition to it shall be expended, and only the interest which accrues in one year shall be expended during that time.

Third.—The author or discoverer need not be a member of the Medical Society of the State of New York, but the communication shall be made first through its Committee on Prize Essays, and the data, methods and everything relating to the communication shall remain the property of that Society, to be made public as it may direct.

Fourth.—The method of presenting the communication and of awarding the prize shall be substantially the same as that followed in regard to the prize essays. That is to say, the communication shall be typewritten or printed, and the only means of identification of the author shall be a motto or other device. It shall be accompanied by a sealed envelope having on the outside the same motto or device, and containing the name and address of the writer. If, in any year, the committee does not deem any essay or communication which is offered worthy of the prize, then it shall not be awarded, and the interest for that year shall be added to the principal.

It is with some hesitation that so small a sum is offered to the Society, but if the prize is awarded only occasionally, as has proved to be the case with the one already established, the principal will increase slowly to many times the original amount. Therefore, as the nucleus of a much larger sum, this may ultimately serve to express in a slight degree our appreciation of original contributions to medical science. Very truly yours,
LUCIEN HOWE.

Moved, seconded and carried:

Resolved, That the House of Delegates accept with gratitude the generous gift of Dr. Lucien Howe and recommend to the Society that the fund be known as the Lucien Howe Prize Fund.

Moved, seconded and carried:

Resolved, That the secretary be instructed to express to Dr. Fowler, of Brooklyn, a member of the House of Delegates, now ill in the Albany Hospital, the sympathy of the House of Delegates and a sincere hope for his speedy recovery.

Moved, seconded and carried:

Resolved, That the secretary be instructed to express to Dr. Roswell Park, of Buffalo, the sympathy of the House of Delegates at his inability to deliver the Oration on Surgery owing to illness.

House of Delegates then took a recess to meet at Albany Medical College at 11 A. M., on January 30th.

Dr. Joseph D. Bryant, president of the Medical Society of the State of New York, has appointed the following members of the committee to select candidates for vacancies in the Board of Medical Examiners, agreeable to Article IX of the Constitution:

Dr. C. S. Styles, Owego, chairman.

Dr. Charles G. Stockton, Buffalo.

Dr. Charles Stover, Amsterdam.

Dr. Henry A. Fairbairn, Brooklyn.

Dr. Francis P. Kinnicutt, New York City.

Among the advantages of membership in the Medical Society of the State of New York may be mentioned:

Membership in County, District Branch and State Society.

Defense in suits of alleged malpractice.

Receipt of THE NEW YORK STATE JOURNAL OF MEDICINE.

Receipt of the Medical Directory of New York, New Jersey and Connecticut.

Privilege of membership in the American Medical Association.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

One Hundredth Annual Meeting, held at Albany, N. Y., January 30, 31 and February 1, 1906.

The president, Dr. Joseph D. Bryant, in the chair.

FIRST DAY, JANUARY 30.

The meeting was called to order by the president at 9.50 A. M.

Prayer was offered by the Rev. Mr. McGrath, of the Episcopal Church.

The president's inaugural address was delivered by Dr. Joseph D. Bryant. (See page 46.)

Report of the Committee on Conference was read by Dr. Henry L. Elsner. (See page 58.)

The president announced that this report should be received and placed on file.

Dr. Wisner R. Townsend, of New York, moved the following resolution:

Resolved, That pursuant to Section 1 of the agreement executed by the Medical Society of the State of New York and The New York State Medical Association, and which agreement was made a part of the order of amalgamation heretofore entered on the 9th day of December, 1905, by Mr. Justice John M. Davy, a justice of the Supreme Court, the ad interim officers, chairmen of standing committees, House of Delegates and Council of the Medical Society of the State of New York, created by such order of consolidation, are hereby authorized, directed and empowered to continue to exercise the respective powers and authority for the organization of the members of the consolidated corporation and the management of its

affairs pursuant to the Constitution and By-Laws of the Medical Society of the State of New York, until the annual meeting of the Medical Society of the State of New York, which shall take place on the last Tuesday of January, 1907."

This was seconded.

Dr. Seamans, of Oneida County, moved the following amendment:

That all persons in the possession of proper credentials who had recently been elected to the House of Delegates to permitted to sit with the House of Delegates which it was proposed to continue. Seconded.

After considerable discussion by Dr. W. G. Macdonald, Dr. Wisner R. Townsend, Dr. A. A. Hubbell, Dr. Henry L. Elsner, Dr. E. Eliot Harris, the president announced that, after due deliberation, he would declare the amendment out of order.

Motion carried.

Dr. Frederic C. Curtis read a letter from Dr. Howe offering \$1,500 in money for a prize fund. (See page 41.)

Dr. A. Jacobi moved that the offer of Dr. Howe be accepted, and that the thanks of the Medical Society of the State of New York were due and were herewith tendered the doctor. Also that the Society express itself as approving the plan and that the prize be called the Lucien Howe Prize.

Seconded and carried.

The president then introduced the president of the American Medical Association, Dr. Lewis M. McMurtry, of Louisville, Ky., who addressed the Society.

Dr. Conner, of Michigan, was also introduced.

The scientific program then followed.

MEETING OF THE HOUSE OF DELEGATES OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

A meeting of the House of Delegates of the Medical Society of the State of New York was held in Albany, at 11 A. M., January 30, 1906, Dr. Joseph D. Bryant, president, in the chair.

On roll call by the secretary, the following answered to their names:

Drs. Joseph D. Bryant, Abraham Jacobi, E. Eliot Harris, Alexander Lambert, Henry L. Elsner, Ogilvie DeVillo Ball, Arthur G. Root, Herman R. Ainsworth, John L. Heffron, William J. Nellis, Albert Vander Veer, Leo H. Neuman, Julius C. Bierwirth, Frederic C. Curtis, Wisner R. Townsend and Parker Syms.

The minutes of the last meeting were read and approved.

The following letter was read from the secretary of the American National Committee for the Lisbon Congress:

"January 29, 1906.

"DR. JOSEPH BRYANT, *President Medical Society of the State of New York:*

"Dear Doctor—In behalf of the American National Committee of the XV International Med-

ical Congress, I beg to request that you nominate delegates from the Society to the Lisbon meeting.

Very respectfully,

"(Signed) RAMON GUIERAS,

"Secretary American National Committee."

Moved seconded and carried:

Resolved, That the president and secretary be authorized to certify as delegates such members of the Medical Society of the State of New York as may desire to attend the congress.

Moved, seconded and carried:

Resolved, That the Medical Society of the State of New York, through its secretary, requests the various health officers of the State to include ophthalmia neonatorum among contagious diseases, which must be reported to the office of the local Boards of Health.

The president then stated that the next order of business was the election of officers, and asked for nominations.

Dr. Henry L. Elsner, of Syracuse, raised the point of order that inasmuch as the regular annual meeting of the Society had continued the officers, committees and members of the ad interim House of Delegates until the annual meeting in January, 1907, that it would be improper and unnecessary to reelect officers at this time.

Upon advice of counsel, the president declared Dr. Elsner's point of order well taken, and stated that the only officers to be elected at this time would be for such offices as were by the secretary declared vacant.

The president then requested the secretary to read the names of offices in which there was a vacancy.

The secretary then stated that there were vacancies in the offices of second and third vice-presidents, and the president then took up the nominations for persons to fill these vacancies.

Dr. Frederic C. Curtis was nominated for the office of second vice-president, and upon motion nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Dr. Frederic C. Curtis as second vice-president. The ballot was cast and the president declared Dr. Curtis elected second vice-president.

Dr. Curtis then resigned the office of secretary. The resignation was accepted, and the president said he desired to express to Dr. Curtis the appreciation of the House of Delegates of his long and valuable services to the Society.

Dr. Allen Arthur Jones was nominated for the office of third vice-president, and upon motion nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Dr. Allen Arthur Jones as third vice-president. The ballot was cast and the president declared Dr. Jones elected third vice-president.

The president then announced that there was in addition to those already mentioned by the secretary a vacancy in the office of secretary, and

requested nominations for the office of secretary.

Dr. Wisner R. Townsend was nominated for the office of secretary, and upon motion nominations were closed.

The president was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Dr. Wisner R. Townsend as secretary. The ballot was cast and the president declared Dr. Townsend elected secretary.

Dr. Ogilvie D. Ball presented his resignation as treasurer of the Society. The resignation was accepted, and the secretary directed to express to Dr. Ball the appreciation of the House of Delegates of his long and valuable services to the Society.

The president then announced a further vacancy in the office of treasurer, and requested nominations for the office of treasurer.

Dr. Alexander Lambert was nominated for the office of treasurer, and upon motion nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Dr. Alexander Lambert as treasurer. The ballot was cast and the president declared Dr. Lambert elected treasurer.

Dr. Townsend stated that as he had been elected secretary he was entitled to sit in the House of Delegates by virtue of such election. He also held a seat by virtue of being a member of the Committee of Conference, and desired, therefore, to resign the latter position, and asked the president to have the vacancy filled. His resignation was accepted.

The president then declared the vacancy in the House of Delegates as representing the Conference Committee, and requested nominations for the vacancy.

Dr. Edward D. Fisher was nominated to fill a vacancy in the House of Delegates, and upon motion nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Dr. Edward D. Fisher as a member of the House of Delegates. The ballot was cast and the president declared Dr. Fisher elected a member of the House of Delegates.

Dr. Alexander Lambert stated that as he had been elected treasurer, he was entitled to sit in the House of Delegates by virtue of such election. He also held a seat by virtue of being a member of the Committee of Conference, and desired, therefore, to resign the latter position, and asked the president to have the vacancy filled. His resignation was accepted.

The president then declared the vacancy in the House of Delegates as representing the Conference Committee, and requested nominations for the vacancy.

Dr. Willis G. Macdonald was nominated to fill a vacancy in the House of Delegates, and upon motion nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of

Delegates for Dr. Willis G. Macdonald as a member of the House of Delegates. The ballot was cast and the president declared Dr. Macdonald elected a member of the House of Delegates.

Dr. Leo H. Neuman, of Albany, nominated as members of the Committee on Scientific Work, to serve with the chairman thereof, the following: Drs. Algernon T. Bristow, of Brooklyn, and Herbert U. Williams, of Buffalo. On motion, nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Drs. Bristow and Williams as members of the Committee on Scientific Work. The ballot was cast and the President declared Drs. Bristow and Williams elected members of the Committee on Scientific Work.

Dr. Arthur G. Root, of Albany, then nominated as members of the Committee on Legislation, to serve with the chairman thereof, the following: Dr. Ernest Wende, of Buffalo, and Dr. Egbert Le Fevre, of New York. On motion nominations were closed.

On motion the secretary cast one ballot as the unanimous vote of the House of Delegates for Drs. Wende and Le Fevre as members of the Committee on Legislation, and the president declared Drs. Wende and Le Fevre elected members of the Committee on Legislation.

Dr. John L. Heffron, of Syracuse, nominated as members of the Committee on Public Health, to serve with the chairman thereof, the following: Dr. Hamilton D. Wey, of Elmira, and Henry R. Hopkins, of Buffalo. On motion nominations were closed.

On motion the secretary cast one ballot as the unanimous vote of the House of Delegates for Drs. Wey and Hopkins as members of the Committee on Public Health, and the president declared Drs. Wey and Hopkins elected members of the Committee on Public Health.

Dr. William J. Nellis, of Albany, nominated as members of the Committee on Arrangements, to serve with the chairman thereof, the following: Drs. Herman Bendell, of Albany; Arthur G. Root, of Albany; Henry L. K. Shaw, of Albany; Hermon C. Gordinier, of Troy; William C. Krauss, of Buffalo; Edgar A. Vander Veer, of Albany, and W. C. Phillips, of New York. On motion nominations were closed.

On motion the secretary cast one ballot as the unanimous vote of the House of Delegates for Drs. Bendell, Root, Shaw, Gordinier, Krauss, Edgar A. Vander Veer and Phillips as members of the Committee on Arrangements, and the president declared Drs. Bendell, Root, Shaw, Gordinier, Krauss, Edgar A. Vander Veer and Phillips elected members of the Committee on Arrangements.

The president then stated that it was necessary to elect twelve delegates to the American Medical Association meeting, and that four members had been elected from the State Medical Association,

and these should be reelected, leaving eight new members to complete the list.

The president then asked for nominations for delegates for two years.

Dr. Alexander Lambert then nominated the following for two years: Drs. Everard D. Ferguson, Joseph D. Grosvenor, E. Eliot Harris, Abraham Jacobi, Wisner R. Townsend and Albert Vander Veer, and upon motion nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Drs. Ferguson, Grosvenor, Harris, Jacobi, Townsend and A. Vander Veer as delegates to the American Medical Association for two years. The ballot was cast and the president declared Drs. Ferguson, Grosvenor, Harris, Jacobi, Townsend and A. Vander Veer elected delegates to the American Medical Association for two years.

The following were nominated by Dr. Lambert as alternates to the foregoing for two years: Drs. George F. Comstock, Charles G. Stockton, William G. Le Boutillier, Francis P. Kinnicutt, John A. Fordyce and F. D. Reese, and upon motion nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Drs. Comstock, Stockton, Le Boutillier, Kinnicutt, Fordyce and Reese as alternates to the American Medical Association for two years. The ballot was cast and the president declared Drs. Comstock, Stockton, Le Boutillier, Kinnicutt, Fordyce and Reese elected alternates to the American Medical Association for two years.

Dr. Lambert nominated the following to serve for one year: Drs. F. C. Crandall, William S. Ely, Henry L. Elsner, George Ryerson Fowler, Roswell Park and Hamilton D. Wey, and upon motion nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Drs. Crandall, Ely, Elsner, Fowler, Park and Wey as delegates to the American Medical Association for one year. The ballot was cast and the president declared Drs. Crandall, Ely, Elsner, Fowler, Park and Wey elected delegates to the American Medical Association for one year.

The following were nominated by Dr. Lambert as alternates to the foregoing for one year: Drs. Charles S. Payne, James Clement Davis, Chauncey P. Biggs, Louis Curtis Ager, Lorenzo Burrows, Jr., and J. Orley Stranahan, and upon motion nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Drs. Payne, Davis, Biggs, Ager, Burrows and Stranahan as alternates to the American Medical Association for one year. The ballot was cast and the president declared Drs. Payne, Davis, Biggs, Ager, Burrows and Stranahan elected alternates to the American Medical Association for one year.

The president then stated that the next duty of the House of Delegates was to select presidents for the eight District Branch Societies, and called for nominations.

Dr. Henry L. Elsner, of Syracuse, then nominated the following: First District Branch, Dr. Virgil P. Gibney, of New York; Second District Branch, Dr. H. B. Delatour, of Brooklyn; Third District Branch, Dr. T. J. Wheeler, of Chatham; Fourth District Branch, Dr. G. C. Madill, of Ogdensburg; Fifth District Branch, Dr. Nathan Jacobson, of Syracuse; Sixth District Branch, Dr. Ross G. Loop, of Elmira; Seventh District Branch, Dr. J. F. Whitbeck, of Rochester; Eighth District Branch, Dr. DeLancey Rochester, of Buffalo.

On motion the nominations were closed.

The secretary was then instructed to cast one ballot as the unanimous vote of the House of Delegates for Dr. Virgil P. Gibney, president, First District Branch; Dr. H. B. Delatour, Second District Branch; Dr. T. J. Wheeler, Third District Branch; Dr. G. C. Madill, Fourth District Branch; Dr. Nathan Jacobson, Fifth District Branch; Dr. Ross G. Loop, Sixth District Branch; Dr. J. F. Whitbeck, Seventh District Branch; Dr. DeLancey Rochester, Eighth District Branch.

The ballot was cast and the president declared Drs. Gibney, Delatour, Wheeler, Madill, Jacobson, Loop, Whitbeck and Rochester elected presidents of the District Branch Societies.

No further business appearing, it was moved, seconded and carried that the House of Delegates take a recess to meet on the call of the chair at ten days' notice.

ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

January 31, 1906.

Dr. Bryant in the chair.

Dr. Wisner R. Townsend, of New York, moved that a vote of thanks be extended to those in charge of the Emmanuel Baptist Church, for the use of their church, and to the Hon. Grover Cleveland, to the Hon. M. Linn Bruce, to the Hon. Charles H. Gaus, and to the Hon. St. Clair McKelway for their admirable addresses delivered at the centennial exercises of the Medical Society of the State of New York.

Seconded and carried.

MEETING OF THE COUNCIL.

A meeting of the Council of the Medical Society of the State of New York was called at the adjournment of the meeting of the House of Delegates, January 30th. Present: Dr. Bryant in the chair, Dr. Wisner R. Townsend, secretary, and Drs. William J. Nellis, Arthur G. Root, John L. Heffron, Herman R. Ainsworth, Frederic C. Curtis, Leo H. Neuman and Alexander Lambert.

Moved, seconded and carried:

Resolved, That a Publication Committee be ap-

pointed by the chair to supervise the publications of the Society.

The meeting then adjourned.

The president appointed the following as the Committee on Publication: Drs. E. Eliot Harris, chairman; Floyd M. Crandall, Hermann M. Biggs, Algernon T. Bristow, Alexander Lambert.

COUNCIL MEETING.

A meeting of the Council was called to order February 1, 1906, at 10 A. M.

Present, Drs. Joseph D. Bryant, Herman R. Ainsworth and Wisner R. Townsend.

Owing to lack of a quorum no business was transacted.

The president has appointed the following as the Committee on Prize Essays: Dr. Abraham Jacobi, chairman, and Drs. Henry Hun and Roswell Park.

CENTENNIAL HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The Centennial Committee beg leave to call the attention of the members to advertising page xi. Unless subscriptions are received in sufficient number to warrant the issue of this history, it cannot be published. All those who desire to subscribe will please do so at once. The Centennial Committee desire very much to publish this book, but do not feel that they ought to do so unless the members of the Society desire it. If for any reason the book should not be published the money of those who have subscribed will, of course, be refunded, but it is sincerely hoped that enough subscriptions will be received during the next month to enable the committee to go ahead with its work.

PRESIDENT'S ADDRESS.¹

BY JOSEPH D. BRYANT, M.D.,
New York.

IT is with happy realization and unalloyed pleasure that I desire you to join with me in greeting this moment's existence of the medical profession of the State of New York with glad recognition. And if I am a competent judge of the meaning of the hearty cooperation that characterizes the efforts of all concerned in reorganization throughout the State, and of the seeming contentment that appears to distinguish those here assembled, then indeed, are these feelings shared to the fullest extent by every one coming within the influence of the sentiment and labor dominating the reorganization. In any event, I beg to assure you that the medical profession of the country regards this occasion as one of the most important in the history of its existence.

The chastening influence of earnest contention in all fields of human conflict is often not unlike

that witnessed in the common convulsions of nature; the air is made the clearer and the purer thereby, the purposes of God and man are better understood, and corresponding things are improved and established upon a better and firmer basis.

For a painfully long period of time the open contention existing in the medical profession of this State has robbed the profession of the significant influence in medical and public matters freely accorded to much less beneficent and potent bodies of men. Bodies illy inclined to salutary measures, and encouraged chiefly because of their forceful organization, even in the attainment of self-seeking aims, have badly defeated the wholesome endeavors of the disorganized opposition of magnanimous and earnest medical desire. Too often, indeed, in the past, divided medical counsel or half-hearted medical support has failed to beget the respectful consideration—on the part of those in authority—due to the justice of a cause championed by the medical profession. How often, in fact, has it happened within the easy recollection of all that we have fittingly been told by those in authority, "When you can agree among yourselves, then come to us for aid"! This reason, or excuse, whichever it may have been, can no longer be regarded as available for the diplomatic purposes which it has served in the past.

The enrolled regular physicians of the State—not less than 6,000 in number—are today a united body of attentive medical men, laboring in common for commendable interests and beneficent causes. The medical profession of the State can now take hold with a firm, confident grasp in support of wholesome, public-spirited propositions and of medical advance with the full consciousness of the fact that their united desire, or their confirmed opinion, will constitute a bulwark of moral force, not to be misjudged nor indifferently considered. Please note the fact, my friends, that I refer to *general* medical and public propositions, meaning general professional and public duty—not private nor personal propositions, relating more often than otherwise to private or personal desire, too frequently strongly tinctured with self-seeking motives.

So long as the medical profession shall contribute its part to the interests of the public good, the public servants will heed its admonitions and respect the logic of its appeals. But when unwise personal desires or clannish purposes shall proselyte patriotic or disinterested efforts, then will the hold on public esteem be loosened, and medical appeals to public confidence become of much less avail or respectful consideration entirely forfeited. In every community, as well as in the State at large, there are broad and fertile fields for the encouragement and practice of general and special good. Therefore, "Be ye not weary in well doing," as the reward for all such labor as this is munificent and ever exer-

¹Delivered at the Centennial Meeting of the Medical Society of the State of New York, Albany, January 30-31, and February 1, 1906.

cising its influence in behalf of those who actively foster healthy sentiments.

But a moment ago it was remarked that the membership of the Medical Society of this State is 6,000. These figures are only approximate and are used at this time as an easy reckoning point to a greater membership. Every regular physician in the State should be a member in good standing in this organization, and every one thus enrolled should recognize the fact that he himself is as potent a factor in the affairs of the organization as is any other member. He should recognize as a truth that he himself is an active unit—if he shall choose so to be—and of as much importance as is any other individual unit of the organized body. And when he shall have recognized these facts, there yet remains another of far greater significance to be known, the fact that this relationship carries with it profound responsibility—the exacting creator of onerous duty, fortified, let us hope, with abundant love for just causes; duty to ourselves and to our professional brother, to our profession, and to the people at large, and to all things that shall glorify our calling and add to the enlightenment of the world.

The present status of this medical body has been attained only through the extraordinary zeal and infinite patience practiced by the "Joint Committee of Conference," to which some time ago the fortunes of the independent medical bodies were mutually and wisely entrusted. I desire to say at this time that although the members of the committee have builded slowly, they have builded intelligently and for all time, and in strict accordance with the letter of the law regulating such matters. Much yet remains to be accomplished under the order of the court, before the control of the affairs of the great body can be relegated by the *ad interim* House of Delegates to the completed organization. There is no doubt, however, that a year from this time you will have placed under your fostering care the fully organized body, the successful outcome of which will depend on the exercise of prudent forbearance and counsel and just action on the part of all concerned. In this connection, I desire to express the earnest hope that all who are engaged in the completion of this great work will cooperate promptly and cheerfully with those now vested by the court with the construction of the legal framework required for the purpose.

At this time, we are legally informed that only the final report of the Committee on Conference, the report of the *ad interim* House of Delegates, and a resolution of continuance of power are in order. I take this opportunity of announcing these facts at once so that no manifestation, of however commendable zeal, can give rise to encroachment on the time allotted to the scientific work of the day. If, however, there be any now or hereafter who may desire to communicate with the *ad interim* House of Delegates upon any matter relating to the labor in their

charge, please do so freely in writing, addressed to the secretary of that body, and I can assure you that most respectful consideration will be given the contents of the message.

If you can kindly indulge me a little longer I will read a communication that should interest you exceedingly and inspire within you a feeling of profound satisfaction:

"DR. JOSEPH D. BRYANT, *President Medical Society of the State of New York*:

"Dear Doctor—I have the honor to acknowledge your communication conveying official notice that the final details of the procedure in the consolidation of The New York State Medical Association and the Medical Society of the State of New York have been completed. I beg to congratulate you on this consummation, which has been long desired by the profession of the United States. Since the organization formed by the union of these two societies becomes the constituent branch of the American Medical Association in the State of New York, I beg to extend, in behalf of the American Medical Association, a cordial greeting to your society and a welcome to the councils of a united profession.

"With best wishes, I am very sincerely yours,
LEWIS S. MCMURTRY,

"President American Medical Association."

Finally, I have the great pleasure of announcing to you the delightful fact, that the Medical Society of the State of New York will be fully represented in the "Councils of a United Profession"—the House of Delegates of the American Medical Association—at its next meeting in Boston. And in this connection, may I not venture to predict that every member of the society will hereafter early and late be found laboring along all the lines of commendable effort to promote the advancement of the new order of things, and that no one will raise a willing hand against a completed consummation?

REPORT OF SECRETARY.

To the House of Delegates of the Medical Society of the State of New York:

In conformity with Chapter VI, Section 3, of the By-Laws, the Secretary begs leave to present the following report for the year 1905-06:

As Chairman of the Committee of Publication the Secretary edited the volume of Transactions of the Society, of which 850 copies were printed. The volume consists of 450 pages, containing two formal addresses and 41 papers presented at the last annual meeting, embellished with 54 illustrations, besides minutes of the meeting, Reports and Society lists. It cost for printing \$921. As directed by the By-Laws, 50 copies were sent to State Societies as exchanges, 50 to public libraries, 20 to medical journals, 100 were sold, 550 were sent to members and complimentary, and there remain 30 or 40 copies undisposed of.

As custodian of the accumulated series of Transactions the Secretary has placed the fullest possible files of these issues in all established

medical libraries in this State and many in libraries beyond our boundaries. There has been an appreciated demand for them in this direction and it has been considered wise to place them to the fullest extent, where they may be found for reference, which is their legitimate place. Complete files are in the State Library at Albany, the New York Academy of Medicine, the library of the Albany Medical College and of the Surgeon-General at Washington; nearly complete in the Cornell University Medical Library, that of the Kings County Medical Society, of the University of Buffalo, of Yale University, of the University of Pennsylvania, of the Grosvenor Public Library, Chicago, of the Syracuse University, of the Gloversville Public Library; and less complete at numerous other points in the State, including all available, or procurable by exchange, making points for permanent preservation and reference of this historic set of 100 volumes.

There remain in our possession, instead of accumulated thousands of volumes, filling a good sized loft, only about 100 volumes, including those of the current year. None are left of the series prior to the seventeen annual issues of which the present secretary has been the editor.

The whole number of volumes printed in these seventeen years has been 15,000, at a cost of \$18,500, or an average price of \$1.23 per volume. The first five editions were printed by William Dorman, of Philadelphia, the average cost per volume being \$1.25; the subsequent issues by Albany printers, at a cost of \$1.18 per volume. Prior to 1898, sixteen yearly editions were printed by the Society, in larger editions and less elaborately, at an average cost per volume of \$1.06. Until 1873 the Transactions were printed as a State document.

The secretary would further report that 118 permanent members were added to the Society in 1905, a considerably larger number than in any previous year of the Society. Originally a delegate body only, there were no permanent members until 1813; then for thirty years 2 were annually elected, and then a larger but still limited number, not exceeding 17 in the year, until 1886, when permanent membership became open to all who attained eligibility. The entire number of men who have attained permanent membership during the century of the Society is 1,281, of whom 566 have done so during the seventeen years of the present secretary's incumbency of office. Dr. John S. Orton, of Binghamton, who joined the Society in 1856, is the oldest now living, and to 1870 there are but 10 living, among them Drs. Stephen Smith, of New York; Bell, of Brooklyn; Freeman, of Albany; Bontecon, of Troy; Buckbee, of Fonda.

On December 9, 1905, Justice J. M. Davy, of the Supreme Court, sitting at a special term in the city of Rochester, signed the amalgamation order, which consolidated the Medical Society of the State of New York and The New York State Medical Association. A certified copy of this order has been filed with the Secretary of State

and another is filed in the possession of the secretary of this Society.

The first meeting of the House of Delegates was held December 14, 1905, in Albany. At this meeting there were present sixteen members. The business transacted has been reported in THE NEW YORK STATE JOURNAL OF MEDICINE, January issue; for further details I respectfully refer you to pages 1, 2 and 3 of the JOURNAL.

Since the day of amalgamation a large amount of correspondence has been carried on with the presidents and secretaries of County Medical Societies, with the view of carrying out the new Constitution and By-Laws, and with the view of securing from these County Societies corrected lists of their members, in addition to explaining many details which were not entirely clear to county officers. It is a pleasure to report that this correspondence has been conducted, on the part of all county officers, in a most courteous spirit, and that all men seemed imbued with the idea of making the reorganized State Medical Society a body in every sense worthy of the State.

Special meetings have been called throughout the State, and up to the present time the following counties have amended their By-Laws and sent the amended copies to the secretary, with the view of having them approved by the House of Delegates:

Chautauqua, Otsego, New York, Queens-Nassau, Onondaga, Kings, Monroe, Montgomery, Saratoga, Ulster, Broome.

Corrected lists of members have been received from the following counties:

Albany, Alleghany, Broome, Cattaraugus, Cayuga, Chautauqua, Chemung, Clinton, Columbia, Cortland, Dutchess, Erie, Greene, Jefferson, Kings, Lewis, Livingston, Madison, Monroe, Montgomery, Niagara, Onondaga, Orange, Oswego, Otsego, Queens-Nassau, Rensselaer, Rockland, St. Lawrence, Saratoga, Schoharie, Schuyler, Steuben, Suffolk, Tioga, Ulster, Washington, Wayne, Westchester, Yates, Franklin, Chenango.

The secretary's office has received valuable assistance from various committees, and all have cheerfully and promptly responded to suggestions in regard to changes made necessary by the new Constitution and By-Laws.

In the agreement, paragraph 1, it is provided that the business of the Society shall be carried on by an ad interim House of Delegates, until such time as the counties in affiliation with the State Society have had an opportunity to elect proper delegates, and to meet in annual session to transact the business of the Society. The agreement further provides that "Dr. Henry L. Elsner, Dr. A. Jacobi, Dr. A. Vander Veer, Dr. George Ryerson Fowler, Dr. Frank Van Fleet, Dr. E. Eliot Harris, Dr. Julius C. Bierwirth, Dr. Alexander Lambert, Dr. Parker Syms and Dr. Wisner R. Townsend, shall be deemed to be severally or collectively, in accordance with the purpose and intent of this agreement, ad interim the officers, the chairmen of standing committees, the House of Dele-

gates and the Council of the Society, with the power and authority conferred upon the officers, House of Delegates, Council and chairman of standing committees by said Constitution and By-Laws, and with the further power when sitting as the House of Delegates of appointing presidents of District Branches from among their own number, or from the membership of the Society at large; and from and after the date of the entry of an order consolidating the corporations, the said officers, House of Delegates, Council and chairmen of standing committees so constituted shall have and may exercise their respective powers and authority for the organization of the members of the consolidated corporation and the management of its affairs until the annual meeting of the Society, which will take place on the last Tuesday of January, 1905, and for such further time as their powers and authority may be extended and continued by the vote of a majority of the members present and voting at any general or special meeting of the Society after the consolidation; and provided further, that in determining the eligibility of members of the Society for office in the Society after the consolidation, the period during which such members shall have been members of the Association continuously at the date of the consolidation, shall be equivalent to membership in the Society for the same period."

The secretary, therefore, would recommend that the House of Delegates apply to the Society in accordance with the terms of the agreement for permission to act during the year 1906-07, or until such time as a new House of Delegates can be legally elected and their members qualified at an annual meeting; and in order to obtain this permission it is suggested that the Society be requested to pass the following resolution:

Resolved, That pursuant to Section 1 of the agreement executed by the Medical Society of the State of New York and The New York State Medical Association, and which agreement was made a part of the order of amalgamation heretofore entered on the 9th day of December, 1905, by Mr. Justice John M. Davy, a Justice of the Supreme Court, the ad interim officers, Chairmen of Standing Committees, House of Delegates and Council of the Medical Society of the State of New York, created by such order of consolidation, are hereby authorized, directed and empowered to continue to exercise the respective powers and authority for the organization of the members of the consolidated corporation and the management of its affairs pursuant to the Constitution and By-Laws of the Medical Society of the State of New York, until the annual meeting of the Medical Society of the State of New York, which shall take place on the last Tuesday of January, 1907."

The work of the Society is being systematized as rapidly as possible under the plan of organization, and when completed will be turned over to the control of the established organization at the earliest practical moment.

Respectfully submitted,

F. C. CURTIS.

REPORT OF COMMITTEE ON LEGISLATION

I herewith submit a brief synopsis of the medical legislation during the session of 1905.

The feature of this session was the introduction of the osteopathic bill by Senator Davis, of Buffalo, in the Senate. The bill was not introduced in the Assembly. Through the legislative committee, a strenuous and hard-fought campaign was made which resulted in its defeat in the Senate by the narrow margin of one vote.

A determined fight was made against the optometry bill, which, after a public hearing, was killed in the Assembly Committee.

In the Assembly 47 bills of special interest to the medical profession were introduced. Of these, 30 did not go out of committee; 5 were returned unapproved by mayors and 12 became laws. In the Senate, 26 medical bills were introduced; 19 remained in committee and 7 were signed by the Governor.

There were in all 73 medical bills introduced, of which number 19 were signed by the Governor and became laws. I enclose a list of some of the more important of these bills with the name of the introducer and the final disposition.

Eleven bills were introduced affecting water supplies, but only one passed—the one creating a State Water Supply Commission.

Ten local hospital bills were introduced and all passed.

Alcoholic hospital, A 2351, McManus. In Mayor's hands.

Alcoholics—treatment by Oppenheimer method, A 2352, Apgar. In committee.

Commitment of alcoholics, A 1986, Apgar. In committee.

Wood alcohol—adulteration of, A 926, Matthews. Chapter 100.

Wood alcohol—use of, A 925, Matthews. Chapter 122.

Wood alcohol—sale or use of, A 463, Matthews. In committee.

Wood alcohol—sale of, A 1474, Yale. In committee.

Adulterated liquors, A 2055, Sammon. In committee.

Adulterated drugs, A 681, Macharck. In committee.

Adulterated drugs, S 438, Grady. In committee.

Proprietary or patent medicines, A 1844, Platt. In committee.

HOSPITALS.

Establishment of hospitals for pulmonary tuberculosis, A 1940, Smith. In committee.

Public hospital in New York, A 2224, Hackett. With Mayor.

PUBLIC HEALTH.

Pure food, S 1285, Tully. In committee.

Pure milk, S 391, Ambler. In committee.

Pure cream, A 1518, Bedell. Chapter 602.

Violations of health laws, A 2218, Matthews. Chapter 443.

Crimes against public health, S 1156, Hill. Chapter 442.
 Protection of public health (local, Ithaca), A 887, Monroe. Killed by Mayor.
 New York City charter, A 1009, McManus. Chapter 532.
 Medical examiners, S 1136, Elsberg. In committee.
 Prohibit stables near hospitals, A 1369, Hasenflug. With Mayor.
 Regulation of bathing establishments, A 1211, Pendry. Chapter 454.
 Vaccination of school children, A 1317, Merritt. In committee.
 Vaccination of school children, A 1319, Merritt. In committee.
 Vaccination of school children, A 2321, Patton. In committee.
 Vaccination of school children, S 1492, Davis. In committee.
 Biological survey of potable waters, S 594, Armstrong. In committee.
 Board of health (local, Binghamton), A 2213, Allen. In committee.
 Health districts, S 852, Lewis, Chapter 232.
 Autopsies at Craig Colony, A 1946, Wadsworth. Chapter 458.
 Doctors as preferred creditors, A 89, Newton. In committee.
 Disclosure of professional information, S 1787, Brackett. Chapter 331.
 Exhibition of infants in incubators, S 409, Brackett. In committee.
 Kinesipathy bill, S 1428, Fitzgerald. In Senate.
 Osteopathy bill, S 1218, Davis. Killed.
 Optometry bill, A 856, Rosenstein. In committee.
 Prosecution of illegal practice, A 493, Maier. Chapter 455.
 Admission to medical examination, S 622, Cassidy. In committee.
 Mental science for physicians, S 626, McCarren. In committee.
 Mental science for nurses, S 627, McCarren. In committee.
 ARTHUR G. ROOT, M.D., Chairman.
 218 State street, Albany.

REPORT OF TREASURER.

RECEIPTS.

Balance on hand, as shown by treasurer's report, January 31, 1905.....	\$2,707.52
Received from County Societies, permanent members, as annual dues, and from Transactions of the Society....	3,157.80
Refund by Committee of Arrangements.	13.80
Interest on deposit in National Exchange Bank	1.88
Interest on deposit in Albany Savings Bank	95.20
Total receipts	\$5,976.20

DISBURSEMENTS.

Expense account from January 31, 1905, to January 30, 1906:

S. H. Wentworth, printing and material.	\$155.96
Committee on Legislation, expenses....	826.27
Messenger service, annual meeting....	24.00
Legal services, Conference Committee..	150.00
Mary E. Stonehouse, clerical work....	98.25
Business Committee, annual meeting... ..	35.80
Committee of Arrangements, annual meeting	72.00
F. C. Curtis, office expenses.....	81.85
E. F. Smith, stenographer.....	75.00
National Exchange Bank for protested check	6.50
Medical Directory for treasurer's office.	2.00
O. D. Ball, expenses of office.....	15.00
Reynolds, Stanchfield & Collins, attorneys	265.85
National Express Company.....	82.91
Brandow Printing Company.....	920.95
S. H. Wentworth, printing.....	6.25
American District Telegraph Company.	19.55
Jeremiah Chase, boxing and shipping Transactions	25.36
J. E. Pladwell, State accountant.....	5.00
Overpaid dues	10.00
F. C. Curtis, salary and expenses of office	380.00
O. D. Ball, salary.....	150.00

Total disbursements	\$3,408.50
=====	
Total receipts	\$5,976.20
Total disbursements	3,408.50

Balance in hands of Dr. Ball, treasurer.	\$2,567.70
=====	
Balance in hands of Dr. Lambert, acting assistant treasurer	\$1,831.55
Balance in hands of Dr. Ball.....	2,567.70

Balance in treasury.....\$4,399.25
 Respectfully submitted,
 O. D. BALL, Treasurer.
 Audited and found correct.
 ALEXANDER LAMBERT, Chairman,
 HENRY L. ELSNER,
 LEO. H. NEUMAN,
 Committee on Audit and Authorization of Expenses.

STATEMENT OF THE MERRITT H. CASH PRIZE FUND.

There stands to the credit of the above fund in the Albany Savings Bank, 1, 1906	\$720.47
Interest accumulated from July 1, 1905, to January 1, 1906.....	12.60
Total	\$733.07

The income from the above fund, which was set aside by Merritt H. Cash, is to be used as a prize to stimulate the preparation and reading of papers

of merit at meetings of the Medical Society of the State of New York on medical subjects.

Audited and found correct.

Respectfully submitted,
O. D. BALL, Treasurer.
ALEXANDER LAMBERT, Chairman,
HENRY L. ELSNER,
LEO. H. NEUMAN,

Committee on Audit and Authorization of Expenses.

REPORT OF THE COMMITTEE ON PUBLIC HEALTH.

Mr. President and Members of the House of Delegates of the Medical Society of the State of New York:

One hundred years of organized effort on the part of the physicians of the State to better the condition of the public health have been productive of great good. It will be the pleasant duty of others to record the achievements of sanitary science during the century whose close we celebrate to-day. It remains the duty of your Committee on Public Health to indicate the desirable things which have not been accomplished, and to emphasize anew our opportunities and our responsibilities.

In times of emergencies and in the presence of imminent danger the people and their rulers listen eagerly to the conclusions of scientists and willingly follow their gratuitous advice. When the period of storms and stress is passed, and only the ordinary dangers of life are encountered, and those which by familiarity are no longer dramatic, physicians raise the warning voice, utter admonitions and give counsel to few who hear and to fewer who heed. To contemplate what we have failed to accomplish at this century's end is humiliating, for it is due to no lack of knowledge, but is solely due to our inability to secure the cooperation of those who govern the people and who control the expenditure of public moneys. Physicians are not political factors that must be reckoned with. To your committee it seems that there are two primary factors that account for our failure to attain the ends we know are right; first, the indifference of the people living under the ordinary conditions of life, and, secondly, the relative inefficiency of those officers of the Department of Public Health throughout the State to whom we must look for the execution of health laws. Neither of these propositions need elaboration or exemplification before a body like this. But they permit the renewing of recommendations previously made by this Society and by many other similar organizations. Though the desirability of having a Secretary of Public Health to the National Government has long been recognized and advocated by the united profession of medicine in the United States, the governing bodies in Washington have never seriously considered the proposition. Your committee ventures once more to recommend this subject to the serious consideration of the Senators and Con-

gressmen from New York State, and to ask if, after mature study of existing conditions in our own native country, and in those semi-tropical territories recently acquired, it is found that it would materially benefit the people of these States and Territories governed to have the National Health Department headed by a Secretary of Public Health, that an act to accomplish this be framed and presented to Congress and to the Senate, and that they use every effort to secure its passage.

The annual conference of the State health officers at Albany is an admirable summer school of three days' duration, in which every man can receive valuable information if he attends. But, however valuable the papers and how eminent soever are the instructors, and though every one of the State medical officers attend, the educative period is so brief that men of the highest general attainment in medicine could not become masters of the technical knowledge absolutely necessary to him who would realize in himself the highest possibilities of modern sanitary science. Attention has been called in at least two reports of this committee to the system inaugurated in England in 1866, and which has worked to the great advantage of the British Empire, by which only those who have pursued especial courses in Sanitary Science, and who have received the additional degree of "Doctor of Public Health," could be selected as physicians to local boards of health. In this day of specializing in medical and surgical practice it should excite universal comment that there is little evidence of a tendency among younger practitioners to make State medicine a specialty. No other field is so rich in possibilities of doing valuable service. If this field is not attractive because it does not offer a sufficient pecuniary reward to amply sustain an ambitious young man, we have ourselves to blame. The value of the services rendered by an intelligent physician of the first class to the public is capable of recognition by the public, and it will be so recognized in the near future. We urge once more that the Regents of the University of the State of New York investigate this subject and make such provisions as are necessary for the inauguration of supplementary courses in public health, at the completion of which the physician shall receive the degree of D.P.H., and that the laws of the State be so amended that the attainment of that degree shall be a necessary qualification for every physician who would qualify for the position of physician to a board of health or as health officer to any city or village in our State.

It is felt by your committee that the interests of the people of the State would be better served if there were a single Board of Medical Examiners, instead of three as at present. The interests of higher special education are not best served by a triple board. The State has decreed that the attainments of every candidate for a license to practice medicine shall be the same and identical

save in one subject, therapeutics. The same questions in the fundamental sciences of medicine are propounded to every student, whatever system of therapeutics he may elect to practice. The questions should be formulated by a single board and should be examined by a single board, thus securing an uniformity of attainment in the fundamental and most necessary sciences on which the practice of medicine is based. This could be attained by a law creating a single board giving equable representation to the schools of therapeutics recognized by the State, and your committee recommends that such a law be framed by the Committee on Legislation, after consultation with the similar committees of the other State Medical Societies, and be presented to the State legislative bodies.

In reviewing the conditions prevalent during the past year there are several subjects which your committee thinks it advisable to notice.

The medical inspection of schools has made substantial progress in the past year, but has not yet attained the recognition which it deserves. Politicians, like lawyers, follow precedent. Unfortunately Boston, which was once known as a "city of light," the "hub of the universe," has established a system of school inspection which is apparently satisfactory to its rulers, by which a certain number of medical men, selected by politicians, serve the city as school inspectors for two hundred dollars a year, one dollar a day for each day of a school year of forty weeks. This precedent is made the basis of the system inaugurated in some cities in our State. Your committee recommends you to study the methods inaugurated in our own State in the City of New York, and it commends its Health Officer, Dr. Thomas Darlington, and his chief inspector, Dr. Cronin, for their efficient work in improving this branch of the service. There is no way by which the cooperation of the public can be so easily secured for all the demands of public health as by medical school inspection carried out with thoroughness and accuracy. It secures the interest of the teacher, the pupils—the voters of to-morrow—and of their parents. Only next in importance to school inspection is the inspection of factories and public buildings. This will certainly follow as a necessary corollary of school inspection after that has become thoroughly established. By such inspection factories and assembling places will be made to conform to known laws concerning ventilation, and the faint signs of serious disease in workmen will be detected, as well as the manifestations of infectious diseases.

Your committee desires to call your attention to the recent successful efforts to awaken popular interest in the prevention of unnecessary blindness. "The New York Association for Promoting the Interest of the Blind," of which Dr. Lyman Abbott is president, is about to bring before the Legislature a bill for improving the condition of the blind. The prevention of blindness is no new subject of discussion before medi-

cal societies, but the present opportunity for securing the cooperation of influential laymen is so unusual that your committee request your unanimous consent to the presentation of this subject in a brief paper by Dr. F. Park Lewis, president of the State School for the Blind.

Tuberculosis.—It is gratifying to note that an ever increasing intelligent interest is taken in the cure and prevention of the "great white plague." The State Sanatorium has done admirable service, not only in returning to health and active employment a large number of men and women, but in disseminating by its returned patients an accurate knowledge of the means for limiting the spread of this disease and the best methods of promoting a cure. In very many communities the erection of local sanatoria is under discussion, and in some places hospitals for special treatment have been erected. In some instances objections have been raised by local boards of supervisors and by property owners, because it has been feared that the establishment of a local sanatorium for tuberculosis would propagate the disease among the community in which the hospital was placed. This is a legitimate fear, and must be met by facts. So far as your committee can ascertain there has never been an instance in which a local sanatorium has been a focus for the distribution of the disease. On the contrary, in many places where accurate records are available, the opposite condition has been observed. Fewer cases have arisen outside the sanatorium than usual in the immediate vicinity, because of the object lesson to the people of the methods of modern science in limiting and overcoming the disease. In communities where hospitals for consumptives have long been established it has been observed that the general health of the people has improved, because of their greater attention to sanitary living taught them by the methods in vogue at the hospital. Greater attention has been paid to the tuberculous inmates of charitable, corrective and penal institutions of the State, and valuable data have accumulated from some institutions of this class. However, that all that could be accomplished is not yet realized, can be gathered from the report of the "Eighth International Prison Congress, 1905." In that report it is recommended by one of your committee, Dr. Ransom, that a mandatory examination law should be passed making it obligatory upon every physician of a public institution to examine every person admitted with special reference to the detection of tuberculosis, and to make examinations of all inmates for the same purpose at stated intervals. Your committee endorses this recommendation most heartily.

It is a matter of surprise to us that the State Hospital for Incipient Tuberculosis has not already outgrown its present quarters. It is explicable only on the theory that counties and cities are shortsighted and do not see the economical value of returning a citizen to work, rather than support him and his family until he dies. In

some instances that have come to our knowledge it has been impossible to persuade the superintendent of the poor to support a patient at Ray Brook for the average period of cure. The education of the people has been greatly forwarded by the "Tuberculosis Exhibitions" with their lectures, which have been held in several large cities. Your committee recommends that other cities than those of the first class endeavor to give such exhibitions. During the past year several cities have established free clinics for ambulatory consumptives, and much good has already been accomplished by this charity. That these charities and all public institutions for the care of the tuberculous poor must be kept free from political influences derogatory to their true development is signally emphasized by the dismissal of that pioneer in the study of tuberculosis, Dr. Vincent Y. Bowditch, from his position at the head of the Rutland Sanatorium, in Massachusetts. His dismissal was unanimously condemned by the physicians of his State, and we heartily applaud their action.

The increase in the deaths from *pneumonia* is considered to be due to the unhygienic methods of life of the great body of workers in our State. In this connection your committee desires to emphasize the necessity of unremitting vigilance in the efforts to improve the condition of tenements and in securing laws that will guard the poor against fraud in foods, especially in that class of foods most used by them and known as "canned goods." It is not necessary to say to this body of men that everything that reduces bodily energy robs a man of that physical resistance which he must have to combat successfully that deadly disease, pneumonia.

As long as human carelessness and ignorance exist so long will we have those unnecessary slayers of mankind, typhoid fever, scarlet fever, diphtheria and smallpox, represented by their hundreds and thousands of victims annually. Our knowledge of how to eliminate them can probably not be perfected, but until an enlightened State shall give the people trained officers of public health, and shall execute righteously wise laws for their control, the endless procession of the young and the strong will go on to death.

Respectfully submitted,

JNO. W. HEFFRON,
H. R. HOPKINS,
H. O. WEY.

THE PREVENTION OF UNNECESSARY BLINDNESS.

BY F. PARK LEWIS, M.D.,
Buffalo, N. Y.

IT is very generally known to all physicians that many human eyes are needlessly lost. It is not so commonly realized, however, that among those who are blind nearly 40 per cent. need never have been so, if right preventive and corrective measures had been taken.

Carefully tabulated foreign and American

statistics, including those of such men as Cohn, Magnus, Hirschberg, Harket, Derby and others, agree that the proportion of eyes that have been lost, that should have been saved, is enormous.

From the figures of eight authoritative observers, the percentage of absolutely unavoidable cases of blindness was put at 27.89 per cent., those that might *possibly* have been avoided at 38.75 per cent., while the certainly avoidable cases were 33.35 per cent. of the whole.

Concerning these figures Hays, in Norris's and Oliver's "System of Diseases of the Eye," than which we have no more trustworthy authority, says: "If it be admitted that blindness could have been avoided in one-third of the cases in which avoidability was regarded as uncertain—and this is certainly a conservative estimate—then blindness could have been prevented in 46.27 per cent. of the whole number of cases tabulated by the above observers." If, then, we moderately say, that 4/10 of the existing blindness is unnecessary the time has surely come when organized effort should be made to prevent some portion of it.

Through a peculiar combination of circumstances the present seems to be the precise time at which such effort should be begun. To make a movement of this character successful it is essential that the professional and lay interests work together.

The people are already actively at work. A society under distinguished auspices has already been formed in New York, and a public meeting to "Promote the Interests of the Blind—and to aid in preventing unnecessary blindness" will be held at the Waldorf-Astoria in March. At this meeting Samuel L. Clemens (Mark Twain) will preside, and an address will be made by Hon. Joseph Choate. Measures will then be taken for propaganda and intelligent work will be inaugurated on these lines.

To make this work effective the cordial and enthusiastic cooperation of the medical profession is imperative—but before this can be efficiently carried out what is meant by unnecessary blindness and what preventive measures might be successfully undertaken, must be understood.

It is not to be presumed that all of the unnecessary blindness—nor indeed of other unnecessary evils—can be blotted out of the world, for ignorance and negligence and indifference will continue to flourish, but if the 40 per cent. could be reduced one-quarter, as it would be if one single leading controllable and curable condition, *ophthalmia neonatorum*, were practically abolished—and it can be abolished—of the 6,000 blind people in the State of New York, 600 would have useful eyes. Those conditions that have needlessly resulted in blindness can be broadly placed in six classes.

First and greatest is *ophthalmia neonatorum*. This is, as we all know, a germ disease in which the adoption of the use of Crede's method of using silver nitrate in the eyes is an almost absolute preventive of blennorrhœa—and in the small

proportion of cases in which the disease does appear, a similar treatment judiciously carried out, is so nearly specific as to make a cure in every case seen sufficiently early, all but assured, and yet there are in the State of New York many maternity and other hospitals in which preventive measures are not yet employed in a routine way. There are hundreds of capable and reputable physicians who never think of using it—while the vast army of midwives are as slipshod in their methods as they ever have been.

It is true that legislative efforts have been made by eleven States to make midwives responsible for cases occurring under their ministrations, and there is no doubt that ophthalmia has been lessened thereby, but if blindness from this cause is to be wiped out, more radical measures must be undertaken. Infantile ophthalmia should be listed by the health officers as a reportable infectious disease, and a case of blindness resulting therefrom should require an explanation. Its dangers should be more fully and more frequently explained, efforts should be made to have preventive measures more generally observed and accurate records of final results should be exacted from every public institution dealing with this disease.

The second chief cause, traumatism, enormously swells the list. That means the toy pistol, concerning which the splendid work already done by the medical profession merely shows its possibilities of cooperative endeavor; it means the air-gun, the man at the emery wheel, the molder, the mason, the carpenter, the boilermaker and other workmen; it means the child who is allowed to play with scissors and other sharp-pointed instruments. If the workmen were suitably protected, if the mother had timely warning of the dangers to her child's eyes, if the toy pistol and cannon and dynamite explosive used for celebrations were absolutely prohibited, numberless accidents resulting in blindness wholly due to carelessness would be avoided.

A third cause of much unnecessary blindness is the indifference born of ignorance on the part of those seeking help in public dispensaries as to the serious character of the disease with which they are afflicted. A patient with beginning acute glaucoma, or sympathetic ophthalmia, or other condition immediately jeopardizing the sight, after a single visit at which operative interference is advised, disappears from view, only to reappear when the time has passed in which surgical help can avail. This condition has been already met in Boston. A tactful visitor specially appointed for the purpose seeks out the patient who fails to appear at the appointed time, and whose name, given by the dispensary clerk, has been indicated by the attending surgeon. It may be a case of hypopion keratitis or corneal ulcer. The necessity of immediate treatment is urged, and eyes that would otherwise be lost are thereby saved.

A fourth and an exceedingly common cause of blindness is the use on the part of the public

of advertised or domestic nostrums for defects of the eyes. A woman, in the experience of the writer, bathed her eyes in urine, when she merely required correct refraction. Suppurative keratitis ensued, and when she finally presented herself for help, both eyes were hopelessly destroyed. The use of even harmless ointments and salves prevents the patient with glaucoma or iritis from seeking aid while it yet might avail, and eyes are lost that correct treatment could have saved.

A fifth cause is improper hygiene and sanitation—in corneal troubles in children, a condition often dependent more on a lack of knowledge of the parents as to what to do than from an inability to do it. In such cases the corneal scars, even if they do not blind the eyes, limit the future usefulness of the patient, and every effort should be made to prevent their development. The dispensary visitor is here a valuable assistant in seeing that measures prescribed are faithfully carried out.

The sixth cause is the failure to give immediate and intelligent care to ophthalmic injuries and infections. The writer has seen suppurative keratitis with the loss of the eye follow the extraction from the cornea of a foreign body that had merely broken through the epithelium.

These are but a few of the many ways in which eyes are needlessly lost. But, is the natural inquiry, can measures be taken that will lessen this prodigal waste of human eyes? Most certainly there can.

Ophthalmia neonatorum as a cause of blindness should be practically wiped out of civilized countries. The only thing necessary to accomplish this is organized and cooperated effort. The medical profession undertook and succeeded in an infinitely greater task in the fight against tuberculosis. In this we have an insidious disease in which its infectious nature is not easily demonstrated, which is slow in development, and in which recovery under proper conditions takes months. In infantile ophthalmia we have a local and visible focus of disease—obviously infectious—in which the results of right preventive or curative measures are almost immediately apparent. It is necessary only that the correct thing shall be done at the right time. Will the medical profession, backed by an enlightened public sentiment, say that it cannot be done? I do not believe it. It is for us only to act.

A committee should be appointed by this Society and invested with authority to investigate the whole subject of the "Prevention of Unnecessary Blindness," to suggest such measures of relief and to take such action as shall make those measures effective.

Similar committees should be appointed from every State Association in the Union to carry on a like work. If the work should be undertaken under the auspices of the American Medical Association there should be no difficulty in making such crusade against unnecessary blindness as would parallel in its helpfulness to mankind that

so successfully waged against tuberculosis. It would result in an immediate reduction in the annual abnormal waste of human eyes. It is right and fitting that such a movement by the profession—and for humanity—should begin at this centennial meeting of the State Society, and should the movement, as it may be, become general and national, it would indeed fittingly crown this as the jubilee meeting.

REPORT OF THE COMMITTEE TO SELECT COUNSEL TO DEFEND SUITS FOR ALLEGED MALPRACTICE.

The committee beg leave to report that Mr. James Taylor Lewis has been selected as counsel and recommend that the defense be carried out on the following lines:

Every member of the Medical Society of the State of New York who has paid all dues, assessments or other charges assessed or levied by the Medical Society of the State of New York for the year 1906, shall be entitled to receive, without expense, upon application therefor, the services of an attorney and counselor at law in any action for malpractice brought against such member in any court within the State of New York, on the following conditions, and not otherwise:

First.—Any member desiring to apply for malpractice defense hereby provided, shall immediately upon receipt thereof send to the secretary of the Medical Society of the State of New York any letter, process of court or other evidence of threatened litigation in connection with such malpractice case.

Second.—It shall be the duty of the secretary to forthwith examine the financial records of the Medical Society of the State of New York, and if such member so applying is found to have paid all arrears, dues or other charges due the Medical Society of the State of New York for the year 1906, he shall certify those facts to the counsel of the Medical Society of the State of New York and forthwith send to such counsel the papers received from the applicant for defense, and such secretary shall forthwith return to the applicant, if he shall find that such applicant has paid all arrears due the Medical Society of the State of New York, a formal application for defense containing authority for the said Society through its attorney to defend the action and granting to the Society and its attorney sole power to conduct the defense thereof, and agreeing not to compromise or settle said claim for damages for said alleged malpractice without the consent of the Medical Society or its attorney. The said applicant shall furnish and return to the secretary with his application duly executed, a full, accurate and complete history of his treatment of the case of which the alleged malpractice arose, giving dates, names of witnesses, nurses and other attendants, all of which information shall, upon its receipt by him, be forwarded by the secretary of the Medical Society of the State of New York to the counsel of the Society.

Third.—If, on the other hand, the secretary finds that any member so applying has not paid all arrearages as herein specified, then, and in that case, he shall return at once to the applicant all papers or memoranda received by him from said applicant, together with a statement that he is not entitled to defense, and the reason therefor.

Fourth.—It is further understood between each and every member of the Medical Society of the State of New York and the Medical Society of the State of New York that under no conditions or contingency will the Medical Society of the State of New York pay any sums awarded in settlement, compromise, or by verdict or otherwise against any member sued for alleged malpractice, and each member in applying for the services of the attorney of the Society in any malpractice case, shall agree not to obligate in any manner the Medical Society of the State of New York or any persons connected therewith, to the payment of any sums whatsoever for any purpose.

JOSEPH D. BRYANT,
WISNER R. TOWNSEND.

REPORT OF COMMITTEE ON SCIENTIFIC WORK.

Tuesday Morning, 9.30 o'Clock.

Opening Prayer.
President's Inaugural Address.
Report of Committee of Conference.
Executive business.

PAPERS.

"The Art and Science of Fitting Glasses," A. E. Davis.

"The Immediate and Early Treatment of Ocular Injuries," Alvin A. Hubbell.

"Typhoid Fever," Luzerne Coville.

"Rapid Method of Detection of Blood in Feces," A. L. Benedict.

"Economy in Hospital Management," John A. Wyeth.

"Toxic Arthritis," Henry A. Fairbairn.

Tuesday Afternoon, 3 o'Clock.

CENTENNIAL EXERCISES, ODD FELLOWS' HALL.

Oration on Medicine, Dr. S. B. Ward.

Oration on Sanitation, Dr. H. M. Biggs.

Address, Dr. W. Osler.

Tuesday Evening, 8 o'Clock.

CENTENNIAL EXERCISES.

In Emmanuel Baptist Church on State Street.
Address, Dr. Joseph D. Bryant, President of the Society.

Address, Hon. Charles H. Gaus, Mayor of Albany.

Address, Hon. Frank W. Higgins, Governor State of New York.

Address, Hon. St. Clair McKelway.

Address, Hon. Grover Cleveland.

Wednesday Morning, 9.30 o'Clock.

PAPERS.

"Report of a Case," J. F. Whitbeck.

"Arterio Sclerosis," J. M. Van Cott.

"A Point in the Technique of Breast Amputations for Cancer," R. F. Weir.

"Induction of Hyperleucocytosis in Infection," W. G. Macdonald.

"Notes on Factors Which Further Convalescence Following Abdominal Section," Frederick Holme Wiggin.

"A Study of Results of Sanatorium Treatment of Pulmonary Tuberculosis," J. H. Pryor.

"A Contribution to the Etiology of Uterine Fibro-Myomata," George McNaughton.

Wednesday Afternoon, 3 o'Clock.

In Emmanuel Baptist Church on State Street.
Oration on Surgery, Dr. Roswell Park.

ADDRESSES:

Dr. W. W. Keen, Dr. Nicholas Senn, Dr. W. H. Welch.

Wednesday Evening, 7 o'Clock.

ANNUAL DINNER AT ODD FELLOWS' HALL.

Thursday Morning, 9.30 o'Clock.

PAPERS.

"Technic of Vaginal Section in Pelvic Diseases of Women," J. Riddle Goffe.

"Ex-Ophthalmic Goitre," W. Gilman Thompson.

"The Rôle of the Medical Society of the State of New York Concerning Medical Education," William Warren Potter.

"The Clinical Limitations of Eliminative Treatment," Allen A. Jones.

"Somatic Evidences of Syphilis in Paretics," James McF. Winfield.

"The Falsity of the Oath as at Present Administered," William Browning.

L. H. NEUMAN, M.D., Chairman.

REPORT OF THE COMMITTEE ON CENTENNIAL CELEBRATION.

The committee, as originally appointed, consisted of Dr. D. B. St. John Roosa, Chairman; Dr. A. Jacobi, Dr. A. Vander Veer, Dr. Daniel Lewis, Dr. Geo. R. Fowler, Dr. Willis G. Macdonald, Dr. Chas. Stover, Dr. Henry L. Elsner, Dr. Hamilton D. Wey, Dr. William S. Ely, and Dr. W. W. Potter.

The first meeting was held in Albany on May 2, 1905.

On motion, Dr. A. Jacobi was made permanent chairman, and Dr. G. R. Fowler permanent secretary.

The following business was transacted: Upon motion of the president of the Society was notified of a vacancy on the committee caused by the resignation of Dr. Roosa, and requested to fill the vacancy.

Provision was made for addresses at the centennial meeting, and for the publication of a centennial souvenir volume. Upon motion it was voted that the State authorities be invited to par-

ticipate in the centennial exercises to be held during the approaching annual meeting.

The second meeting of the committee was held in Albany on May 2, 1905.

The name of Dr. E. D. Fisher was presented as a member of the committee appointed by the president in place of Dr. Roosa, resigned.

Upon motion it was voted to invite Dr. Herman Biggs to deliver the address on Sanitary Science; Dr. Roswell Park the address on Surgery, and Dr. S. B. Ward the address on Internal Medicine.

It was voted that the places to be selected for the meetings, and other local matters be referred to a sub-committee composed of the members of the committee residing in Albany, and that the secretary of the Medical Society of the State of New York should be associated with this local committee.

Upon motion it was voted that the matter of the selection of lay speakers be left to the sub-committee acting in conjunction with the president of the Society and the Chairman of the Centennial Committee. Authority was given to the local sub-committee to have a suitable memorial prepared.

The third meeting of the committee was held at Albany, November 24, 1905.

Dr. Ball, the treasurer of the Society; Dr. Curtis, the secretary of the Society, and Dr. Nellis, the chairman of the Committee on Arrangements, were present by invitation.

Reports were received from the local sub-committee relative to the time and place of the meetings at which addresses to the public were to be delivered. Upon request, Dr. Nellis, the chairman of the Committee on Arrangements, reported on the subject of banquet and the entertainment of invited guests.

Upon motion, all matters relating to the publication of the centennial souvenir volume were placed in the hands of a sub-committee, consisting of the chairman and secretary of the Centennial Committee, president and secretary and treasurer of the Society.

Finally, the committee begs to report that it has completed the details and arranged a program for the centennial exercises in connection with the 100th annual meeting of the Medical Society of the State of New York.

Respectfully submitted,
A. JACOBI, Chairman,
A. VANDER VEER,
DANIEL LEWIS,
WILLIS G. MACDONALD,
CHAS. STOVER,
HENRY L. ELSNER,
HAMILTON D. WEY,
WILLIAM S. ELY,
WILLIAM WARREN POTTER,
EDWARD D. FISHER,
GEO. RYERSON FOWLER, Secretary.

ANNUAL REPORT OF THE STATE BOARD OF MEDICAL EXAMINERS.

Representing the Medical Society of the State of New York.

To the Members of the Medical Society of the State of New York:

Gentlemen—Herewith is presented the annual report of the State Board of Medical Examiners representing the Medical Society of the State of New York:

Total number of candidates examined for license since the establishment of the Boards:

		Passed.	Rejected.	P. Ct.
State	8,469	6,781	1,688	19.9
Homeopathic	653	564	89	13.6
Eclectic	271	188	83	30.6
	<u>9,393</u>	<u>7,533</u>	<u>1,860</u>	<u>19.8</u>

Total number of candidates examined from July 31, 1904, to August 1, 1905, appearing for full license:

		Passed.	Rejected.	P. Ct.
State	421	331	90	21.3
Homeopathic	24	22	2	8.3
Eclectic	17	9	8	47.0

Primary Medical Examinations (anatomy, physiology and hygiene and chemistry):

		Passed.	Rejected.	P. Ct.
State	354	338	16	4.5
Homeopathic	19	19	0	0.0
Eclectic	12	12	0	0.0

Final examinations (candidates who had previously passed their primary tests and appeared in 1905 before the Board for examination in surgery, obstetrics, pathology and diagnosis, therapeutics, practice and materia medica):

		Passed.	Rejected.	P. Ct.
State	318	313	5	1.6
Homeopathic	23	23	0	0.0
Eclectic	7	7	0	0.0

Honor men for the year:

State	14
Homeopathic	2
Eclectic	0

The rejections per topic for the year were as follows:

Anatomy	47
Physiology and hygiene	50
Chemistry	42
Surgery	28
Obstetrics	48
Pathology and diagnosis	28
Therapeutics, practice and materia medica	33
Average rejections per topic	39.4

The total number of candidates for license, including those who took the full examination and those who took the final examinations, was 810, against 778 last year, 756 in 1903, and 685 in 1902.

The total number of examined candidates who appeared before the three boards was 1,195.

RECIPROCITY.

The first practical step in reciprocity has been consummated and since January 1, 1906, New York and New Jersey are reciprocating in the matter of the endorsement of State medical licenses. Arrangements to this effect were perfected after a number of meetings between representatives of the Educational and Medical Departments of both States, and the details of such arrangement are recorded in a report recently issued by the New York State Department of Education, entitled "Reciprocity in Medical Licensure." Applications have been received from the State Board officials in relation to reciprocity in medical licensure, from the following States: Minnesota, Vermont, Indiana, Illinois, Ohio, Michigan and from the District of Columbia. All of these communications are being given consideration, and if the conditions warrant, reciprocity will obtain; however, existing standards in New York State will have to be met to insure such a consummation.

THE SEVEN-YEAR COURSE.

As stated in the last annual report of this Board to the State Society, a systematically arranged minimum course to meet the requirements of the law regarding a combined seven-year course in arts and in medicine, must be constructed. This work is now being done under the auspices of a committee consisting of the deans of three of the leading medical schools of the State, two presidents of academic colleges and two representatives of the New York State Education Department. It is stated that their conclusions will be announced before April 1, 1906, whereupon this feature of the law can be given practical effect. The course of study agreed upon by this committee will doubtless serve as a criterion for those who have been in doubt as to this much-mooted question.

EQUALIZATION IN EXAMINATIONS.

Complete returns as to the question of equalization in examination requirements as between the so-called primary branches (anatomy, physiology and hygiene and chemistry) and the practical branches, are not yet at hand. As soon as these data are in evidence, the result will be given to the State Boards of Medical Examiners who in turn will report the same to their respective parent bodies with such recommendations as the conditions warrant.

The Board desires to add to this report an expression of deepest regret at the tragic death of Mr. James Russell Parsons, Jr., in the City of Mexico on December 5, 1905, a gentleman through whose earnest and energetic efforts the laws relating to medical practice were largely interpreted and administered. Mr. Parsons was a man of superior ability, an indefatigable worker, a righteous servant of the people, and a gentleman of refinement and culture. He endeared himself to all with whom he came in con-

tact, and his death is a calamity to the State and to the nation.

At the first session of the annual meeting of the Board held January 29, 1906, the following officers were elected for the ensuing year:

President—William Warren Potter, M.D.

Secretary—Maurice J. Lewi, M.D.

Members of the Question Committee:

George Ryerson Fowler, M.D.

Maurice J. Lewi, M.D.

Those interested in the detailed operations of the work of this Board will find full data regarding the same in the annual report of the Commissioner of Education, a copy of which may be had on application to the secretary of this Board.

By order of the Board.

WILLIAM WARREN POTTER, M.D.,
President.

WILLIAM S. ELY, M.D.,

A. WALTER SUITER, M.D.

GEORGE RYERSON FOWLER, M.D.

JOSEPH P. CREVELING, M.D.

EUGENE BEACH, M.D.

MAURICE J. LEWI, M.D., Secretary.

January 30, 1906, Albany, N. Y.

REPORT OF COMMITTEE OF CONFERENCE.

To the Medical Society of the State of New York:

Your Committee of Conference in making this, its fourth and last report, begs leave to call your attention to the following:

The object for which the Committee of Conference was appointed at the annual meeting in January, 1902, has been accomplished.

The unification of the regular profession of this State in the Medical Society of the State of New York with representation in the American Medical Association has become a fact.

The individual members of county medical societies in affiliation with the State Society by virtue of such membership, now enjoy all of the advantages of membership in this State body; thus our society becomes at once the most powerful State medical organization in the United States.

It is unnecessary at this time to rehearse the sequence of events which have led to this happy result. The three preceding reports of the Committee of Conference, all published in the Transactions of the Medical Society of the State of New York during the years 1903, 1904 and 1905, give these in detail.

Your committee in its last report, after considering the legal obstacles with which the Joint Committee of Conference were confronted, suggested, on advice of counsel, in order to make the title of this body clear, without flaw or question, that at both the annual meeting held in Albany on the 31st day of January, 1905, and at a special meeting which was called in the same city on Thursday, February 2, 1905, in accordance with the Constitution and By-Laws, this

Society approve and adopt the proposed agreement of the Joint Committee of Conference.

Your committee recommended at these meetings that the resolution adopted at the preceding annual meeting, subscribing to the agreement and adopting the Constitution and By-Laws as printed in the Transactions of this Society for 1904 be rescinded, and that following this action at both these meetings the Society again subscribe to the agreement and readopt the Constitution and By-Laws contained in the report of your Committee of Conference at the annual meeting of the Society in 1904, and published in full in the Transactions of the Medical Society of the State of New York for the same year.

It was suggested by the Committee of Conference in its last report that as soon as The New York State Medical Association shall have taken similar action, the Medical Society of the State of New York, through its committee, shall be reorganized in accordance with the agreement, Constitution and By-Laws unanimously adopted at the annual meeting in 1904.

On the receipt of the report of this committee, for the purpose of conforming to legal requirements, it was moved and carried that the following resolution adopted at the annual meeting in 1904 be rescinded:

Resolved, That the report of the Joint Committee of Conference be accepted, and that the proposed agreement for the consolidation of the Medical Society of the State of New York and The New York State Medical Association, be and the same is hereby approved, and the president of the Society is hereby authorized and directed to execute the same in the name and behalf of the Society, and the Secretary is hereby authorized and directed to affix the corporate seal thereto."

The following was then unanimously adopted:

Resolved, That the report of the Joint Committee of Conference be accepted, and that the proposed agreement (including the Constitution and By-Laws), for the consolidation of the Medical Society of the State of New York and The New York State Medical Association, a copy of which appeared in the Transactions of the Medical Society of the State of New York for 1904, page 22, and is also appended to the report of the Committee of Conference, and made a part of such report, made on the 31st day of January, 1905, to this Society, be and the same is hereby approved, and the president of the Society is hereby authorized and directed to execute the same in the name and behalf of the Society, and the secretary is hereby authorized and directed to affix the corporate seal thereunto; and be it further

Resolved, That the Committee of the Society heretofore appointed for the purpose of bringing about the consolidation, namely, Drs. Henry L. Elsner, Abraham Jacobi, Albert VanderVeer, George Ryerson Fowler and Frank Van Fleet, be and they are hereby continued as such commit-

tee, with full power and authority to do whatever may be necessary to carry the agreement into effect.

At the special meeting of the Medical Society of the State of New York, held in the city of Albany, February 2, 1905, the Chairman of the Committee of Conference presented the report of that committee with the agreement which was presented at the annual meeting on the morning of January 31, 1905, which report was unanimously accepted. Whereupon, by unanimous vote, a resolution was adopted accepting the report of the Joint Committee of Conference and the proposed agreement for the consolidation of the Medical Society of the State of New York and The New York State Medical Association, including the Constitution and By-Laws, and the president of the Society was authorized and directed by such resolution to execute the same in the name and behalf of the Society, and the secretary was authorized and directed to affix the corporate seal thereunto. It was further

Resolved, That the committee of the Society mentioned in the resolution above quoted be appointed for the purpose of bringing about the consolidation, and said committee was continued with full power and authority to do whatever might be necessary to carry the agreement into effect.

By this action of the Medical Society of the State of New York it became possible as soon as The New York State Medical Association took similar action, to unify the regular profession of this State.

At the twenty-second annual meeting of The New York State Medical Association, held at the New York Academy of Medicine, in the city of New York, on Tuesday, October 17, 1905, a resolution was adopted in which the Association subscribed to the agreement of the Joint Committee of Conference, and appointed a committee consisting of Drs. E. Elliot Harris, Julius C. Bierwirth, Alexander Lambert, Parker Syms and Wisner R. Townsend to carry out the purposes of said agreement, and with full and absolute power to take any and all legal steps necessary in the premises in the place of the said New York State Medical Association, as may be necessary to complete the consolidation of The New York State Medical Association and the Medical Society of the State of New York.

The action of both State bodies made it possible in accordance with an "Act to authorize the consolidation of the Medical Society of the State of New York and The New York State Medical Association" (Chapter I of Laws of 1904), which was duly introduced into the Senate and Assembly of the State, promptly passed and signed by the Governor on the 21st day of January, 1904, to petition the Supreme Court for an order consolidating the corporations. Said Act provided that when the order is made and duly

entered the corporations, parties to the agreement shall be one corporation under the name, "Medical Society of the State of New York," which shall *not* be deemed to be a new corporation, but to be a continuation of the Medical Society of the State of New York, incorporated in 1806. It was provided that a certified copy of said order shall be filed in the office of the Secretary of State.

At the meeting of the Joint Committee of Conference, held in the city of New York, on October 20, 1905, the Chairman of the Committee of Conference of the Medical Society of the State of New York was authorized to engage counsel for the purpose of presenting the petition to the Supreme Court for an order consolidating the corporations. Mr. Frederick Collin, of Elmira, who had already served the Conference Committee of the Medical Society of the State of New York, was engaged for that purpose, and on the 9th of December, 1905, Mr. Collin appeared before Mr. Justice John M. Davy in the city of Rochester, N. Y., and made such application pursuant to the Act above mentioned, known as Chapter I of Laws of 1904. Such order was promptly granted by the learned Justice, and a certified copy of said order has been filed in the office of the Secretary of State. All property belonging to the corporations so consolidated has been vested in the said Medical Society of the State of New York.

Pursuant to Section 1 of the agreement executed by the Medical Society of the State of New York and The New York State Medical Association, which agreement was made a part of the order of amalgamation entered on the 9th day of December, 1905, by Mr. Justice John M. Davy, a Justice of the Supreme Court, the *ad interim* officers, Chairmen of Standing Committees, House of Delegates, Council of the Medical Society of the State of New York created by such order of consolidation, must of necessity be authorized, directed and empowered to continue to exercise the respective powers and authority for the organization of the members of the consolidated corporation and the management of its affairs pursuant to the Constitution and By-Laws of the Medical Society of the State of New York until the annual meeting of the Medical Society of the State of New York, which shall take place on the last Tuesday of January, 1907. Your Committee of Conference, therefore, recommends that action be taken by the Medical Society of the State of New York at this, its annual meeting, in accordance with such agreement and order.

The Committee of Conference, in making its final report, wishes to express its appreciation of the encouragement and support received from the individual members included in the unified profession as represented at this time in the Medical Society of the State of New York. Its labors have been materially lightened by such assistance.

Without it unification would have been longer postponed.

The committee wishes still further to express to the members of the Joint Committee of Conference who represented The New York State Medical Association its appreciation of the uniform courtesy and consideration extended, which made it possible for the committee to act harmoniously with a single object in view, and that, the upbuilding of a model State Medical Society.

The committee has at no time been unmindful of the valuable assistance cheerfully rendered by those who have served as presidents of the State Society since its appointment, and wishes at this time to make public acknowledgment of its appreciation of their efforts.

On this centennial occasion your committee feels justified in congratulating the Society upon the unification of the State profession without interference with the life or activities of our time-honored Society.

The committee feels that the future success of the State Society must largely depend upon the efforts of its individual members and the earnestness with which the many advantages of this body shall be presented to the profession of the State, and would therefore suggest in conclusion that concerted effort be made which shall have for its object the upbuilding of the county societies, their stimulation to greater scientific activity and the addition to these of the many worthy members of our profession who have never understood the advantages of membership, now greater than ever before, because of a union which shall continue for all time to strengthen the profession and extend its influence with the public and the State.

Respectfully submitted,

HENRY L. ELSNER, Chairman,
A. JACOBI,
A. VANDER VEER,
GEO. RYERSON FOWLER,
FRANK VAN FLEET.

Committee.

REPORT OF THE COMMITTEE ON SECURING AN EDITOR FOR THE STATE JOURNAL.

Your committee would respectfully recommend Dr. James P. Warbasse, of 68 Greene avenue, Brooklyn, N. Y., as editor in charge of all publications of the Society; that he have under his control a business agent, a man competent to look after the business interests of the Society, especially in regard to advertisements; that there be appointed a committee of three to have charge of the publication of the JOURNAL and its management, whom the editor is to consult on all doubtful questions, and before whom all matters pertaining to the administration of the Society, and other publications, are to be presented.

A. VANDER VEER,
E. ELIOT HARRIS,
PARKER SYMS.

AN ACT

To Amend the Public Health Law by Providing for the Proper Labeling of Proprietary and Other Medicinal Preparations Containing Alcohol or Narcotic or Other Potent Drugs, and for the Inspection, Analysis and Regulation of the Manufacture and Sale of the Same.

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

Section 1. Chapter six hundred and sixty-one of the laws of eighteen hundred and ninety-three, entitled "An Act in relation to the public health, constituting chapter twenty-five of the General Laws," is hereby amended by inserting therein a new article, to be Article XIV, and to read as follows:

ARTICLE XIV.

PROPRIETARY AND OTHER MEDICINAL PREPARATIONS.

225. Manufacture and sale of certain proprietary and other medicinal preparations prohibited unless legally labeled.

226. Definition.

227. Application of this article.

228. Statement on the label to constitute a warranty.

229. Duty of the State Department of Health in respect to proprietary and other medicinal preparations.

230. Analysis of proprietary and other medicinal preparations.

231. Penalties.

232. Analysis as evidence.

SEC. 225. Manufacture and Sale of Certain Proprietary and Other Medicinal Preparations Prohibited Unless Legally Labeled. No person shall manufacture, sell, or offer or expose for sale or give away any proprietary medicine or other medicinal preparation containing alcohol, opium or any of its preparations, its alkaloids or their derivatives, stychnine, digitalis, chloroform, cannabis indica, chloral or any of its derivatives, bromides, cocaine or any of its salts, eucaïne or any of its salts, acetanilid, antipyrine, bromoform, exalgine, holocain, phenacetin, phenocoll, sulphonal, trional, veronal or any other hypnotic anæsthetic, analgesic, or cardiac, circulatory, respiratory or nerve depressant, unless the same shall have plainly and conspicuously stamped or printed on the bottle or receptacle containing the same or on the label affixed thereto, and also on the outside wrapper or package, if any, and also on the inside wrapper and on all circulars accompanying said medicine or medicinal preparation and relating to it, if any, a true statement of the percentage of alcohol and the percentage or proportion of each of the other above-mentioned or described drugs contained in each bottle, box, receptacle or package of such medicine or medicinal preparation. Such information shall be stamped or printed in antique or gothic type,

easily to be read, of a size not smaller than that known as ten-point, and so displayed as to be conspicuous.

Where alcohol is used as a solvent or preservative, or for any other purpose, it is to be deemed as contained in the medicine or medicinal preparation within the meaning of this act, and the drugs above mentioned or specified shall be described by their common, or English, names.

SEC. 226. Definition. The term "medicinal preparation" as used in this article shall be deemed to include every preparation or combination or mixture of drugs, or of drugs with substances which are not drugs, when such preparation, combination or mixture purports to have medicinal properties or to be a remedy or medicine or cure or food, or is intended to be used for medicinal effects or for the cure, alleviation or prevention of disease.

SEC. 227. Application of this Article. The provisions of this article shall not apply to preparations intended solely for external use, whenever the label plainly indicates that the preparation is to be used externally, and is not to be used internally, nor to the making up and dispensing medicinal compounds on a prescription by a legal ly authorized and registered physician, dentist or veterinarian, for the individual use of the one for whom said prescription was made by such physician, dentist or veterinarian, nor to preparations listed in the Pharmacopœia of the United States or the National Formulary, unless sold under a proprietary name or trademark.

SEC. 228. Statements on the Label to Constitute a Warranty. The label placed upon a proprietary medicine or other medicinal preparation by the manufacturer, as required by this act, shall be a warranty of the truth and accuracy of the statements contained therein, and the absence of any statement on such label shall constitute a warranty by the manufacturer that such medicine or medicinal preparation contains none of the drugs mentioned or described in Section 225 of this article. Any person injured by reason of the failure of a manufacturer to comply with the provisions of this act shall have cause of action against the manufacturer, and may recover both actual and exemplary damages.

SEC. 229. Duties of State Department of Health in Respect to Proprietary and Other Medicinal Preparations. The State Department of Health shall take cognizance of the interests of the public health as affected by the sale or use of proprietary medicines and other medicinal preparations, and make, if necessary, inquiries or investigations relating thereto. It shall appoint such public analysts, chemists and inspectors as it may deem necessary for that purpose and revoke any such appointment when it shall deem the person incompetent or his continuance in the service for any reason undesirable. It shall make, or cause to be made, from time to time, such analyses of any or all proprietary medicines and other medicinal preparations manufactured, sold or of-

ferred or exposed for sale in this State as shall seem necessary or desirable to facilitate the due enforcement of this law, and shall from time to time furnish for public information, and particularly for persons engaged in the sale of drugs, lists of such medicines and medicinal preparations as are found on analysis to contain any of the drugs mentioned or described in Section 225 of this article with the respective percentages of such drugs as ascertained by such analysis: Such analyses to be conducted as provided in the next section. It shall from time to time adopt such measures and make such regulations and declarations in addition to the provisions of this article as may seem necessary to enforce or facilitate the enforcement of this article or for the purpose of making an examination or analysis of any such proprietary medicine or other medicinal preparation manufactured, sold or offered or exposed for sale in the State, and all such regulations and declarations made in any year shall be filed in the office of the Secretary of State and published in the Session Laws first published after the expiration of thirty days from such filing.

SEC. 230. Analysis of Proprietary and Other Medicinal Preparations. The State Department of Health shall, upon complaint by any citizen, accompanied by his affidavit upon information and belief, that this law is being violated, forthwith cause samples to be procured in the public market of any and all proprietary medicines or other medicinal preparations so complained of and manufactured, sold or offered or exposed for sale in this State, such samples to be kept in vessels in a condition to obtain a proper test and analysis thereof, such vessels to be properly labeled and numbered and an accurate list kept of the names of the said medicine or medicinal preparation, its manufacturer and the place or places from which such samples were procured, and opposite each name shall appear the number which is written or printed on the label attached to the vessel containing the sample. In each case the bottle, box or receptacle in which such medicine or medicinal preparation was contained and the outside wrapper or package, if any, and all inside wrappers and circulars accompanying said medicine and relating to it, if any, shall receive a like label and number as the sample contents thereof. When listed and numbered every such sample shall be delivered to an analyst, chemist or officer of the department, and shall be designated and known to him only by its number and by no other mark or designation. A test of such sample shall be made by such analyst, chemist or officer, which will determine the ingredients or component parts thereof. The result of such test or analysis shall be immediately reported by the person making the same, to the department, setting forth explicitly the percentage of alcohol, and the percentage or proportion of each of the other drugs named or described in Section 225 of this article, if any, contained in any such samples, describing the same by number.

SEC. 231. Penalties. Sub-division 1. Any person violating any provision of this article shall be guilty of a misdemeanor, and shall be punished for each offence by a fine of not less than fifty dollars nor more than two hundred and fifty dollars, or by imprisonment for not less than ten days nor more than one hundred days, or by both fine and imprisonment, in the discretion of the court.

Sub-division 2. Any person violating any provision of this article in addition to and irrespective of the punishment hereinbefore provided, shall forfeit to the State Department of Health the sum of fifty dollars for every such violation, except that where such violation occurs in a city of the first class said forfeiture of fifty dollars shall be to the department of health of said city. The said amount may be sued for and recovered in the name of said State department or where the violation occurs in a city of the first class in the name of the department of health thereof, and shall be paid to the said State or city department, as the case may be, to be applied to the running expenses of said department, together with the costs, and a reasonable allowance in the discretion of the court to reimburse the said department for the expenses incident to such suit and recovery, not exceeding two hundred and fifty dollars.

Sub-division 3. In case of the violation of any of the provisions of this article by a partnership or corporation, each member of such partnership and the directors and executive officers of said corporation and the agent and the general manager of such partnership or corporation, shall be individually liable, and any suit, prosecution or proceeding authorized by this article may be brought against any one or all of such persons.

SEC. 232. Analysis as Evidence. In any suit, prosecution or proceedings authorized by this article a copy of the analysis of the State Department of Health or of the analysis of a department of health in a city of the first class of a sample of medicine or medicinal preparation manufactured, sold or offered or exposed for sale under the same name and purporting to be of the same manufacture as the medicine or medicinal preparation in question in such suit or prosecution, duly certified by the Commissioner or by the Secretary of said State or city department of health to be a true copy thereof, shall be presumptive evidence in all courts and places of the percentage of alcohol, and the percentage or proportion of each of the other drugs named or described in Section 225 of this article, if any, contained in said medicine or medicinal preparation. Provided that where the analysis has been made by a city department of health it shall be certified by the Commissioner or by the Secretary of said department that said analysis was made by an analyst, chemist or officer of said department in like manner as in Section 230 of this article provided for analyses by the State Department of Health.

Section 2. This Act shall take effect October first, Nineteen hundred and six, except that Section 229 hereof shall take effect immediately.

BY-LAWS

of the DISTRICT BRANCH of the
MEDICAL SOCIETY OF THE STATE OF
NEW YORK.

Adoptedday of month of year.

..... day of month of year.

This is to certify that the By-Laws herewith submitted are approved by the Council of the Medical Society of the State of New York in accordance with Chapter VIII, Section 4, of the By-Laws of the Medical Society of the State of New York.

.....President.

CHAPTER I.—NAME AND MEMBERSHIP.

SECTION 1. The District Branch shall include all members in good standing of the medical societies of the counties of

CHAPTER II.—OFFICERS.

SECTION 1. The officers shall consist of a President, Vice-President, Secretary and Treasurer. They shall, with the Presidents of the county societies of the District Branch, constitute the Executive Committee.

SEC. 2. The officers shall be elected by ballot at the annual meeting of the District Branch, by the duly elected delegates from the county societies.

SEC. 3. The officers elected shall assume office on January 1st of each year, and serve for the ensuing year or until their successors are elected.

SEC. 4. The President shall be the Councillor for the District. He shall assist, on request of county societies, in arranging their scientific programs; shall organize county societies where none exist; preside at all meetings, and perform such other duties as the Constitution, By-Laws and Resolutions of the Medical Society of the State of New York, and the District Branch, shall direct.

SEC. 5. The Vice-President shall assist the President in the discharge of his duties, and in the event of his death, resignation, removal, incapacity or refusal to act, shall succeed him.

SEC. 6. The Secretary shall attend all meetings and keep the minutes and perform such other duties as usually pertain to the office.

SEC. 7. The Treasurer shall receive and disburse all moneys for the District Branch granted by the House of Delegates or the Council. He shall make an annual report, and send a copy of the same to the Treasurer of the Medical Society of the State. He shall pay out no moneys except upon an order signed by two members of the Executive Committee.

SEC. 8. The Executive Committee shall meet at the call of the President, prepare the program for the annual meeting, and transact such other business as may come before it.

CHAPTER III.—DELEGATES.

SECTION 1. Each County Society in the District Branch shall be entitled to send annually a delegate or delegates to represent it

in the District Branch, in the proportion of one delegate to each one hundred members or fraction thereof.

SEC. 2. At the first election held after the adoption of these By-Laws, half the delegates from each county shall be elected for one year, and half for two years, and thereafter delegates elected shall serve for two years. In counties entitled to but one delegate, he shall be elected to serve two years. Where a county society is entitled to an odd number of delegates the odd number shall be elected for two years.

CHAPTER IV.—MEETINGS.

SECTION 1. The District Branch shall hold an annual meeting on the day of month. members shall constitute a quorum for scientific work; delegates a quorum for business.

SEC. 2. Special meetings may be held at the written request of members, or delegates, and at such meetings no other business can be transacted except that for which the meeting was called.

SEC. 3. At the annual meeting the President shall deliver an address.

SEC. 4. The place of holding the next annual meeting shall be determined by vote at each annual meeting.

SEC. 5. The time and place of holding special meetings shall be stated in the call for the meeting.

CHAPTER V.—ORDER OF BUSINESS.

1. Reading minutes of last meeting.
2. Report of Executive Committee.
3. Election of officers.
4. Reports of officers and committees.
5. Unfinished business.
6. New business.
7. President's address.
8. Scientific session.—(1) Presentation of patients. (2) Papers of the meeting. (3) Presentation of specimens and instruments. (4) Reports of cases.
9. Adjournment.

CHAPTER VI.—RULES OF ORDER.

SECTION 1. The deliberations of the District Branch meetings shall be governed by parliamentary usage, as contained in Roberts's Rules of Order, when not in conflict with the Constitution and By-Laws of the Medical Society of the State of New York.

CHAPTER VII.

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

THE RADICAL REMOVAL OF CANCER OF THE STOMACH.¹

BY WILLIAM J. MAYO, M.D., and CHARLES H. MAYO, M.D.,
Rochester, Minn.

THERE is no truthfully recorded example of a cancer of the stomach cured by medical means, yet these cases are treated by medical men, are sent into the medical wards and subjected to treatment which must result in 100 per cent. mortality. Cancer of the stomach is the most frequent form found in the human body, at least 30 per cent. of the total, a tremendous sacrifice of human life almost without effort at cure.

The past high mortality of radical excision and the difficulty of early diagnosis are largely to blame for this state of affairs. Since 1900, great improvement in technique has lowered the mortality to less than 10 per cent. and exploratory incision in the suspicious cases gives the diagnosis.

Report of 81 gastric resections with mortality of 14½ per cent., including early operations: Thirty-four patients operated upon in the last thirty months with a mortality of 8 per cent. Twenty-five consecutive with 1 death, 4 per cent. As to relief, 11 operated upon too recently to be of value as to cure. Five failed to live six months. Thirty-eight lived six months to a year and 24 are alive now. Twenty-one from one to two years and 13 alive. Ten from two to three years and 8 alive. Four from three to four years and 3 alive; as only 16 were operated upon more than three years ago this gives 25 per cent. living three years. One is alive and well after four years and ten months.

Clinical history and symptoms of most value in early diagnosis. Traces of blood and reduction of hydrochloric acid of some importance. History of past ulcer is not against later diagnosis of cancer, as ulcer often degenerates into cancer. Twenty-five per cent. of our last 24 cases show this. The presence of a tumor is not necessarily a contra indication to operation. A small, movable growth in the pyloric end is a rather favorable type, as it gives early obstruction. Seventy per cent. are in the operable (pyloric) end of the stomach.

All known means of diagnosis merely give rise to a suspicion, and if we cannot disprove it, exploratory incision is called for.

DISCUSSION.

Dr. John B. Deaver, of Philadelphia, said:

Mr. President and Members of The New York State Medical Association—I greatly appreciate the invitation of this Association to open the discussion of Dr. Mayo's paper. I congratulate Dr. Mayo upon this admirable paper, the practical and telling way in which he has brought out the important points of this important subject. The subject of the paper is one of the deepest interest

¹Abstract of paper read before the Twenty-second Annual Meeting of The New York State Medical Association, October 16-19, 1905.

not only to the surgeon but to the internist as well: this will be admitted by every one I am sure. May I not suggest, yea demand, that the internist witness all stomach operations and with the surgeon familiarize himself with the living pathology? Some teachers of medicine are credited with the remark that surgeons cut too much—in other words, operate too often. While I grant that this may be true of the inexperienced, I hope not so, however, with those of us who have been and are daily engaged in the study of autopsies *in vivo*, the only certain way to learn the rôle the symptoms of the particular disease bear to the pathological lesion; if the above remark is true, which I hope it is not, it is unfortunate that students of medicine are to be so falsely impressed. I would invite those among the internists who are sceptical of Dr. Mayo's and my position on this subject to witness our operations.

For the diagnosis of gastric carcinomata we may attack the disease in three chief ways: by means of its symptoms, by a physical examination, and by laboratory methods. Among the latter those of most value are the examination of the stomach contents and of the blood. The stomach contents are examined to show alterations in the normal gastric juice. It has long been an axiom to some diagnosticians that absence of free hydrochloric acid or the presence of lactic acid, or both, was a sure sign of gastric carcinoma. As may not be unknown to you, I have never been one of those who placed much reliance on laboratory diagnosis, and further study of my own cases and of those reported in the literature only serves to confirm me in the view that such signs as these are extremely fallacious in cases of cancer of the stomach. Many cases are known in which free hydrochloric acid persists, the tumor being implanted upon a previously existing ulcer which was attended by hyperchlorhydria; or, the carcinoma being in the pyloric portion of the stomach exclusively the secretory acid glands remain unaffected. Likewise with lactic acid fermentation, which is, nevertheless, the more valuable symptom of the two; lactic acid may be found in almost any gastric affection attended by stasis of food in the stomach and absence of free hydrochloric acid. (Boas, Hemmeter.) Moreover, the development of lactic acid is a late symptom, only appearing at a stage of the disease when surgical cure is beyond hope.

As far as blood examinations are concerned, I do not think they are of any except confirmative value. If by the symptoms and the physical examination we are led to diagnose cancer, then a medium decrease in the hæmoglobin and the number of red-blood cells, and a slight leucocytosis, will confirm our views, but if these changes are not present our diagnosis will not be altered by this fact. The absence of the normal hyperleucocytosis, which occurs in health during digestion, is considered by some almost a pathognomonic symptom; but I cannot see that a surgeon could

justifiably base his treatment on no stronger evidence than this.

In a choice between symptoms and physical signs, it may seem a strange admission to make, but I commonly rely more upon symptoms than upon the results of palpation and so forth, in reaching a conclusion as to the existence of gastric cancer. There have been so many cases observed in which a palpable tumor disappeared after stomach rest had been obtained by gastroenterostomy, that I have found it well-nigh impossible to unerringly diagnose a tumor as malignant until either the constitutional symptoms were well advanced, or the abdomen was opened. The character of the vomitus and the progressive emaciation are to my mind what are to be most relied upon when the case is at all advanced. The coffee-ground appearance of the former is so supremely characteristic and so extremely seldom met with in patients with gastric ulcer, where the hemorrhage is usually fresh, and productive of more or less immediate vomiting, that were I willing to accept any pathognomonic symptoms this should be one. Emaciation is not to be accepted merely on the patient's word; he should have weighed himself accurately at suitable intervals before we could be satisfied to accept his statements.

As I have already stated, the presence of a mass has come to be regarded as by no means sure evidence of the existence of carcinoma. For even after the abdomen has been opened, a mass to all appearances characteristic, and one which is attended by enlargement of the neighboring lymphatic glands, may after suitable treatment melt away in the course of a few weeks or months, and show us our error. Moynihan speaks of the peculiar gritty feel of gastric carcinoma, and it is probably a fact that the surgeon is much less apt to diagnose a tumor as inflammatory when it is really a cancer than he is to diagnose it as a carcinoma when it is actually only an inflammatory mass.

The uncertainties of diagnosis being so great, and the importance of early and radical removal being so important, an exploratory laparotomy is to my mind less objectionable in this class of cases than in almost any other. The statistics from the clinics of Krönlein and Mikulicz, recently compared by Moynihan, show that patients who have undergone an exploratory laparotomy in which no further operative treatment was possible, actually lived longer than did those whose disease was so far advanced as to make even an exploration unjustifiable, or those who entirely refused an operation of any kind. This fact thus confirms me in my opinion that in this class of cases exploratory laparotomy is justifiable, since, even if nothing further can be done to relieve the patients, they are given such efficient hospital care and attention as to somewhat prolong their lives on the average, and so almost certainly render their closing days less miserable. In very many operations, moreover, which are com-

menced as explorations merely, it is found possible to either remove the growth, or at least to perform a gastroenterostomy and thus materially prolong life and relieve suffering. But I am nevertheless unalterably opposed to the doctrine of some surgeons which amounts to little more than to say "when in doubt as to the diagnosis, do an exploratory laparotomy." This is not surgery. It has not been surgery in the past, and it should not be the surgery of the future. I am inclined to the opinion that there is too much surgery being done upon the stomach at present, for all its affections, cancer not being alone in this respect, and while I am quite willing, nay, eager, at times to impress upon my medical colleagues that indigestion is not always a medical disease, yet I am equally insistent in asserting the fact that it is by no means always a surgical disease, and that it may very often be permanently cured by rational medical treatment. But this medical treatment must be *rational*. That is to say, it must not be persisted in after its failure to relieve in the course of a few weeks. Persistent gastric indigestion with loss of appetite and gaseous distension, which is not corrected by medicine, calls for surgical investigation to discover and relieve the physical condition which is the prime cause of the symptoms. I do not myself believe in such a thing as an essential gastritis which has its basis in no physical lesion. I believe that every case of gastric indigestion not promptly cured by diet and suitable drugs will be found to be due to lesions of the gall bladder, of the duodenum, of the pancreas or of the stomach itself. There is such a disease, we are told, as neurotic gastritis, and this certainly will not be cured by operation, but all other forms of persistent indigestion are, I believe, the result of a lesion which can only be cured by mechanical intervention. And, I agree with Dr. Mayo that it is only when gastric carcinoma is operated upon in the precancerous stage that we can expect a radical cure of the affection. Medical treatment, as has long been known, is unable to cure carcinoma, and when once the cancer is fully developed surgical treatment is nearly as inefficient. As Dr. Mayo has said, medical treatment is not only of no use, but it is also positively harmful in that it induces a feeling of false security in both physician and patient. The medical man is, therefore, of use in these cases chiefly as a diagnostician, and for him to counsel delay until a palpable mass can be made out or until the diagnosis of cancer is assured by examination of the stomach contents is to consign the patient to an early grave.

Pylorotomy, or partial gastrectomy I would limit to very few cases if not encountered early. Total gastrectomy I consider beyond the pale of legitimate surgery. In those rare and almost unknown cases where the abdomen is properly opened for the relief of gastric symptoms, and where an operable carcinoma is unexpectedly found, I have employed both pylorotomy and

partial gastrectomy. I have removed as much as two-thirds of the stomach, always leaving the cardiac end and the "greater tuberosity" of the stomach untouched. I cannot say, however, that my results from gastrectomy have been very much better in respect to prolongation of life than from gastroenterostomy, owing to most of them being advanced when operated upon. In the hands of Mikulicz, Carle and of Fantino, the mortality was lower, and the average prolongation of life was ten to eleven months longer than after gastroenterostomy. Adhesions I think a more formidable objection to radical removal than size of the tumor or lymphatic involvement, especially when the adhesions involve the pancreas. Under such circumstances the death rate has been alarmingly high. Some surgeons have urged gastrectomy even when lymphatic involvement was so far advanced as to render a complete removal of the disease out of the question, arguing that if the sloughing and toxic mass is removed from the patient's stomach prolongation of life will be greater, even though the carcinomatous glands be left behind. It seems to me a good rule, in a few cases where a partial gastrectomy is contemplated, to first complete a gastroenterostomy in the ordinary way; and then, if the condition of the patient warrants it, to proceed at the same sitting to perform the gastrectomy, but if the patient will stand no further interference to postpone the radical operation for three weeks until sufficient strength has been gained. For if, after completing our gastrectomy as the initial step of the operation, collapse should then suddenly develop we should be in danger of having to send our patient back to his bed with no other channel for nutrition than the rectum.

Gastroenterostomy is, to my mind, the operation of choice, if any operation is permissible, for patients with advanced gastric carcinoma; nor do I limit it to cases where pyloric obstruction is present. Even if marked stagnation of food does not exist, there can, I think, be no question that direct drainage of the stomach is beneficial, and that by diverting the chyme from its course over the ulcerating area, we check to an appreciable degree both the pain from the growth and the progress of the malady. If the disease has not extensively involved the stomach, but yet is so far advanced as to contraindicate removal of the growth, I employ the ordinary technique for posterior gastroenterostomy with the suture. If, on the other hand, the disease has progressed further, so as to considerably debilitate the patient, I do simply an anterior gastroenterostomy, with the Murphy button. This is a simpler operation, consuming less time, and it will, I believe, give equally good results for such patients, who can scarcely ever anticipate a return to normal diet and active life.

Where the carcinoma has progressed very far, and the patient is starving to death, I think the surgeon can best fulfill his duty to humanity by performing either a gastrostomy or a jejunostomy

according as the obstruction is at the cardiac or the pyloric end of the stomach. I am satisfied that the profession in general does not appreciate the degree of alleviation of suffering which these procedures afford. They are operations which may be done under local anesthesia if desirable, but, as a rule, so short a time is required for their performance that a few whiffs of ether will suffice, and will serve merely to stimulate, not depress the circulation. The fistula should, if time permit, be established by the method of Witzel, in the stomach, or by an analogous technique in the jejunum. In such patients, after opening the abdomen, no time should be lost in idly exploring the stomach and duodenum. We should know before commencing the operation what it is desired to accomplish, and the stomach or the primary loop of the jejunum should be immediately sought and attached in the manner advised to the anterior abdominal wall. I prefer the incision splitting the fibers of the left rectus muscle. Feeding should be begun as soon as possible, in moderate amounts, such as would be given to a starving man under other circumstances. Rectal alimentation may also be employed, but, except for the saline solution which can be thus absorbed, will be of little value.

In conclusion, I may sum up my views on the surgery of gastric cancer in the following manner:

1. By timely operation for the various causes of persistent indigestion many a patient will be saved from developing gastric carcinoma.

2. Early diagnosis of gastric carcinoma being so extremely difficult, and radical removal being only highly promising when an early diagnosis has been made, pylorotomy and partial gastrectomy should be, and practically are, operations which are limited to cases operated on for symptoms of pyloric obstruction, in whom the existence of cancer is usually unsuspected. Hence no stomach operation should be undertaken without facilities being at hand for such procedures should they appear desirable when the abdomen has been opened.

3. Partial gastrectomy is the preferable treatment for patients with cancer of the stomach. In cases moderately far advanced a posterior gastroenterostomy should be chosen, if possible, since the diagnosis may be at fault, and since, if it is, this form of gastroenterostomy is the most permanent and satisfactory. In cases which are further advanced an anterior anastomosis should be made with the Murphy button.

4. Where the indication is to prevent starvation, gastrostomy or jejunostomy is to be performed.

Dr. Charles P. Noble, of Philadelphia, stated:

The most striking facts concerning cancer of the uterus are: First, that cancer of the uterus is a common disease; second, that in a very large majority of instances the disease has passed the curative stage before the patient is brought to the surgeon; and third, that in cancer of the cervix

the methods of treatment heretofore usually employed have failed to cure more than 10 per cent. of the patients subjected to radical operation. The reports of Olshausen, Winter, Mackenrodt, Wertheim and others indicate that approximately 50 per cent. of women the subject of cancer of the uterus applying to the German clinics present themselves sufficiently early to permit of radical operation. This point has not been developed in American statistics, but my own experience and knowledge of the work of others leads me to believe that not more than 20 per cent. of cancers of the uterus when seen by the American surgeon are operable. Therefore, one of the most important, if not the most important duty of the profession is to educate the family physician and the lay public concerning the necessity for the early diagnosis of this disease. Until some discovery which shall revolutionize the treatment of cancer is made, the greatest hope for improvement in results lies in the earlier diagnosis and treatment of the disease by radical operation.

The classical view that cancer is necessarily a fatal disease still influences the lay public and many of the profession, so that the propaganda for improving the prospects of the victims of cancer must include convincing evidence of the curability of the disease if removed in its early stages. The relatively favorable results of operation for cancer of the corpus uteri, for cancer of the breast, of the skin, etc., must be employed for this purpose while we are seeking to improve the results in cancer of the cervix.

There is a general agreement that the results of hysterectomy for adenocarcinoma of the corpus uteri are very favorable. From 60 to 75 per cent. of permanent cures are obtained by the methods heretofore in use, and it is probably not an unreasonable hope that with improvements in diagnosis and the earlier subsection of patients to operation, by the methods already known 80 or 90 per cent. of cures will be obtained in the future in this group of cases.

The real difficulty lies in dealing with cancer of the cervix. Cancer of the cervix (squamous cell carcinoma of the portio vaginalis and adenocarcinoma of the cervix) constitutes about 80 per cent. of all cases of cancer of the uterus, as against 20 per cent. of cancer of the corpus uteri. The reports of American surgeons show that not more than 5 or 10 per cent. of cures have been obtained by hysterectomy in this group of cases. Baldy claims that less than 5 per cent. have been cured. MacMonagle reports 100 per cent. of recurrences in a large series of vaginal hysterectomies for cancer of the cervix. Sampson (Johns Hopkins Hospital Bulletin, March, 1904) states that 12 per cent. of the patients operated on for carcinoma of the cervix were free from recurrence at the end of five years at the Johns Hopkins. In my own work, excluding the patients who died as a result of operation, there have been 17 per cent. who have remained well at the end of five years or longer. Unfortunately for the

value of this relatively favorable showing, it is based upon only twenty-three cases.

Most of the American papers are not statistical, and therefore it is not feasible to give the percentage of cures obtained, but the results claimed in general are poor. The late Dr. Byrne, of Brooklyn, is the only American reporting a large series of cases and claiming relatively good results. He reports 367 cases operated upon with the galvano cautery, without operative mortality. One hundred and forty of these were carcinoma of the cervix; in 219 cases both body and cervix were involved, and in 8 cases the disease was confined to the corpus uteri. One hundred and fifty-one cases were lost sight of during the first year. There remained, therefore, 216 cases of which the subsequent history is known. Of these, 19 remained free from the disease from ten to eighteen years, and 22 for five years or more; thus, upon the five-year basis, 19 per cent. were cured. In the number of cases reported and in the percentage of cures no other American has equaled these results, although the operation performed was amputation of the cervix and burning out of the cancerous growth.

The Germans claim better results; thus, Ols-hausen reports 671 cases operated upon by vaginal hysterectomy, with 18 per cent. of cures by the five years' standard. The percentage of operability increased from 31 per cent. in the beginning of this series to 44 per cent. toward the end of it. Zweifel reports 270 cases treated by vaginal hysterectomy, with 35.6 per cent. cures by the five years' standard. Schuchardt claims 40 per cent. of cures by the paravaginal operation, based upon twenty-five cases, and Winter calculates an average of 29 per cent. of cures five years after the ordinary vaginal hysterectomy for cervical cancer (Gellhorn: *American Journal of Obstetrics*, July, 1905, p. 20).

On the other hand, Jacobs, of Brussels, reports 100 per cent. of recurrences after vaginal hysterectomy and no improvement in results after the radical abdominal operation. Von Rosthorn, Wertheim, Amann and Mackenrodt, who are the advocates of the radical abdominal operation, cannot report results, as the five-year limit has not yet elapsed. It is clear that the claims of various operators as to the curability of cancer of the cervix by hysterectomy vary from absolute pessimism to 40 per cent. cures, and in these claims the Americans are much more modest than the Germans.

Because of the relatively poor results obtained by vaginal hysterectomy and the typical abdominal hysterectomy of Freund, and also because of the relatively good results obtained in operations for cancer of the breast by the extensive removal of the tissues in front of the chest, together with the lymphatic connections in the axilla, a much more radical operation was advocated by Riess, Clark and Werder, and more recently by von Rosthorn, Wertheim, Amann, Mackenrodt and others. It was hoped that by a much more ex-

tensive removal of the parametria together with the pelvic glands, the same improvement in results could be gained in operations for cancer of the uterus that has been effected in operations for cancer of the breast. While the five-year period now selected for a comparison of results has not elapsed for a definite estimate of the radical operation, sufficient recurrences have already taken place to discourage many from adopting the operation, especially as the primary mortality of the radical operation is about double that of the typical hysterectomy. Moreover, considerable evidence has accumulated which tends to show that the radical operation, including the removal of the pelvic glands, is not justified as a routine procedure. The known facts concerning cancer of the breast and axillary involvement led to the expectation that the pelvic glands would be found involved in a large percentage of cases of cancer of the cervix, which, if true, would render the radical operation essential in order to offer hope of a cure to all those having secondary involvement. Gellhorn in a recent study of the literature shows that in 364 cases of cancer of the uterus, including cases both of the body and of the cervix, in which the pelvic glands were studied, that in 101 or 27.7 per cent. glandular involvement had occurred. Also that in 216 cases of cancer of the cervix, in 61 or 28.2 per cent. glandular involvement had occurred. In other words, in order to offer the possible benefits of the removal of the pelvic glands to less than 30 per cent., the routine removal of these glands would double the operative mortality in over 70 per cent. in which the glands were not involved.

In addition to this, Schauta, in a series of 60 cases in which death followed operation for cancer of the uterus or took place in the course of the disease, found the following facts: Group 1, both the lower and upper series of glands free of disease in 26 cases, 43.3 per cent.; Group 2, the lower pelvic glands carcinomatous, while the upper glands were free in 8 cases, 13.3 per cent.; Group 3, the lower glands free, but the upper the seat of metastasis in 5 cases, 8.3 per cent.; Group 4, both the upper and lower series of glands involved in 21 cases, 35 per cent. From this study of cases it is evident that there were 48.5 per cent. of cases in which the lower glands were carcinomatous, but only 13.3 per cent. could have been saved by the most radical operation, for in the remainder the upper series of glands, along the aorta, which could not have been removed, were involved. It must be recalled that the percentage of glandular involvement in this series was probably high, as only eleven of the series were operable cases; in the others the disease had reached its full development. The facts, however, tend to discredit the attempt to remove the pelvic glands, as in only 13 per cent. were the pelvic glands involved when the upper glands along the aorta were free.

My own experience with the radical operation, its higher primary mortality and the impossibil-

ity, in my judgment, of actually removing the pelvic lymphatics, led me to abandon the operation some years ago. The foregoing facts confirm me in this practical judgment. This position has the further support of both Clark and Werder, two of the pioneers in the radical operation.

The next important question to consider is the condition of the parametria in cancer of the cervix. It has been well recognized clinically that invasion of the parametria is present in a large percentage of cases. We have now more definite microscopic information on this point. Cullen states that in nearly every case of adenocarcinoma of the cervix observed in the Johns Hopkins Hospital the disease had extended to the broad ligament. In Wertheim's material, including eighty uteri, twenty-one thousand sections were studied microscopically, and involvement of the parametria was found in 44 cases, or 55 per cent.; in von Rosthorn's material of 33 cases the parametria were involved twenty-four times, or 72.7 per cent., and in Schauta's material of 96 cases the parametria were involved sixty-four times, or 66.7 per cent. In other words, it is evident that unless the parametria as well as the cervix are removed in over half the cases operation will be useless.

The practical question before us to-day is as to the best means to accomplish this result—best as to the primary mortality and best as to the ultimate percentage of cures. The choice of operations lies between: 1, the radical abdominal operation, omitting the removal of the pelvic glands; 2, Schuchardt's operation, in which the extensive removal of the parametria is attempted by vaginal hysterectomy assisted by the paravaginal incision, and, 3, the application of the principle of Byrne—the removal of the parts involved with the galvano cautery knife, with the thorough roasting of the adjacent parts with the galvano cautery. Sufficient time must elapse to test the relative merits of these procedures. For some years I have adopted the Byrne principle and have operated for cancer of the uterus by abdominal section, applying heat by means of the Downes electro-thermic clamps. The method has given gratifying results with one exception—the injury of the ureter or bladder, which has been heated sufficiently to bring about necrosis and fistulæ in five cases. To avoid this accident it is my intention to dissect out the ureters and free them from the broad ligaments before removing the parametria by means of the Downes clamps. In this way I hope to secure the wide removal of the parametria without damage to the ureters and bladder. The method offers a number of positive advantages, the most marked being: 1. The absence of troublesome venous oozing so common in operations for cancer, particularly as the operation approaches the vaginal plexus. 2. The leaving of a dry field. 3. The freedom from pain subsequent to the operation, which is very marked in comparison with the typical operation. 4. The theoretical advantage in

the prevention of implantation. Werder has also become a convert to the Bryne principle, using the electro cautery knife and the Downes clamp as a part of the technique of vaginal hysterectomy.

In conclusion, it seems to me that until some revolutionary discovery is made through which, by means of serumtherapy or otherwise, cancer may be eradicated, the greatest prospect for improvement lies in teaching the profession and the public the necessity for the early recognition of cancer of the uterus and its immediate subjection to operation, and the application of the principle of Byrne to whatever operation may be adopted for the removal of the uterus together with the parametria.

Dr. Willy Meyer, of New York City, said that the subject of gastric carcinoma was one of burning importance, just as much so as that of enlarged prostate, and even more so, because if in the former condition there is much delay in the diagnosis and treatment, early death was inevitable.

The value of chemical tests, subjective signs and clinical symptoms in the diagnosis of carcinoma of the stomach had been referred to by the speakers who had preceded him. To wait for the formation of a palpable tumor in a given case was just as great a mistake in these cases as to wait for a tumor formation in appendicitis. The discovery of a palpable tumor in gastric cancer meant that the time had gone by to be of much service to the patient. Instead of losing valuable time, let the surgeon do an early exploratory operation, and, as Dr. Deaver had emphasized, let the medical men be present as often as possible at these operations. In many of these cases the diagnosis could not be made without the aid of an exploratory operation, and in such instances, where there was even a suspicion of malignant disease, it was the duty of the physician to early call in the surgeon.

Dr. Meyer said that he had performed gastroenterostomy, about eighty times, and gastrectomy five times. Of those five, four recovered. The fatal case was that of a young man who had suffered from specific disease, and who had recently had a severe gastric hemorrhage. Of the four that recovered, two had now survived for over two years.

Dr. Meyer called attention to the fact that in 10 per cent. of cases of carcinoma of the stomach, the disease was not found at the pylorus or the cardia, but on the posterior wall of the organ, and those were the cases which at times led even the surgeon to wait, because there were no symptoms. Nothing could be felt, not even under an anesthetic, and perhaps the most significant symptom was that these patients were steadily losing weight, and complained of a loss of appetite. In one such case that came under the speaker's observation the patient was a much-reduced woman who had frequent slight gastric hemorrhages. She had never vomited. There was a reduction in weight and a loss of appetite. Upon opening the

abdomen he found its posterior wall the seat of an infiltrated carcinoma larger than a silver dollar, necessitating an almost total gastrectomy. The operation was done over two years ago, and the patient was still alive, but he feared the advent of a recurrence of the disease in the liver, which was especially prone to occur in these cases. While this was a very dangerous class of cases, they could be much benefited by early surgical intervention. The attending physician should not lose sight of the fact that cancer of the stomach was a surgical disease, not a medical one, and that the surgeon should be called in early.

THE PRESENT STATUS OF VAGINAL CAESARIAN SECTION.¹

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IT is now about ten years since Dührssen, of Berlin, brought this operation before the medical profession (*Allgemeine deutsche Aerztezeitung*, April 1, 1895) and theoretically laid down its rules and indications, which seem to have suffered very little change by time and experience. At first a number of theoretical objections were raised against this operation and the profession was slow in giving it a practical test; with increased experience, however, these objections have been gradually removed. An additional reason for its tardy acceptance may be found in the introduction, at that time, of new dilators by Bossi and others. A sufficient number of operations have now been made in Europe, especially in Germany, and within the last two years in this country, to enable us to speak of its merits and its various indications. The proof that it has some abiding qualities and that it is accepted as a safe and practical procedure in obstetric surgery, is demonstrated by the fact that a certain Berlin school which, up to a recent date, had no words of recommendation for this operation, now shows a disposition to vindicate its priority to one of its own adherents. In studying the literature upon this subject very little doubt will be in the mind of the reader that Dührssen is not only the intellectual, but also the practical, originator of this operation. It is true that Acconci, of Italy, has been credited with having performed the first vaginal Caesarian section on July 4, 1895; a closer study, however, ought to convince the unbiased reader that to Dührssen belongs the undisputed priority in this question. Acconci's case was operated on for carcinoma of a pregnant uterus. After the anterior and posterior incisions were made into the cervix he still had to resort to dilators to get sufficient access to the fetus, a step which Dührssen's method, if properly carried out, will never require. Moreover, his case died and such incidents are generally not of a nature to entice others to repeat such an operation very soon. His case was not published before October, 1896, and it is

evident from his report that, at that time, he had no idea of the importance and wide applicability of vaginal Caesarian section, as not a word was said about its possible value and its different indications; besides, his first claim of priority was not brought forth before 1898.

Dührssen demonstrated that the incised uterus, after having been emptied of its contents, can be sutured and united again and perform its former function, also that we can empty a gravid uterus at any time and save the child, provided it is viable. Acconci naturally extirpated the cancerous uterus. It would seem that in questions of priority the maxim laid down by Fritsch, when he spoke of Trendelenburg's position, could be accepted as a fair and just one. On that occasion he said: "The priority must be vindicated to the one who has succeeded in making an invention or discovery common property, who establishes its reason and its indications and recommends it to such an extent that it will be universally accepted." Animated by such a spirit, I think, no one will successfully contest Dührssen's priority. The purpose of vaginal Caesarian section is to empty a pregnant uterus at once through the vaginal route by an anterior or posterior incision, or both combined, into the cervix and lower segment of the uterus, without opening the peritoneal cavity, in cases where the cervix is totally or partially closed or where there is absence of pain or any effort on the part of the uterus to expel the fetus in due time. Dührssen in his earlier publications laid down the following indications:

1. Abnormal conditions of the cervix and lower segment of the uterus (carcinoma, myoma, rigidity or stenosis of the cervix and partial pouch-like distension of the lower uterine portion).

2. Dangerous conditions of the mother which may be removed or relieved by prompt emptying of the uterus (affections of the heart, lungs and kidneys).

3. Conditions of the mother where death is imminent and can be foreseen. The last two conditions have value only in cases where the cervix is closed and not dilatable or where the depressing influence of labor pain should be obviated, as in affections of the heart and lungs. In pregnancy complicated with cancer of the uterus he advocated immediate vaginal Caesarian section with subsequent extirpation of the uterus, no matter at what time of pregnancy or at what stage of labor this condition is encountered. Since that time he has extended these indications also to the child where its life is threatened.

Objection has been raised from different sides in regard to the title of "Vaginal Caesarian Section," to which Dührssen has not failed to answer ("*Volkmann's Klin. Vorträge*," p. 232). He there refers to Plinius, where Caesarian section received its name from the fact that the child was delivered "a caeso matris utero," or from the incised uterus of a pregnant woman. Dührssen says: "If, then, we make an incision per vaginam into the uterus

¹Read before the Twenty-second Annual Meeting of The New York State Medical Association, October 16-19, 1905.

of a pregnant or parturient woman so that the child can be delivered through a previously closed cervix, the name 'vaginal Caesarian section' is, in my opinion, not a specially bad one, and it has been adopted by Fritsch, Schauta and others without comment." As Dührssen recommends in most cases an anterior and posterior incision, I think, myself, the name "anterior and posterior vaginal hysterotomy" would not be any essential improvement over the above title.

Technic: Dührssen's first description (1896) seems not to differ much from the technic he follows at present and has described in his monograph ("Der Vaginale Kaiserschnitt," Berlin, 1904). I may be permitted to give you a translation in substance:

After having emptied the bowels and bladder and disinfected the vulva, its vicinity and the vagina thoroughly, a right, lateral vagino-perineal incision will relieve the resistance of the lower third of the vagina in case of a primipara. If the levator ani muscle is divided by this incision a large closed fist can be readily introduced into the vagina, and the vaginal vault and portio vaginalis can be brought to view by short, broad specula. The vaginal portion is then seized on either side with bullet forceps, which may be immediately supplanted by two silk tractors (Fadenzügel) and the posterior lip is split sagittally up to the vaginal junction. In extending this incision the posterior vaginal vault is severed about 4 cm. and Douglas' peritoneum is pushed away from the posterior wall of the cervix and uterine body by means of a speculum introduced into this opening. In a similar manner the anterior os and vaginal vault is raised and from this incision the vaginal wall is separated from the bladder by a few strokes of the scissors. To facilitate this manipulation the vaginal wall may be severed from the cervix by a transverse incision of about 2 cm., and then the bladder and peritoneal fold are loosened from the anterior wall of the cervix and body of the uterus. By this procedure the anterior and posterior uterine walls are exposed fully to the extent of 6 cm. and are rapidly split with scissors, first the posterior and then the anterior wall. The opening thus made, and into which the amniotic sac will fall at once if the membranes are still intact, must be large enough to readily admit the fist of a strong man. This hand will promptly reach for one foot and extract the child. If the uterus contracts well, which may be aided by hypodermic injections of ergotine before the operation, you may wait for spontaneous separation of the placenta and then deliver it by expression. In case of uterine atony, however, the placenta may be detached by the hand, and tamponade of the uterus may eventually be resorted to after Dührssen's method. This latter procedure will prove very simple since the large aperture in the lower uterine segment will admit good-sized specula so that large quantities of gauze can quickly be introduced between them into the uterine cavity. For this purpose

and for the subsequent suture of the severed parts, the silk tractors which transfixed the cervix from the start, serve nicely, as by sufficient traction the vaginal and uterine incisions can be brought down to the vaginal introitus. In this way the posterior incision of the uterine wall can conveniently be closed without the aid of a speculum, by through and through catgut sutures tied upon the side of the mucous membrane of the cervix. We proceed about in the same manner with the anterior incision, except that the sutures are tied upon the anterior instead of the inner surface of the uterus. The vaginal incisions are united by continuous catgut sutures, leaving only a small opening close to the uterus. It is important to introduce small gauze strips through them into the ante and retro uterine cavity for drainage to prevent retention of blood and secretion. These strips and the uterine tampon are removed after three to twenty-four hours. In case a vagino-perineal incision was made the operation will end with its closure. The vaginal wall is united by continued catgut suture and the perineal cut by deep silkworm sutures. The latter are removed in eight to ten days. As a rule, the child is delivered in about six minutes and the whole operation finished in from twenty-five to thirty minutes. The after treatment does not differ from the one followed in normal labor; the subjective condition after operation is as favorable as that found in any easy, spontaneous confinement.

Dührssen speaks of a radical and conservative vaginal Caesarian section. In the radical operation the womb is removed, *i. e.*, for cancer or sepsis. This operation does not differ much from the method generally adopted for the extirpation of a cancerous uterus. The uterus is best split into halves before the ligaments are tied, as there is less danger from hemorrhage. In the conservative operation the uterus, after having been sutured, is left in its place and in a condition to carry on its function as before. So far it has been performed upon the following indications:

Cicatricial contraction of the cervix and vagina after typhoid fever (Braun-Fernwald).

Uncontrollable vomiting, combined with cicatricial rigidity of cervix (Spinelli, Ehrendörfer).

Stenosis after amputation for prolapse (Simon).

Heart affection and stenosis (Ungaro).

Rigidity of the cervix, tetanus uteri (Ruehl, Simon).

Painful œdema of the posterior portion (Regnoli).

Dangerous hemorrhage due to premature detachment of placenta (Ruehl, Regnoli, Bumm, Dührssen, Ewerke, Miller).

Mitral stenosis, patient moribund (Dührssen).

Heart disease and nephritis (Bumm).

Chorea gravidarum (Bumm, Ewerke).

Sepsis (Proubosta).

Pouch-like distention of the anterior uterine wall (Regnoli).

Incarcerated retroverted uterus (Wennerström).

Torpidity of the uterus after induced abortion, narrow pelvis, two cases (Bumm).

Overdistended and attenuated lower uterine segment (Dührssen).

Eclampsia (a large number).

Placenta prævia.

Danger to child (Dührssen).

Dead child, long, hard contracted cervix (Goffe).

Lack of pain in very young or old primipara.

Flat pelvis where the fetal heart became weak and os was not dilated, head high up, version could be more readily made after incision (Dührssen).

In the majority of cases of vaginal Cesarean section, Dührssen's advice to make an anterior and posterior incision should be heeded, as there is less danger of laceration of the uterus or bladder and the incisions do not have to be made so deep as would be necessary with a single incision. In my first paper on this subject I advised to make the longest incision in the portion that presents itself best, having done so in my first case; this has been sanctioned by Dührssen. Schauta in one case made the posterior incision exclusively. In case of narrow vagina, Dührssen strongly advised the vagino-perineal incision, known as Schuchardt's method. In my second case the passing of the head made a tear into the vagina up to the parametrium; this was brought together by continued catgut suture and healed by primary union. The placenta, of course, should always be removed before the sutures are tied. Ruehl advises to dilate the cervix with metal dilator before the operation, as in that way retention of secretion or lochia might be obviated. I think a small iodoform gauze strip would do it as well, if not better, and in my hands I did not find it to interfere with the sutures. In atony of the uterus gauze tamponade is especially indicated. Hammerschlag, however, mentions a case which had eight convulsions before the birth of the child; six hours after delivery patient was seized again with about eleven convulsions, with tracheal rales; temperature, 104 degrees; pulse, 132, and deep coma. He finally came to the conclusion that the uterine tampon might produce irritation and keep up the convulsions. The latter ceased immediately after removal of the tampon and the temperature went down to 99 degrees and pulse to 96 per minute; recovery was undisturbed. On theoretical grounds some fear of excessive hemorrhage has been entertained by men of limited or no experience, but so far no such accident has been recorded. To avoid this it is well to make the incision strictly in the median line, as the venous plexus on both sides of the cervix furnish the chief source of bleeding. There are two cases of sepsis reported out of about 140 cases; from this it appears that the danger from such a source is not any greater than that of any other obstetric operation. Moreover, in these

cases manual or mechanical dilatation has preceded the Cesarean section, so that it would be difficult to decide whether such interference or the operation should be made responsible for it. If the uterus is already septic the danger is not as great in the vaginal as in the abdominal Cesarean section, as in the former the abdominal cavity is not opened and there is better chance for drainage by leaving the uterine and vaginal cuts unsutured. Having to deal with such a case of septic infection we may, under proper circumstances and after taking all the features of the case into account, remove the source of infection at once by extirpation of the uterus immediately after the delivery of the child and placenta. A successful case of Doederlein is reported by Baisch (Hegar's Beitrage Bd 6, Heft 3). Patient 38 years old, XI gravid., six months pregnant, with prolapse and elongation of the cervix, decubitus and incipient sepsis. Cervix would admit one finger, anterior and posterior Douglas was opened, incision in the lower half of both parametria, the anterior wall of the cervix was split, perforation and extraction of the fetus, total separation of the parametria, closure of the abdominal cavity. Most of the cases which have been examined some time after operation revealed such slight cicatricial changes that they would have escaped the attention of the examiner had he not been aware of the fact that such an operation had been performed. There are, however, some cases reported where parts were not fully united. As to the effect of vaginal Cesarean section upon subsequent labor, Dührssen, Wennerström and myself have reported cases. A case of Dührssen was delivered three years later, with balloon dilatation of six hours' duration, of a living child. Wennerström's case had spontaneous labor two years after operation. My second case was operated on September 6, 1903. She gave birth to a child 7½ months old on July 15, 1904, before any physician could reach her and without any untoward effect. Both mother and child are in good health to-day. The question has repeatedly been asked, What advantage has vaginal Cesarean section over the ventral section? Experience so far shows that the former is less dangerous, which, no doubt, is due in great part to the fact that the peritoneal cavity is not opened. Moreover, I think patients, or at least their friends, will sooner consent to a vaginal operation than to abdominal Cesarean section, the mention of which is still apt to create in the mind of the public a certain amount of consternation.

It is advisable to make this operation in a well-equipped hospital, if possible. A man skilled in such work, however, should not hesitate to operate in private houses in case of emergency. My first case was operated on at the residence of the patient, about sixteen miles from home. Ruehl, of Germany, and Miller, of New Orleans, also report one case each operated on at patient's home.

Since my first publication (*Am. Journal of Obstetrics*, Nov., 1903) there have been made about eighteen operations in this country where in most

cases eclampsia furnished the chief indication. Miller, of New Orleans, operated for accidental hemorrhage, and Goffe, of New York, for removal of a dead fetus 6 months old. The woman was in labor seven days and as he did not succeed in dilating the long, hard, contracted cervix by other means, he delivered the patient promptly by vaginal Cesarean section and version of the child. I was not able to get a full report of all the other cases, and as no one of the operators has had more than two or three cases and as no new practical points have been revealed by their work, I will limit myself to the mere mention of their names: Bacon, Chicago; Carstens, Detroit; Webster, Chicago; Miller, New Orleans; Peterson, Ann Arbor; Fry, Washington; Goffe, New York; Stone, New York, and three cases in the Maternity Hospital in New York. From all the various indications which have called for vaginal Cesarean section carcinoma of the pregnant uterus and eclampsia seem to furnish the greatest number. As to carcinoma, there can be no dispute in regard to time and necessity. In eclampsia, however, there seems to be still a wide difference of opinion. Some authors claim such excellent results from more conservative measures, as venesection, diaphoretics, veratrum viride, salt infusion, others again from the different methods of mechanical dilatation that in their eyes vaginal Cesarean section hardly seems to be justified. Personal experience and skill will, therefore, be the determining factor at such a critical moment. Some may not be spared the experience of Sippel, of Frankfort. He had for a long time happy results from hot baths and packing, diaphoretics and diuretics, subcutaneous salt infusion and avoidance of irritation and he thought the unfavorable results of others were due to improper treatment. But all at once he lost three cases and came to the conclusion that eclampsia was due to pregnancy and the best thing would be to terminate the latter as promptly as possible. I lost two cases before the normal end of pregnancy, treated by manual dilatation, and gained at that time the impression that the latter procedure caused considerable irritation and added to the shock or increased the convulsions. I considered, therefore, Dührssen's operation as a valuable method, and was not slow in adopting it when occasion presented. I was especially convinced of its great value in my second case where the parts were not only blue, but really black and very friable, and I asked myself at the time of the operation whether any one would be bold enough to use a metal dilator in such a case and risk a tear the extent of which would be beyond his control. From my own experience and from the ideas gained through literature, I have no doubt that vaginal Cesarean section is going to stay and that wherever prompt delivery is indicated, either to save the life of the mother or that of the child, it presents advantages superior to any other method of dilatation of abdominal Cesarean section, except where the conjugata is below 7 or 8 cm.

or where some neoplasm should prove an insurmountable obstacle. Although Pozzi vindicated the priority to Acconci he considered the operation as the last great surgical feat of the nineteenth century, and in a private communication Dührssen gives expression to the thought that since the introduction of forceps no more important operation has been introduced into obstetric art.

As eclampsia will in the future probably be the chief indication for this operation the statistics reported by Hammerschlag (*Zentralblatt für Gynäkologie*, No. 36, 1904) may interest some of you. That report gives 21 cases of eclampsia; 5 of which reached the normal end of pregnancy, the rest were from six months up. In 6 cases the anterior and posterior wall of the cervix were incised, once the posterior alone and 14 times the anterior alone. The forceps were applied twice, version and extraction 16 times, twice combined version, twice perforation of the after-coming head, one case breech presentation and extraction, twice perforation of the head presenting first, seven times manual detachment of the placenta and 10 times iodoform gauze tamponade of the uterus. Of these 21 mothers, 9 died, 6 cases died from eclampsia in spite of operation, 1 from pneumonia. In 10 cases convulsions ceased after operation, in 3 cases 1-11 convulsions still followed operation. In 6 fatal cases 3 had still convulsions after operation, but all died from coma.

At the meeting of the German Gynecological Society in June, this year, in speaking of the different methods of artificial dilatation of the pregnant and parturient uterus, some noted accoucheurs have also given their experience in vaginal Cesarean section. As some of them have had a comparatively large number of such operations, it may be of advantage to hear their opinion on this question.

Bumm has operated on 52 cases with 23 per cent. mortality; he generally makes an anterior incision 10-12 cm. long. He thinks there is no method equal to vaginal Cesarean section where the os is closed or only slightly dilated. If the cervical canal is too narrow after suturing he introduces a glass drainage tube and, in case of atony of the uterus, he leaves an iodoform gauze tampon. In placenta prævia he recommends anterior hysterostomy and considers the technic easy; hemorrhage he finds not more severe than usual; the child need not be sacrificed. As a prophylactic measure he recommends ergotine injections. The post partum course in his experience is generally normal.

Veit, of Halle, reports 33 cases operated on for eclampsia with one death from pneumonia. All eclamptic cases are sent to the clinic after the first convulsion and vaginal Cesarean section is made at once. To this prompt action he ascribes his excellent results.

Van Bardeleben, of Berlin, thinks that deep incisions or vaginal Cesarean section alone enable us

to empty the uterus at any time and in any condition, and there is less danger of laceration, and parts heal much better than after any method.

Leopold favors Bossi's dilator greatly and wants deep incisions into the cervix or vaginal Cesarean section restricted to hospitals, or masters in this kind of work alone should undertake it in private houses.

Most of the other members who discussed the question seem to favor deep incisions or vaginal Cesarean section in cases where prompt delivery is indicated.

THE ACID INTOXICATION OF PREGNANCY.¹

BY H. McM. PAINTER, M.D.,
New York.

THE only excuse for according the subject of acidosis in pregnancy a separate treatment is the fact that the pathological chemistry of the condition is, perhaps, a little more definite and the clinical symptoms are often not sufficiently serious to indicate the gravity of the situation. The clinical picture, however, is fairly clear and at last may become so alarming as to attract the attention of the most casual observer.

The statement that the pathological chemistry of acid intoxications is definite requires some explanation. The existence in the blood of certain organic acids is an accepted fact. The origin of these acids is not by any means so clearly demonstrated. That they arise from a perversion of the metabolism of the proteid molecule is probable. But whether they have other origin and the details of the perversion of metabolism which produces them await the researches of the chemist. A capitulation of theories upon the subject is not the purpose of the present paper.

The bodies which concern us in the acid intoxications of pregnancy are acetone, diacetic acid and beta-oxybutyric acid. The relation of these bodies to one another is practically one of oxidation. The acetone is the most highly oxidized and the beta-oxybutyric acid the least oxidized. The presence, therefore, of diacetic acid and beta-oxybutyric acid would indicate, so far as these bodies are concerned, the lowest ebb in power of oxidation on the part of the body cell. So it follows that the presence of these latter bodies probably gives evidence of a more profound condition of acid intoxication than the presence of acetone alone. Acetone may exist in the urine of a healthy adult to the amount of three centigrams in twenty-four hours. It is, perhaps, unnecessary to say that the poisonous effects of the acetone bodies are not due to their direct toxic properties, but to the fact that they seize upon the alkalis of the body to satisfy their chemical affinities. Thus the ammonia, the normal fate of which is the formation of urea in the liver and other tissues, is first diverted and later any available base whether in the blood or the tissues at large is similarly utilized. The alkalinity of the

blood is diminished according to the degree of acidosis and we finally arrive at a clinical picture not differing particularly from that of diabetic coma. It may be well to state before proceeding to a consideration of the clinical aspects of acid intoxications that all statements of symptomatology and analysis of urine are drawn solely from the writer's personal observation. It would seem that personal experience would be more acceptable on such an occasion as this than a review of literature. It is for this reason that this paper will be so limited.

So far as the experience of the writer is concerned, the acid intoxications of pregnancy occur in primiparæ and multiparæ alike. Age seems not to be a factor. The surroundings of wealth grant no immunity. They may occur in any month of pregnancy, although they seem to be more common in the early months. They occur in all degrees of severity. They may develop with great rapidity and threaten life in a few days or they may be present throughout pregnancy, producing their symptoms more or less continuously but never with sufficient severity to cause alarm.

The clinical picture is somewhat varied. Perhaps the simplest class of cases is those patients who at some time complain suddenly of great lassitude, nausea, headache, sleepiness and vertigo. An analysis of the urine at this time will show considerable disturbance of the nitrogen ratios and the presence of acetone. Thorough purgation and a milk diet will clear up all the symptoms in two or three days. Probably they would recover in a few days without any treatment. In fact, the writer has records of a case in the second month of pregnancy with extreme nausea and occasional vomiting. Acetone was present in considerable amount. Traces of diacetic acid were present. The nitrogen partition showed no particular disturbance. Before the treatment which was instituted could have any effect other than to increase the total quantity of urine the symptoms had improved and all traces of acetone and diacetic acid had disappeared. They did not again appear except in faint traces during a period of ten days in which daily examinations of the urine were made.

Another class of mild cases which, however, cause constant anxiety, is the patients who throughout pregnancy complain of nausea in varying severity, but not commonly attended by vomiting. Analyses of the urine show sometimes a fairly normal nitrogen partition without acetone. At other times the nitrogen ratios are disturbed and acetone is present. The writer has never had an opportunity even to suggest treatment for this class of patients, but he has followed a small number and secured rather unsatisfactory urine examinations. He has never known them to develop more severe symptoms, and complete recovery has followed delivery.

Probably a wider experience will prove to the writer that his clinical classification of the severe

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cases is not warranted. Thus far, however, these cases fall into two classes, first those in which the nausea and vomiting are so extreme as to overshadow the other symptoms, and second those in which this is not the case.

Both classes of cases have been seen more commonly in the early months of pregnancy and always in multiparæ. This is probably mere chance.

Patients of the first class complain of excessive nausea and vomiting which began either gradually or rather suddenly. Vomiting is very variable. It is often of a mild type. It is often absent for twenty-four hours or more. On the other hand it may be so severe as to render feeding by the mouth impossible.

The nausea, the writer has found always severe. It is usually uninterrupted night and day. It may become so increased during the night as to arouse a patient from sleep. It occasionally disappears entirely for two or three hours, rarely for a longer time. It is so extreme as to make mouth feeding impossible, or quite impracticable even in the absence of vomiting. Obviously considerable prostration attends such a condition and yet these patients often exhibit a most misleading vivacity in the presence of the attending physician. Careful inquiry at this time will reveal the fact that the patient sleeps unusually soundly all night and may sleep for an hour or two during the day. This is a significant symptom. Whether these patients actually lose in body weight the writer cannot say, but they suddenly appear to be much emaciated in the face and on the extremities. The cheeks seem hollow, the eyes retracted and the cheekbones prominent. The change is sometimes quite startling. The hands become almost shrunken and claw-like in their apparent emaciation.

At about the same time there appears particularly upon the cheeks, under the eyes and across the nose a peculiar greenish-yellow suggestion of a jaundice. The eyes have not been found to be discolored and close inspection may fail to show a pigmentation of the skin and yet there is an unmistakable and significant suggestion of strong, greenish-yellow color in the face.

The pulse early in the course of these symptoms maintains an unexpected quality and rate; of good force and between eighty and ninety. Later it begins to increase in rate and this increase continues steadily as the symptoms develop. The writer has never followed a case beyond this point.

In the second class of cases the nausea and vomiting are so slight that multiparæ may not complain of them except upon questioning and then will often speak slightly of them. The nausea particularly is usually present, however, in some degree and is rather persistent. Appetite is absent and the bowels are constipated.

The prominent symptom with these patients is giddiness. This giddiness rarely leaves them. They may fall from their chair on account of it.

They stagger in walking and grasp at articles of furniture by reason of it. They even awake in the night to find the bed whirling about, above and beneath them.

There is apparently no tendency to loss of consciousness or any clouding of the intellectual faculties at this time.

The writer has not been struck by the seeming loss of flesh or by the shadow of an icterus in these patients. The skin is rather of a thick, muddy appearance and the face maintains its ordinary lines. The pulse follows much the same course as in the previous class of cases. Drowsiness is often not present at first but develops as the intoxication continues. Gradually it becomes more marked and patients have been seen lying in a heavy sleep day and night from which they could be aroused only by mild castigation. The writer has not followed these cases any further in the development of symptoms but it is probable that the fatal cases of both classes would die in coma similarly to diabetics.

The urine in both classes of cases is usually diminished in total quantity; even to 300 or 400 c.c. The specific gravity is between 1010 and 1015, even in specimens of normal amount, and has been found as high as 1026 in concentrated specimens.

A trace of albumin has always been found, and it has increased as the symptoms have developed, but even in the case most profoundly poisoned of all of which the writer has records, there was not more than a "marked trace."

A few hyaline casts are commonly present, and occasionally a few studded epithelial casts.

The chlorides are diminished. The urea is usually diminished when the acidosis is marked, but normal for pregnancy where it is slight. The writer has been surprised to find from his records how little the urea may be lessened in the presence of a fairly marked acidosis.

Sugar has never been found.

Indican is usually in excess.

Leucin and tyrosin crystals have been found but infrequently. The ratio between the mineral and ethereal sulphates is almost always depressed.

The ammonia is increased in all of the writer's records where a determination was made. Theoretically it should be increased, but unfortunately some of the records from which these statements are drawn were made before it was the writer's custom to make the complete nitrogen partition.

Urobilin has been present in excess wherever the acidosis has been marked. Acetone is regularly present and diacetic and beta-oxybutyric acids according to the severity of the intoxication.

In all cases where acetone is present the peculiar, chloroform-like odor can often be detected on the breath. With regard to the analysis of the urine, one thing should be distinctly borne in mind which is often overlooked; namely, that all of these patients, whether they are vomiting or

not are so restricted as to the ingestion of food that they may perhaps be considered to be in a state of starvation so far as certain elements of the urine are concerned. This applies particularly to the indican, the chlorides and the ratio between mineral and ethereal sulphates.

So far as treatment is concerned, the writer regrets to say that his experience is limited to the termination of the pregnancy. This statement will, perhaps, bear explanation. These cases are rarely seen in hospital services as they probably occur more commonly in the early months and women do not apply to hospitals for care at this period. The cases upon which these remarks are based occurred in private practice and were so far advanced when they were first seen that any general methods of treatment known to us at present could hardly be expected to succeed.

The writer believes, however, that much can be done in prophylaxis. In the first place it is his belief that every case of pregnancy should be seen by the physician at least once in ten days throughout pregnancy. The physician is by this means more closely in touch with his patient and is much more likely to have early symptoms reported to him, even if they be not present at the time of the visit.

It is also the belief of the writer that many cases of toxæmia in pregnancy begin as cases of intestinal intoxication. From a large number of analyses of the urine of women in all months of normal pregnancy the writer feels that he can safely say that the evidences of an intestinal intoxication do not exist commonly in the urine of normal pregnancy. By "normal pregnancy" is meant, arbitrarily, pregnancy which complains of no symptoms other than those referable to the mechanical conditions. On the other hand, when there is present headache, irritability, marked depression, neuralgic pains, lassitude, the intestines distended and painful from gas, constipation, etc., etc., there will commonly be found the evidences of intestinal putrefaction. Sometimes the symptoms will be present without any evidences in the urine and vice versa, but in general the symptoms and the analysis coincide. Thorough purgation should be instituted and thereafter two watery movements should be secured daily. A milk diet for a few days is of the greatest assistance and is usually not unwelcome to the patient.

At least a quart and a half of water should be drunk daily. The extra water should be administered as medicine between meals. Unless it is put upon the basis of a medicine it will not be taken.

Drugs are not of great value, and salol, perhaps the most common, increases the evidences in the urine of intestinal putrefaction. The writer has often found it necessary also to resort to the intestinal exercises of the Swedish system; breathing exercises, resistance movements and massage. These must be carried on under the personal direction of a trained attendant. The writer has never yet found any danger to the

pregnancy in the use of these exercises carefully administered.

It is the writer's custom to have complete analyses of the twenty-four hours' specimen of urine made at occasional intervals during pregnancy, with the determination of the sulphate ratios and the nitrogen partition. And in any case where symptoms arise this is always done at once. Of course, this is not possible in the case of patients with a small income unless very serious symptoms arise, but any one can learn to determine the presence of indican. If the evidences of an intestinal intoxication exist even without any symptoms, it is the writer's belief that every effort should be made to relieve the condition.

The possible relation between intestinal toxæmia on the one hand, and the intracellular toxæmias of pregnancy on the other, is purely conjectural so far as the writer is concerned. It is, however, an accepted fact that a large proportion of cases of neurasthenia are the victims of an intestinal intoxication. It is the experience of the writer and of others with whom he has talked upon the subject that a great proportion of neurasthenics with intestinal intoxication improve and are cured coincidentally with the improvement and cure of their intestinal malady.

When, therefore, one considers the profound disturbances of the nervous system in neurasthenics from their intestinal poisoning, and when one considers the influence of the nervous system upon the functional activity of the body cells, does it not seem quite possible that an intestinal toxæmia in a pregnant woman may be a considerable etiological factor in producing an intracellular toxæmia? It is for this reason and also for the purpose of improving in every possible way the general condition of the pregnant woman that the writer wishes to insist upon the value of treating the intestinal condition as a method of prophylaxis. Cases have been observed in which an intestinal toxæmia has been followed by an intracellular toxæmia, but that does not necessarily prove anything.

The treatment of the actual condition of acid intoxication is: First, general; rest in bed, diet, rectal feeding if necessary, high rectal lavage or large saline enemata.

Second, specific; the two methods of treatment recommended by von Noorden, of the introduction into the body by any available method of, first, large quantities of carbohydrate food to furnish oxygen for the oxidation of the proteid molecule; and, second, large quantities of alkali to neutralize the acids of the blood arising from the faulty metabolism. The writer has not been able to make use of either of these methods.

When a patient is suffering from an acid intoxication certain symptoms already noted are to be carefully watched; the appearance of emaciation and icterus, the drowsiness, and, perhaps, most important, the continued increase of the pulse rate. These are symptoms of the utmost gravity and it is the writer's belief that these

constitutional symptoms and not any arbitrary limit of variation in the ratios of urea and ammonia or ammonia and total nitrogen or total nitrogen and the amido-acids should determine the question of the termination of pregnancy.

All the more does this seem vital when one considers that we sometimes find the widest range of variation in ratios from day to day in these cases without any marked correspondence in the condition of the patient. In any case, until we understand better the chemistry and pathology of these toxæmias it would seem fairer to sacrifice an occasional foetal life perhaps prematurely or even unnecessarily where the dangers to the mother are so great and so insidious.

The writer has never secured an autopsy upon a case in which an acid intoxication had been proven to exist. In a hospital case, however, brought into his service moribund with a strong odor of acetone upon the breath, the pathological findings agreed with those established for the toxæmias of pregnancy. The only evidence of an acid intoxication in this case was the presence of the acetone odor.

SOME EXPERIENCES WITH APOMORPHIA.¹

BY GEORGE H. PEDDLE, M.D.,
Perry, N. Y.

APOMORPHIA is a pseudo-alkaloid, obtained by the action of HCl on morphine in sealed tubes at a high temperature.

My observations of the physiological action of the drug differ somewhat from those of W. D. Carter and others. Instead of acceleration of heart beat with increase of volume, increased respiration with sunken eyes and drawn features, I find there is a marked slowing of the pulse and respiration, the features rapidly assuming a calm and peaceful expression, the drug acting especially as an arterial sedative. However, my experience has only dealt with pathological conditions where there existed rapid heart beats and frequent respirations. In regard to pallor, surface becoming bathed in perspiration, dilated pupils, yawning followed by emesis, relaxation and sleep, my observations correspond with Carter and other observers.

It is my object to make prominent some of the practical uses of the drug in this paper. You are all familiar with its use as a prompt and efficient emetic, and its great and satisfactory use in the relief of croup and capillary bronchitis, without being attended by retching and nausea.

I wish to report two cases of chronic alcoholism treated by means of this drug.

Was called, August 10, 1900, to see M. H., aged 47. Found him suffering from extreme nervous excitement. He passed three days and nights walking the floor and streets, then would lie down in a vain endeavor to sleep. Patient talked incessantly and incoherently; constantly on the move. He imagined thousands of people clutching him by the throat, exclaiming every few

moments, "Here they come! Here they come!" whereupon he would rush to the wall and pound it until blood streamed from his hand. His pulse ranged from 140 to 160, his temperature slightly above normal. His wife told me that he drank all the whiskey he had and how many quarts of wine she had in the cellar, she did not know. I gave him 1/20 gr. apomorphia hypodermatically and told his wife to fetch a bowl as he might be nauseated. In about two minutes he began swallowing; swallowing, his forehead meanwhile becoming bathed with a cold perspiration, followed by repeated yawnings. No sooner had his wife reached his side than a stream quite resembling, excepting in color and odor, the water from a city hydrant during street flushing time, came rushing into the bowl, scooting up the opposite side over the floor and his wife's apron, until the vessel was as full as could be carried. His yawnings continued; he was immediately put into bed where, in a few minutes, his troubles were forgotten in a deep, refreshing sleep. Meanwhile his pulse fell to about 60; changed from the wiry to a soft, compressible pulse. His face, which was flushed, with distended veins, now became paler; the tightened lines were softened and his countenance took on a calm, peaceful appearance. I have treated him successfully ten or twelve times since in the same manner and using the same means.

W. B., 1903, strong, healthy and robust, came to my office with the statement that he had had no sleep for four nights, and was laboring under great nervous excitability due to alcoholism. He was given 1/10 gr. apomorphia hypodermatically. Had some trouble ridding ourselves of him as he wanted just one more. He was hustled away as soon as possible; he walked down the street but soon began to weaken. He stopped at the house below, lay down on the floor and was fast asleep before he could be put into bed. Another time he called and wanted the same dose repeated. He was given 1/10 gr. and hustled home; but as he lives several blocks away, he was unable to cover the distance. He reached the gate where he fell fast asleep on the downy pillow of the picket fence, where he was discovered by a passerby and taken into the house without awakening.

Since preparing this paper, I had a very interesting experience which I wish briefly to relate. Was hurriedly called, October 3, 1905, by 'phone, to Orangeville, some fifteen miles distant, to see a very sick man; strong, broad and at the age of 44. He had been attended by two physicians and his case diagnosed as one of paris-green poisoning. I found him in the wildest delirium, with seven men holding him in bed, and a woman fanning vigorously. He was so disturbed that a good examination was impossible. Before determining the cause of his trouble, I gave him 1/4 gr. morphine but without any quieting effect. However, we held him down, took his temperature in axilla; found this normal, pulse rapid, face livid, with all the characteristics of acute alcoholism. Upon inquiry, found that he had been

¹Read before the Twenty-second Annual Meeting of The New York State Medical Association, October 16-19, 1905.

drinking heavily of late. I decided to give him apomorphia. He was given 1/20 gr. The change was almost magical. He began to relax and soon fell into a fitful sleep, notwithstanding he was in this delirium for seventy hours. In half an hour, I gave him another 1/20 gr. and he slept soundly for nearly four hours. The attending physician told me he had given him 1/2 gr. morphine at a single dose, and had also given him hyosine with large doses of chloral and bromide.

However, this is not the object of this paper, but it is to call special attention to the use of this drug in alarming clonic and tonic spasmodic seizures, and extreme nervous excitement, from whatever cause. I have used it with great success in hysterical contortions and fits. Also gave it to a woman who had taken ten 1/40 gr. tablets of strychnia by mistake, producing the characteristic twitchings. Gave her 1/20 gr. and in two or three hours she was all right.

J. Augustin reports a case of strychnine poisoning in which the patient swallowed 1-3/4 gr. of the drug in 1894. Apomorphia, cutaneous friction, cold douches, chloral hydrate and bromide of potash brought about her recovery.

Horsley reports a case of strychnine poisoning in 1890 that was successfully treated by 1/15 to 1/10 gr. of apomorphia.

Ingram reports a case of violent insanity, caused by bromidia, calmed and sleep produced by 1/10 gr. apomorphia.

L. G. Stevens reports a case of hysterical crisis (opisthotonos) completely relieved by 1/20 gr.

I have two cases to report which will be of especial interest, for, as far as I know, this is the first time the drug was used for such cases. On the night of July 24, 1900, my bell was vigorously pulled and a man hurriedly told me that his wife was having a fit and desired me to hurry to her relief. Upon reaching the house, I beheld a woman about 17 years of age (three months pregnant) in the most violent and extreme convulsions. Her fingers were flexed in the palm of her hand; toes drawn to the soles of the feet; elbows, knees, legs flexed to the extreme; eyes rolled back until only the whites were discernible; all muscles, including chest and abdominal, were hard and tense; jaws firmly locked; altogether she presented the most wild and weird spectacle I have ever seen. The room was filled with a peculiar odor; I asked if she had taken strychnia. One of the boarders said she saw her throw a small bottle out of the window. I asked her to fetch it. The bottle was a two-drachm vial and labeled oil of tansy. Now, the question arose in my mind what was to be done, as there is no antidote for this drug. Apomorphia occurred to me as an indicated remedy for this extreme nervous tension. I decided to give her 1/10 gr. and take my chance on the result. To my great relief, she straightened out for the first time, gave a little shudder and was quiet. The effect was magical. I now sent for another doctor while I ran down home for a stomach tube. He forced open her mouth with a large, iron spoon handle after an unsuc-

cessful attempt had been made to introduce the tube through the nose. Her stomach was flushed out with several gallons of water. She remained semi-conscious the rest of the night, awoke in the morning, seeming no worse (barring a little muscular soreness) for her experience. Pregnancy was not disturbed.

November 21, 1903. A. M. (pregnant), aged 17. Was hurriedly called to see this girl who had taken one drachm oil of tansy. After taking the drug she immediately went down town and was walking locked arms with her mother and another lady. Without any warning, she pitched forward on her face in the street, and went into convulsions. I arrived about three minutes after she had fallen. The cause was discovered and I promptly gave her 1/20 gr. apomorphia. The convulsions ceased, she opened her eyes and yawned; she was carried to her home only a short distance, her stomach washed out and in half an hour she was as good as ever; pregnancy undisturbed.

B. K., aged 28. Was called in consultation with Drs. Skiff, Wilson and Smith, of Buffalo, to the bedside of this young, strong man who was suffering from severe type of tetanus caused by stepping on a nail. His foot was opened by Dr. Smith, cleansed and properly dressed. His muscles were rigid and tightly drawn, causing much suffering; jaws tightly locked, being unable to open his mouth. I was so anxious to try my pet remedy in such a case as this, that, when they cast about for some one to remain all night, I consented—after obtaining permission of all consultants to care for the case as if he was my own, should symptoms warrant a change of conduct. His pulse was rapid, 130, with slight elevation of temperature. After chloroform was given him he had the characteristic sickness at stomach with vomiting, and being unable to open his mouth, the contents of his stomach squirted through his teeth, closely resembling a village sprinkler on a hot, dusty day. I watched him for about five hours, noted the rapid pulse and breathing, with the characteristic high muscular tension, and determined to give him the experimental dose. Accordingly, he was given 1/20 gr. as a feeler. This made him sick, followed by vomiting. I watched him closely; observed that his pulse grew slower and softer, muscles began to relax; he could breathe easier and deeper, abdominal muscles grew less tense and could drink from cup. I waited about three hours; 4 o'clock I repeated the dose. This time his pulse slowed to 60. At the time of my departure—5 A. M.—he could open his mouth at least two inches, take full breaths freely, move hands and legs with but little inconvenience. I assured the family that he was better and held out strong hopes for his recovery. After this, the anti-toxin treatment was again resumed. He lingered until the following Saturday after suffering much. What would be the outcome of a free, continuous use of apomorphia no one will ever know, but the immediate effects were very satisfactory. Hereafter I shall ex-

periment with this drug in eclampsia. I have such confidence in its effects that my experiments with it in the future will be much broader. I trust that this paper will stimulate you all to a freer use of this wonderful drug, especially as a perfectly safe remedy for delirium tremens, drug poisoning by strychnine and oil of tansy, or any poisons, systemic or otherwise, producing convulsions accompanied with rapid pulse and high arterial tension. I think it might be used with good result in insanity and melancholia of the severe type. The object of this paper was to put the drug before you especially as an antidote for oil of tansy poisoning and trust you will recall its magical use if you are so unfortunate as to be called upon to treat such a case.

Would it not be more humane, gentlemen, in cases of hydrophobia to administer a dose of apomorphia than to follow the advice of Helen Hall and administer chloroform?

GEORGE RYERSON FOWLER, M.D.

Dr. George Ryerson Fowler may be regarded in every sense as one of the most eminent surgeons this country has produced. Through the literature of surgery he stamped his personality upon the surgical thought of his times; his buoyancy of character and eternal hopefulness inspired all who came in contact with him; his great knowledge of surgery, founded upon an immense experience, made him an oracle of wisdom, and his indefatigable labors placed under obligations to him a vast army of patients and the whole world of surgery.

He was born in New York City December 25, 1848; graduated in medicine from the Bellevue Hospital Medical College in 1871, and entered in practice in Brooklyn. From the beginning he interested himself in surgery, and occupied positions upon the staffs of many institutions. He was the first attending surgeon to the Bushwick Hospital. In 1883 he became visiting surgeon to St. Mary's Hospital, and upon the organization of the Methodist Episcopal Hospital he was made one of its attending surgeons, and continued in that position until his death. He was also surgeon-in-chief of the Brooklyn Hospital, and senior surgeon to the German Hospital. In these three last institutions he did an amount of surgical work which would seem beyond the capacity of any one man.

When the Medical Examining Board of the Board of Regents was created by the State of New York, in 1890, Dr. Fowler was recommended to that board by the State Medical Society, and was appointed examiner in surgery, which position he occupied with great credit to the State at the time of his death. His contributions to the literature of surgery entitle him to a high position as a surgical author. He was for several years one of the editors of the "Annals of the Anatomical and Surgical Society," afterwards called the "Annals of Surgery." A list of the

original memoirs from his pen would be an almost complete index of the surgical progress of his time. He was the author of a "Treatise on Appendicitis," published in 1894, which is still an authoritative work upon that subject. A few days before his death he saw go to press the last corrections of the last proof-sheets of his masterpiece—"Fowler's Surgery," a splendid work in two octavo volumes, of 725 pages each—in which he had put the best efforts of his busy life.

He was one of the organizers of the Brooklyn Anatomical and Surgical Society in 1878, now the Brooklyn Surgical Society. He was also president of the Medical Society of the County of Kings in 1886. He was a Fellow of the American Surgical Association, a member of the New York Surgical Society, the Medical Society of the State of New York, the New York Academy of Medicine, the Association of Military Surgeons, the Society of Medical Jurisprudence, and the Physicians' Mutual Aid Association.

In military medicine he began his career as assistant surgeon in the Fourteenth Regiment, N. Y., in 1877. From this position he advanced to that of staff surgeon in the Second Brigade, and in 1902 he was made surgeon-colonel on the staff of the commander of the State troops. During the Spanish war he served in Florida and Cuba as surgeon-major on the staff of General Fitzhugh Lee, commander of the Seventh Army Corps.

Dr. Fowler was a man of indomitable energy. His capacity for work seemed almost without limit. Notwithstanding the vast amount of hospital and private work which he did he found time to give a large measure of his energy and thought to the general interests of the medical profession. He was always active in the affairs of his medical societies, and was always found taking a firm stand for what he believed to make for the best interests of his profession. He was one of the active movers in the amalgamation of the two great societies of the State of New York. One of the last things to receive his attention was a movement to make accessible to all the members of the State Society the books of the library of the Medical Society of the County of Kings. He had hoped to see consummated a plan to give members of the State Society the privilege of having sent them, upon request, volumes from this large library. With these objects for the general good in his mind, he went to Albany to attend the centennial meeting and reunion of the State Societies. He was stricken with appendicitis on his way to the capital city—the very disease from which he had rescued thousands—and after an illness of ten days, in which every resource of science was exhausted, he gave up his life on February 6, 1906. A system which had been overtaxed by years of unremitting work, failed at the critical hour; and this splendid and much beloved man died because of the great labor he had done for others.

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No. 3.

Addresses delivered on the occasion of the One Hundredth Annual Meeting of the Medical Society of the State of New York, held at Albany, January 30, 31, and February 1, 1906.

ADDRESS.

BY JOSEPH D. BRYANT, M.D.,
New York City,

President of the Medical Society of the State of New York.

IN behalf of the Medical Society of the State of New York, it affords me infinite pleasure to welcome you on this joyous occasion, and invite you to participate with us to the fullest degree in the centennial exercises of our organization. We are especially delighted at this time because we can extend to you the hearty greetings of a united profession after many years of sincere contention in matters not altogether profoundly appreciated by lay understanding. That the event of a birthday celebration and a family reunion should fall thus happily together makes the occasion one of momentous importance in the medical history of the State, and of thanksgiving in the ranks of the medical profession, everywhere in the Union. The ceremonies of the evening are expressive of the gladness which we feel because of your presence and because of the gracious bestowment on us all of the physical favors and mental virtues that permit of our presence here and prompt the giving of respectful heed to passing events.

To the distinguished gentlemen who signalize the occasion by their presence and by the wise products of their experience and thought we beg to acknowledge our profound appreciation and to express the fond hope that the fruitful admonitions so graciously bestowed shall fall on quick, fertile soil and yield a bounteous harvest of abiding wisdom.

To our lay friends especially we desire to say, Please do not let this evening's experience be the limit of your thoughtful attendance and the gracious attention given to our centennial

proceedings. For surely you should be deeply interested in the record of advance of the last one hundred years' attainments in medicine, in surgery and in State medicine, especially when told to you by eminent men, who themselves have been active potent factors in the achieving of many of the beneficent results.

One hundred years ago marked the time of the birth of the Medical Society of the State of New York. Nearly every animated being of that period has returned to Mother Earth the generous loan bestowed as a token of her maternal desire and fostering care. The few, the very few that yet remain will soon yield their mite in payment of the debt to Nature which never outlaws nor remains unrequited. Fortunate indeed is it for earthly tenants that energy—the profit of the loan—increases vastly the world's belongings before the loan itself is returned to the bosom of the giver.

During this time the means of human intercourse have multiplied in number and efficiency to a startling degree. The ten-mile passenger railroad from Stockton to Darlington, England, of 1825, and the seventeen-mile one from Albany to Schenectady of 1830, with its daily passenger list of 387, were mere traces—primitive traces of those of the present time. To-day in the world quite 440,000 miles of railroad, of which nearly 214,000 are in the United States; respond to the demands of human enterprise and thrift with scarcely an unreckoned halt, conveying in the United States alone over 716,000,000 of passengers.

The alluring notes of the dinner call and the loud tones of human speech as means of transmission of ideas are now of infinitesimal scope compared with the electric telegraph, the telephone and wireless telegraphy, all of such modern invention, utility and thrift, as to require no special statement in the presence of an American audience. The announcement through these channels of intercourse of important events, of the consummation of momentous designs of individuals and nations in all parts of the civilized world, are matters of hourly occurrence and of successful issue. The loom, the printing press, the reaper and many other labor-saving, civilizing and wealth-producing instrumentalities are of common knowledge and in constant use everywhere.

The onward march of freedom during this century has kept pace with the advance of general human intelligence and human sympathy. The growth of the sentiment of inherent right of self-control in all things not inconsistent with the rights of others has been prolific with the increase of unhindered opportunity and the lessening of human oppression. Great Britain in 1843 emancipated 12,000,000 of slaves. France in 1848, Sweden in 1846-7, Denmark in 1848, Netherlands in 1862 abolished slavery. In 1861 Russia emancipated about 22,000,000 serfs. In the United States in 1860 there were nearly 4,000,000 of slaves, but in January, 1863, all slaves and all slavery were abolished by the proclamation of Abraham Lincoln. In other less noted instances release from individual bondage has been progressive and enduring, fixing beyond the gainsay of all forms of contention "the inalienable right to life, liberty and the pursuit of happiness." Let us hope that ere another century shall have passed that in the language of Cooper,

"He is the freeman whom truth makes free,
And all are slaves besides."

The immense contributions made to the healing art during this centennial period are no less astonishing than are those in other fields of abundant achievement. In the fore-rank is vaccination, whose approaching footfall was early heard in this century, and whose surpassing contribution to human life and human comfort is the glorious heritage of this and of centuries to come. Close to hand is found anesthesia, a gift from God to man which supplants the terrors of pain and apprehension with the blissful slumber of unconsciousness. Here, too, we find the twin marvels, antiseptis and asepsis, which have banished from the path of surgical effort its insidious hosts of infecting foes, and this during the lifetime of the immortal Lister, who first taught us how.

Antitoxin, the X-ray, the discovery of the tubercle bacilli, and of the kinship between the mosquito and the yellow fever plague of commerce and of malarial torment, are most beneficent contributions to the relief of human suffering, a fitting estimate of which cannot be foretold.

These, my friends, are a few of the striking contributions made by the medical profession to the people of the world during this century. Contributions, the praises for whose bloodless victories are sung by happy mothers and glad children in contented homes. Not so, however, in every instance. Not so in the home of the late Major Reed, who lost his life only a short time ago in demonstrating the relationship between the mosquito and the yellow fever plague. His children and their mother suffered irreparable loss that the mothers and the children of coming time might remain unstricken.

Medical and surgical afflictions which hitherto yielded only to merciless fate now yield with seeming ease to the measures of modern medicine.

The prevention of disease—the keystone of human sympathy and the keynote of scientific endeavor—has advanced medical knowledge and public spirit to the forefront in the conflict for increased human comfort, and augmented national prosperity.

It is estimated that of one million human beings born a hundred years ago, only about three hundred are now alive. In this connection I wish to say that life's expectation has been remarkably advanced during the last hundred years. The expectation of life has increased in New York City since 1886, from a little more than twenty-five to quite forty-one years, representing an equivalent in saving of 28,000 lives annually. In the seventeenth and eighteenth centuries the average death rate of the civilized world was about 50 per 1,000. In London, from 1628 to 1635 (in the absence of pestilence), the average death rate was 50 per 1,000. In 1902, in London, the average death rate was a little more than 17 per 1,000.

Examples of this tenor are almost as common as by-words, and as emphatic of the power of human control of human longevity as is the force of gravitation of the integrity of the universe.

The broadening of the horizon of human thought and of human understanding, the product of enlarged human contact and interests, is rapidly leveling the barriers raised by sectional prejudices and doctrinal differences throughout the world, banishing—let us hope, forever—the discords in professional strife that characterized the time of the birth of this organization, but now rarely, if ever, witnessed under any circumstances.

Finally, I desire to say that the medical body which I have the honor to represent on this occasion will gladly welcome the time when human reliance in the means of medical relief shall no longer be tormented by illogical differences in the employment of the healing efforts.

ADDRESS.

BY THE HON. GROVER CLEVELAND,
Princeton, N. J.,
Ex-President of the United States.

I HAVE heard a story, invented in a spirit of frivolous waggery, to the effect that once upon a time the devil, having undertaken an excursion throughout the earth for alleged purposes of investigation, met with all sorts of adventures and mishaps; but that the culmination of all was not reached until he fell among the lawyers, where he lost his tail. So far as the legal fraternity is implicated, I am supported by all my brethren in the profession, when I brand this fable as absurd and libellous, without sense or even the cheapest kind of wit. And yet, sometimes a feeling of loneliness and forlornness may so overwhelm us, and may so subdue our reason and distort our imagination that any superstition of evil portent, even though it relates to the mishaps of the devil, is apt to enter our minds. I

will not confess that I am at this moment in such a deplorable predicament; but I am tremendously impressed by the serious position I occupy. Confronted as I am with an inexorable and un pitying medical environment, it is something of an effort for me to entirely close my mind to the old story of the devil who fell among the lawyers, and to free myself from every tinge of apprehension concerning the things that may happen to the lawyer who to-night has fallen among the doctors.

It is well enough for me to enter upon my task to-night with a determination to be absolutely frank and unreserved; but the reproachful thought now vexes me that I have done ill in hinting, even in a tone of pleasantry, that the circumstances surrounding me justify the least feeling of loneliness or forlornness on my part. I will not forget that I am speaking in the city of Albany, where more than twenty years ago, during a short residence, I received at the hands and from the hearts of its people such kindness and consideration, and where I formed such delightful friendships that through all the intervening years I look back upon my brief sojourn in Albany as a tired and wayworn wanderer might recall the restful delights of a shaded spot left far behind in his weary travel. Surely I could have no better or surer guaranty of indulgence and support than is afforded by the steadfastness of my Albany friends—the living still kind and the dead still giving the reassurance which comes of sacred memories.

Another reason why I should be brave to-night grows out of my consciousness of a professional duty I have to discharge. I appear before this awe-inspiring tribunal holding a brief in behalf of an immense army of comrades as well as clients.

For the purpose of our argument, let us divide humanity in two sections—one composed of a few doctors, and the other embracing the many millions of their actual or prospective patients. I appeal for myself and those millions, and I claim at the outset that, notwithstanding our large majority, the medical section of mankind has, in one way or another, curtailed the opportunity of freedom of thought and considerate hearing, to which we are entitled by "the laws of Nature and of Nature's God." We acknowledge that the world owes this minority a living. With a generous delicacy which reaches sublimity we are on their account not over obedient to the laws of health; and we sometimes pay their bills. When sick we submit with more or less humility to their orders. If we recover, it is only to take our place on the waiting list, still subject to further service. If we do not recover it is left to us to do the dying.

In view of these facts, I think I do not mistake the temper of my clients when I represent that there is growing up among them a feeling that there ought to be less mystery and high and mighty aloofness on the part of their medical

advisers. We have long been wont to treat with a kind of amused toleration the names in pigeon Latin or Greek given by the doctors to very common things, and to diseases which already had names both simple and significant. But all this seems to have much increased with the discovery of new remedies, and the chase after new diseases; and this increase has apparently been accompanied by additional mystery and additional inclination on the part of our doctors to remind us of their stately superiority.

We fully appreciate the tremendous advance that has been made in medical knowledge and practice within the memory of those not yet old. There are but few left who bear the scars of blood-letting which depleted the veins of a former generation. In these days the fever stricken wretch who begs for a drop of water to cool his tongue is heard with more favor than was the rich man who cried out to Father Abraham from the flaming torments of the bottomless pit. We are now told that germs and microbes, more or less deadly, countless in number, of every conceivable size and shape, and given to habits and tastes adjusted to every emergency of their existence, not only inhabit the earth beneath us and the atmosphere about us, but lurk in every corner and cranny of our bodies with murderous intent. Another marked and startling indication of progress in medical knowledge is found in the sentence of removal and destruction lately passed by medical science upon a certain annex or attachment of the human body, which has for centuries substantially escaped more serious accusation than that of inactive uselessness. Its detection in conspiracy against life and health has stimulated our doctors in such hot pursuit that the man who carries his appendix about with other personal belongings is probably just as comfortable if he has never heard the story of the way the devil lost his tail.

In all seriousness, therefore, I desire to concede, without the least reservation, on behalf of the great army of patients, that they owe to the medical profession a debt of gratitude which they can never repay, on account of hard, self-sacrificing work done for their benefit, and for beneficent results accomplished in their interest. But at the same time we are inclined to insist that, while our doctors have wonderfully advanced, in all that increases the usefulness and nobility of their profession, this thing has not happened without some corresponding advance in the intelligent thought and ready information of their patients along the same lines. We have come to think of ourselves as worthy of confidence in the treatment of our ailments; and we believe if this were accorded to us in greater measure it would be better for the treatment and better for us. We do not claim that we should be called in consultation in all our illnesses; but we would be glad to have a little more explanation of the things done to us. We do not like to think of

our doctors as veiled prophets or mysterious attendants, shut out from all sick-bed comradeship except through cold professional ministrations, and all the time irresponsive to our utmost need of sympathetic assurance. Nor should it be considered strange if thousands among us, influenced by a sentiment just now astonishingly prevalent, should be disturbed by the specter of a medical trust, in mystery, and like all who are trust affrighted, should cry out for greater publicity between physician and patient.

I am authorized to say for the great body of patients, that they are naturally proud and gratified when their doctors are scientific and learned. It is a great comfort and satisfaction to us when the medical erudition accumulated through ages and the medical study of centuries are brought to bear upon our ailments. In an unperverted state we have no tolerance for uneducated and unscientific pretenders or quacks who promise to cure disease, and we have no faith in their nostrums and haphazard remedies. Yet these nostrums and remedies are bought and taken by hundreds of thousands, and those who manufacture and sell them amass fortunes. And our doctors wonder at these things, and charge them to the ignorance, degredation and superstition of those who should remain their loyal patients. This is a hasty conclusion, not altogether just nor quite adequate to the solution of the problem. Perversion of judgment and vain imaginings on the part of patients undoubtedly enter into the situation. But we all know that the sick who wait and longingly hope for health are peculiarly susceptible to these things, and that fatiguing discontent with halting results of a mysterious and unexplained course of regular medical treatment leads directly to the camp of quacks and charlatans who not only cunningly guarantee speedy recovery, but capture the imagination and gratify caprice by an alluring and apparently frank explanation of the qualities and character of their remedies or treatment. These considerations suggest the possibility that our doctors themselves may contribute in a remote and indirect way to a condition irritating and disquieting to all conscientious practitioners and threatening harm to the great body of patients.

I feel that I have very freely availed myself of the privilege which a generous tribunal accords to advocacy, and have rather bluntly hinted some things as they have presented themselves to my mind. If the substance of what I have said meets with your dissent, I beg you to remember that much must depend upon our respective points of view. If the manner of the presentation of my case subjects me to the suspicion of perverting the privilege of free discussion to the purpose of flippant and inconsiderate treatment of a serious topic, I hope it will not be altogether unavailing for

me to protest that I have not deliberately or intentionally sinned. I yield to no one in respect and admiration for the medical profession. I have formed friendships among its members so strong and so warm that they not only fill a large place in the comfort and solace of my life, but by sentimental association lead me to covet the good opinion of the entire fraternity.

In these circumstances I am glad that my professional attitude and my duty to my clients permit me to turn from an advocate's statement of grievances to a more congenial and pleasing branch of discussion.

Of course we of the patient class as an aggregation cannot avoid the color of selfishness in our estimate of the relationship that should exist between ourselves and the medical profession. As a general proposition this quite accords with the bent of human nature; and this is accentuated in our case by the tremendous stakes of life and health which we risk upon such relationship. It may as well be here conceded that when life and health are pressed upon his attention by their demands for protection and care, every individual belonging to our class will, consciously or unconsciously, regard the highest medical learning, the most important medical discoveries, the utmost refinement of medical science and all that is or can be in medical ministration as mere agencies which should be working together for the one great end of saving his life and curing his disease.

I have used the words "working together" because they seem to be suggestive of another condition in which the great body of patients are more generally and more watchfully interested than at first glance might be supposed. We naturally desire that everything which medical science has taught should be within our reach, in our times of need. But this is not all. Nothing can divert our minds from the belief that the free course and glorification of medical science, so far as we are related to it, is largely dependent upon the harmonious opinions, the harmonious fellowship and harmonious ministrations of its office bearers—whom we delight to honor as our doctors. And so it happens that we have appropriated the words, "When doctors disagree," as defining a situation not altogether favorable to our most complete realization of medical benefits. We are told that sometimes differences have arisen from opposite opinions as to the ethics that should govern medical practice. We disclaim any desire or intention to meddle with these ethics so far as they may be above and beyond us. But we cannot after all escape the reflection that patients as well as doctors are necessary to medical practice. On this ground it should not be thought strange if we are somewhat alert to discover how our interests are affected by any rules of medical ethics that

may be proposed. Clearly we are only entitled as patients to ask that our privileges be not curtailed while doctors disagree, that we be not allowed to suffer while professional punctilio stands aloof and that we be not put in jeopardy by ethical quarrels.

And so I have no fear of sacrificing the interests of my clients, nor any misgivings as to the rectitude of my course, when I claim the relevancy and fitness of what I have said as well as all that has preceded it, as prefatory to the request I now make in behalf of myself and the millions of patients I represent, that we be permitted to join our doctors in the congratulations and felicitations that befit this occasion.

We celebrate to-night the close of the first century in the life and usefulness and honorable achievement of the Medical Society of the State of New York. If it has experienced vicissitudes, they are as nothing when compared with its many triumphs. It is well to recall them all. And yet I believe there is no single incident of its career which furnishes greater cause for satisfaction and joy to-night than the harmonious unification of medical organization within the Empire State, which has just been accomplished under the name of this Society.

Upon the resumption of its relations with the American Medical Association, it will be in affiliation with a national body nobly responsive to the highest and purest motives of the profession. We do not suspect that the ethical sentiment of the doctors of the State of New York needs prompting. And yet no scheme of medical ethics could more delight and satisfy us than the suggestive and advisory statement of ethical principles which the national organization has submitted to its constituent State branches. This statement opens with the declaration that "Physicians should not only be ever ready to obey the calls of the sick and the injured, but should be mindful of the high character of their mission and of the responsibilities they must incur in the discharge of momentous duties. In their ministrations they should never forget that the comfort, the health and the lives of those entrusted to their care depend on skill, attention and fidelity." It declares that "the physician should be a minister of hope and comfort to the sick," and that "the opportunity which a physician has of promoting and strengthening the good resolutions of patients suffering under the consequences of evil conduct, ought never to be neglected." The truth which underlies the real gospel of the profession is thus announced: "There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical; and to attain such eminence is a duty every physician owes alike to the profession and to patients. It is due to the patients, as without it their respect and confidence cannot be commanded; and to the profession because no scien-

tific attainments can compensate for the want of correct moral principles."

If we of the patient class are admitted to the rejoicings and felicitations of our doctors to-night, may we not be permitted to express the wish that the cup of our hopes and desires may be completely filled by the adoption on the part of the rehabilitated Medical Society of the State of New York, of ethics so generous, so necessary and so Christianlike.

I cannot close without suggesting the thought that on every account you of the medical profession should be sympathetic, tender, reverent and God-fearing men. You cannot escape contact with sickness and death, with dire distress, with anguish too deep for tears, and with mute heart-breaking—all appealing to your ministrations. And you cannot avoid the awful thought that no impious hand should explore the most fearful and wonderful mechanism of God's handiwork and the abiding place of His Holy Spirit.

Tread lightly, gentlemen; for you have to do with temples of the Holy Ghost.

ADDRESS.

BY THE HON. M. LINN BRUCE,
Lieutenant Governor of the State of New York.

I REGRET the unavoidable absence of his Excellency, the Governor of the State of New York, the Hon Frank W. Higgins, on this occasion. He desired to be present but has found it impossible, and has asked me on his own behalf and on behalf of the State, to congratulate the members of the Medical Society of the State of New York upon this most interesting anniversary—a century of effort for the advancement of a science which is so essential to human life and to the alleviation of human suffering and the promotion of human happiness. I presume that the advancement and progress in medicine and surgery during the existence of this Society has been in truth greater than the progress in any other science, not excepting electricity itself. What was to-day a mere incident in the ordinary practice of the profession would have been thought one hundred years ago to have been something impossible, to reach into the miraculous. This century has represented serious thought and patient work, not only of those present, but of the thousands upon thousands who are not here, who have made contributions to this science and to this Society, and who have passed on to their own reward. I doubt if any profession has contributed more to the advancement of the State, to that proud position of prominence in the sisterhood of states, than the medical profession. The great family of medical men is as wide as the world. Yet I have in mind the old country doctors up in the mountains of this State, who, year after year, in storm and in sunshine, have gone about their work of mercy and love with meager compensation, offer-

ing themselves up as willing sacrifices in order to alleviate the sufferings of their fellow beings. Their names may not be known in this Society, but they are true heroes, men who, if called upon, would lay down their lives on the field of battle in defense of their country.

I am gratified in having the pleasure of being present, not only to hear the words of our distinguished fellow citizens, but to extend to you all, in behalf of the people of the State of New York, greetings and hearty congratulations.

ADDRESS.

BY THE HON. ST. CLAIR McKELWAY,

Brooklyn, New York,

Chancellor of the Board of Regents of the University of the State of New York.

MY FRIENDS: I congratulate you on the attainment by the Society of an age so respected and so long. I especially congratulate you on the condition of reunion and of fellowship which has been made finally effective and which renders this anniversary significant of far more than the mere age of your organization which it attests.

There is, perhaps, a propriety in my addressing you. What you think of yourselves can be assumed. The effect of culture, character, competition and contention on a profession from which there is no appeal except to God and to the undertaker can be imagined and is evident. What an outsider thinks of you must be surmised. Officially I am an outsider; sympathetically and by your kind indulgence I am likewise an insider. I often addressed this organization before any line of demarcation was drawn in it. I subsequently addressed with polar impartiality, not only the organization which annually meets here, but also your temporarily separated brethren who met in Manhattan, which is sometimes incorrectly called New York. I invariably espoused the cause of the State Society, before the State Association. I did not hesitate to espouse the cause of the State Association before this Society. Some of your Society would rather be kissed than cuffed, but while each of you insisted on being right, the fact that your lines have been reformed on the basis of the old fellowship shows that the final right has been ascertained, and that lots need not be cast nor disputation multiplied as to which of the two was the more or the less right—or wrong—at the time of separation.

I shall hold no such inquest. I shall neither suggest nor provoke taunts. The best way to agree is to agree; the best way to maintain agreement is not to review or to revive misunderstandings which have been composed.

I am free to say that all doctors who meet here, and all laymen, rejoice that the causes of separation are submerged in the fact of reunion itself. The causers might study these causes. The study might furnish a text or a

pretext for vivisection. The process would be more industrious than benign. The conclusion would be more dogmatic than educational. It is enough—and it is gratifying—for us here and now to know that where there were two bodies there is now only one society, and that for the future as during a long past—prior to the separation—the physicians and surgeons of the State of New York represented in this society are and will be one.

Before proceeding to any debatable topics and before indulging in any polemical suggestions, permit me affectionately to recall the pleasures of our long fellowship. Your officers now are representative men. Your officers in the past were representative men, both in citizenship and in medical science. Who here can forget the refined presence, the simple nature, the profound learning and the steady principle of Dr. Hun? All here will remember the subtle wisdom, the tactful diplomacy, the strong character and the hypodermic personality of Dr. Grey, the great alienist. None of us can have failed to regret the recent loss of Dr. Didyma, who, full of years and of honors from his profession and from his fellowmen, lately fell asleep in his home city which regarded him as her most venerated son. Not a few of us here, going further back, will ever forget, while memory holds a seat and love a place in our hearts, Jacob M. Mosher, of this Capital. He was a wit among scientists and a scientist among wits; and as friend, companion, and helper of his fellowmen the memory of him is blessed. Nor is Wey, of Elmira, or Moore, of Rochester, or many a former officer of this Society lost to the mind. Their characteristics are cherished, their influence is still pervasive, and they can never be forgotten in the gatherings of their brethren.

I shall not suggest many names from my end of the State. They are well known to you and hardly need suggestion. Some of them were among my companions and to them I cannot without emotion refer;—they were my dear friends, and they were yours. We all know that Flint and Simms and Hutchison and Delafield and Mitchell and Crane and Chapman left upon the lives of their colleagues or of their pupils an influence which those colleagues and those pupils will, in turn, transmit to their successors, in coming generations. The light passes from hand to hand. The light is never put out. It is inextinguishable; it is immortal.

I do not know under what conditions you have accomplished reunion. I feel sure the conditions were candidly canvassed and are clearly understood. I can recall with distinctness the period of your separation, and I perhaps could technically hint at the questions which led to it. I know they were intense questions. I know that the differences which they aroused were sincere. I know that the severances which they caused were acute and

were grievous. I am sure that the respect, which each of the former societies had for the other, should have been unimpaired. We will do well to believe that those who stayed by, and held the fort, felt that they should do so in order to be faithful to those with whom they acted and to the obligations of service which they had laid upon the State and the State upon them. But we are here together again to-day and we are here to face, not the past with analysis or with acrimony, but the future with confidence and with hope.

Many things have occurred. The average of life has been lengthened. The list of diseases regarded as incurable has been made smaller. The percentage of mortality in many diseases has been appreciably lowered. So marked is this reduction that the revenues of your profession must have been perceptibly impaired, except in favored instances. Patients are fewer. Diseases are shortened in duration. The area of your lucrative practice and the period of complaints, which make your practice lucrative, have both become less. You may yet have to imitate the wise men of your calling in the East. You may have to charge, not for making persons well, but for keeping them well. Your income may have to be conditioned on the prevalence of health, and may cease to depend upon your restoration of ill patients to health. The wise book says: "Those who are whole need not a physician." The time may come here, as it has come in the older, and as seems to us, the less cultivated portion of the world, when the physician will need those who are well, and whom he keeps well, to be the measure of his income and the warrant of the confidence or of the competence he would command. Fancy could multiply comedies out of what may seem to you to be a paradox, but the paradox of one age may become the acknowledged principle of another. It often has.

Why life has been insured with more profit to the insurance companies than to the policy holders has become evident. Complaint against that inequality is widespread. But why the doctor, who keeps us well, should not be so well regarded as the doctor who makes us well, after we have made ourselves ill, might be sincerely instead of merely cynically or clinically asked. This is not so absurd as it may seem. Your profession has divided the patient into compartments. Your profession has subdivided its members into specialists. The general practitioner still obtains and many of him, I am glad to say, can be seen here to-night. But he is accustomed more and more to call the specialist into consultation with him. He can bring to the specialist a thorough account of the personality, the environment, and the life and the habits of the patient. The specialist can bring to him an accurate knowledge either of the complaint from which the patient suffers or of that organ of the patient which is particularly affected by such complaint. I recall Disraeli's definition of a medical consultation.

"It is," he says in *Lothair*, "an occasion in which the consulting physician endorses the policy of the superintending practitioner—and changes the treatment."

I shall seek to explore none of the mysteries of your calling, and to turn up none of the secrets of your prison house. If "I could a tale unfold whose lightest word" would accomplish all the dire results which the ghost of Hamlet both predicted and feared, I would not. But I would have you bear in mind that you must seriously consider whether, by your very skill, you may not be undermining your own practice and impairing your own revenue. Of course, those nations which we flippantly call heathen are indifferent to the ailing, impatient with the aged, and almost hostile toward the dying. So were the Greeks. So were the Romans. So is *not* modern civilization. There must be harmony between sensibility to suffering and the pride and power commanded, and demanded, by health. The new dispensation must ameliorate the hardness of the old; but must borrow from the old some of the value which that old placed on health, for the sake of health, and on the usefulness of health itself to the age and to the State. And your own profession must realize that the State—as that political expression is understood by this generation—takes, not your quarrels, not your differences, not your divisions, not your scholastic distinctions into account, but your patients, both as citizens and as sovereigns. It wants their votes. The State recognized different schools of medicine before they recognized one another except as belligerents. The State long waited for those now legally recognized schools to agree with one another, and when it found that they did not, could not or would not do so, then the State came in and did its own work of recognition. That accomplished more than was at first realized.

It shifted the center of power from over the heads of doctors to the State Government. A doctor thereafter became a State-made product. He remained a medical college pupil, but as a doctor he became, if not a product, then at least the creature of the State. New York well might lead off in this. Other States have since assumed the control of doctor-making in the final stage. The tendency among many States is indifferent to the ramifications or groups of your calling, whether they flock together, or, in the language of Dundreary, "flock separately." As already said, the State did not willingly, or suddenly, or violently assume control of the making or of the recognition of doctors. The State gave to them plenty of time and plenty of hints to do that themselves. These opportunities were not availed of. The schools which the State recognized as organized facts then collectively became the subject of State consideration. The State established for all intending surgeons and doctors a uniform degree of primary instruction. The State saw to it that the different schools, as nearly

as could be, established a uniform degree of direct medical instruction. That set the present system going in this commonwealth. On the whole it has gone on very well. It is not ideal, but it is practicable. It is also progressive. It carries in it for medicine a reasonable assurance against ignorance and for the patients against quackery. If, however, patients insist on preferring quackery they have a constitutional right to do so; but they must prefer it openly. It cannot be palmed on them covertly, under State auspices. This is a great gain.

The question is practically settling itself. It was supported, and it was opposed. There were arguments for it, and there were protests against it. These will long continue. Some things, however, must be regarded as established. The State is and will remain the guarantor of doctors. Practitioners or colleges are their teachers, and will remain so, but the State will be—to speak practically—the final doctor-maker, and its stamp must be the last affixed. Those who receive its stamp will be the only ones. "None others genuine" will be the excluding language or fact.

The present issue is not shall this be undone. It will never be undone. The pressing question is, shall more of it be done than is already done? Here is where the State must again come in. Without forecasting its action, I think one can tell where the State will take its stand. It is where we should all wish the State to take its stand, and, having taken it, to hold it. Nearly every year the State is urged to recognize some new division or branch of alleged medical theory or practice, in addition to those already recognized. Whether the State will do that or not is not for you or for me to determine. But it is for you and for me, as citizens of the State, to consider, and by our consideration to help this State to a right conclusion. The State should not and never will lower the standard of *primary* medical education. It should not appreciably lower the standard of specific and final medical instruction for those for whom it now maintains it. The State should insist upon the literary and clinical requirements of that instruction, and upon the final examination of the students of that instruction, under State auspices within the subjects to which each school is addicted and limited. Incidentally, that final examination is to a degree under the supervision of the Regents. The Regents do not name the examiners. They make selections of them from among the names submitted to them by the three medical divisions recognized by State law. Nor do the Regents propound the questions. They are propounded by the representatives of the different schools named to the Regents. The examinations are rated in the usual mathematical and impersonal way, which is admitted by all to be practically just.

The pleas made to the Legislature, and through the press, to the Regents and to the politicians for additions to the list of medical divisions to be recognized by the State are natural and are

pathetic. The sincerity of these appeals is manifest and should be cheerfully admitted, but they should really be addressed to the State. They cannot properly be addressed to the Board of Regents. That Board simply receives orders from the Legislature. That Board has respected the orders it has thus received. That Board is limited by those orders. That Board never sought those orders; it never desired them, but it has never declined them. It has simply obeyed them. The Board, legally authorized and protected by the constitution, is personally named by the Legislature. Its policy of waiting the orders of the Legislature is alike loyal and logical. You, gentlemen, represent the senior and the more numerous and the more influential school of medical theory and practice. You are yourselves authorized to meet, before the committees of the Legislature, all applicants for further legislative recognition in the field of medicine. It is to the Legislature, and not to the Regents, you should signalize your proverbial preference of peace to war and of harmony to discord. You should leave to the Regents the execution of the will of the State. You should not expect of the Regents the retardation or the expansion of that will; but I can assure you that the Regents, as I have said, will favor the maintenance of existing elementary educational tests for intending students of medicine as a preliminary condition to the commencement of their studies. Should new applicants seek to avoid or to lower these preliminary tests, their prayer to the State to suspend or to reduce or in any substantial degree to evade these tests should not, in our opinion, and I am sure should not in your opinion, be granted, except on conditions to be freely understood. Should new applicants meet existing preliminary tests their claim to final State examination will remain for the Legislature and for the Governor to settle, and for the Regents, so far as they conscientiously can, to maintain a loyal regard to the ordered will of the State.

I have set forth these plain facts and have made these plain distinctions for a plain reason. The Board of Regents, of which I still have, for a short time, the privilege to be a member and the presiding officer, has been urged to support the application to the Legislature of interests and of organizations which claim a medical recognition that the law does not at present allow or extend. My colleagues and myself have found life made more lively than we could wish by appeals, and are conscious that the appeals themselves have behind them a considerable body of sincere opinion and of natural sentiment. We have been just as earnestly urged to repel this sentiment as to recognize it; just as earnestly urged to oppose it as to favor it.

The whole situation grows out of the State's assumption of the conditions to determine both preliminary and final educational tests in medicine and in surgery, in lieu of leaving, as in the past, the determination of them to the different,

and to the differing, medical schools themselves, which were unable to agree upon them. It is natural for those benefited by present conditions to wish to retain them and to prevent others from sharing with them. It is natural for those who would also share them, but who do not, to try to obtain them. The Board of Regents is thus beset both by the privileged and by the unprivileged. It is made very conscious of the existence of both and of its own bombardment by both. We shall never presume the State will reduce its preliminary educational tests. As already frankly stated, we do not believe the State should, nor can we presume the State will, reduce its final professional educational tests. It should require everyone to know the how and the why and the effect and the purpose of what he proposes to do, and should then allow him medically to do nothing else, under State auspices. Frankly, should the State do less than that, the Board of Regents could well ask the Legislature to relieve it from all the medical work delegated to it, and unasked by it. Like work, however, has been delegated to us in the case of other learned professions. The improbability that the State will lower its standard is as plain to us as the fact that the State should not do so.

But there can be no reason for supposing that, given an equal degree of preliminary knowledge, and given an equal standard and an equal period of scientific education, the Board will be inhospitable to any new claimants for medical consideration by the State who ask for what is safe, just and fair. The career of organized medicine has been marked by many advances. It has been signalized by many enlargements. It has been modified by many classifications and sub-classifications. These have taken effect upon medical and surgical study and practice. All these facts justify the supposition that evolution has not been brought to a stop, and that "the end" has not been written against any branch of scientific study or practice.

I know these questions have been threshed out before, but there is need to thresh them out again. That must probably be done this very winter. Legislators and school men have been urged with uncommon vigor to lower the standards, on the one hand, so as to let in the ill-prepared, or so to enforce the standards, on the other hand, as to make the present beneficiaries of them their exclusive possessors. On the one hand, we have been asked to vulgarize the standards; on the other hand, to monopolize them. The State has the power to do either. I confidently predict the State will do neither. No steps backward have been taken by the State in medical education. Steps forward were long too few and too slow. At certain times, they were too many or too quick, but the average maintained, while it may be raised, or made less inelastic, will never be reduced, and that average here is less than that of more boastful states.

There is a series of propositions which grow

out of the general statements which I have advanced, but which have a relation to the subject we are directly considering. Institutions, in New York for instance, on private foundations, in a few instances, illustrate co-education. State institutions, in Western commonwealths, illustrate that those states will not willingly recede from it. Former generations of voters in newer states, for reasons of economy, introduced co-education. For reasons of progress and of justice—and no longer merely of economy—they have carried co-education from the primary clear through the university state. They love the system. Their fathers and their mothers were educated under it. This generation gratefully, loyally and proudly maintains it. Our own commonwealth has not yet provided the capstone of free university education, to crown the foundations of free primary and secondary education. But, right or wrong, the plea is spreading that our own commonwealth should do so.

The commonwealth is richer than all private wealth. From this fact grows, and is growing, the belief that the State should freely bring within the reach of all its children everything that private wealth can bring within the reach of its beneficiaries. "The best is alone good enough for all." This condenses the policy of the Middle-Western, North-Western and the Pacific States. This, perhaps, prophesies the pregnant purpose of the awakening South. The belief is gaining that New York itself will come to the substantiality of this. Some of us may not live to see it. Some of us may make our lives bitter by the futile violence of unproductive activity against it. But it will come, and we will go, and the memory of us, when we are gone, will be sweet, in proportion as we shall have foreseen and welcomed the larger and the better day, or the era will pass us unhonored and unsung if we live, and we will die disobedient unto the heavenly vision. The free provision of the highest education by the State is, I think, ultimately inevitable. Whether or not it should so be provided for the sexes in separate institutions, or co-educationally, is a detail. The detail is not important.

This has a relation to medical education. This State insisted on prescribing primary standards to its own schools, and then monopolized the control of intermediate education through its own Boards. After doing both, it reserved to itself the licensure of medical, legal, dental, pharmaceutical and other learned practitioners. Whatever it may then have contemplated or intended, it then created the demand that it should eventually provide and control the institutions themselves, whose human produce it visés, examines and licenses. I am not unaware of the amount of property involved in private ownership of scientific school foundations. Neither am I unaware of the very gradual process of public opinion and of public action. Generations will probably pass away before the State will completely control the education of the children,

from the kindergarten through to the university; before the State will teach and train as well as make doctors, just as it now finally examines them and exclusively commissions them. Nor should one for a moment conclude that there will be, or that I would advocate, the abolition of private foundations. There will be a division of higher learning between State foundations and private foundations. Such a division already obtains in commonwealths which have long conducted State universities. Nothing essential, however, will eventually be beyond the reach of the children of the commonwealth, at the hands of the commonwealth, which is now within the reach of the children who can command the benefits of private wealth. There will be no compulsion or confiscation, but there will be discrimination. The State must eventually put within the reach of all what private endowment or private munificence now puts within the reach only of some.

My friends, whether we realized it or not; whether we foresaw it or not, this became inevitable when high schools, normal schools and normal colleges were established in the process of public education. The State slowly parted with the idea that it was bound to give only the minimum of education to its children. It slowly realized it was bound to place within their reach more than as much knowledge as would keep them out of jail, if they acted on it, and justify the putting of them in jail, if they refused to act upon it. The State slowly grew to the idea that it should raise the schooling of its children by its own hands, at its own cost, by its own teachers, from the minimum to a modicum of education. But when the people were providing the modicum of education, the certainty, at some time, they would provide the maximum of education became apparent. The State now says, "No one shall be a doctor or a lawyer or a dentist or a pharmacist or an accountant until I shall have examined him and until he shall have been commissioned by me." When the State said that, with the approbation of the callings or of the professions therewith concerned, the State gave entrance to the idea that it might control, and that it might conduct, institutions of its own like unto those from which are now sent up to the State graduates upon whom it stamps its own imprimature. Only those whom the State thus authorizes and credentials can deal with human rights, with human life, and with what is affected by an intimate relation with human rights and with human life. There can be, and there ought to be, a degree of resistance to this, for the resistance to this will be salutary. Such a resistance will of itself be desirable to slow the process which should not be too fast. There is, and there will be denial of this. The denial itself will be desirable, to bring out the agitation which is the spiritual and intellectual and moral warrant or prelude

to the necessary education. Protest against this will be desirable, to open the way and to preview the steps necessary to the establishment of this. Protest will give to beaten objection itself the satisfaction of knowing that it had its day in Court, of knowing that it was not brutally overridden by the impact of unreasoning, impatient and irresistible insistence.

Much that I have before spoken to you in former years, and written about you in past times, can be quoted quite contrary of this. "When I was a child I thought as a child, I understood as a child; when I became a man, I put away childish things." Since then I have seen the State in its cities establish kindergartens and high schools over phrenetic protests against both. I have seen the State establish normal schools and normal colleges against the contention that "To teach teachers to teach is as absurd as it would be to teach mothers to nurse or children to plait." Well, the mothers of the overworked poor are now taught how to nurse; indeed, their children are even nursed for them amid clean and sweet surroundings, while the mothers are away at hard work in congested city centers. To-day the children of the slums are gathered in kindergartens or in city playgrounds. To-day they are tenderly taught even how to play, instead of leaving the instinct for play to the outcome of chance, amid conditions of confusion and of dirt and the immunities which combine to make for sin. He Who took the little children in His arms and blessed them and said of them, "Of such is the Kingdom of Heaven," has touched city, county, State and National life, and the human heart, with His sublime spirit. He has made much of our life the almoner and exponent of His life to many of His little ones. Very significantly, the race of His mother, in our free American cities, has been in advance of other races to take its children in its arms and to bless them with the blessing of education; tenderness and training; putting their little feet on the paths of right endeavor and leading them tenderly over the steppes of elementary learning to the flowery plains of trained culture.

We cannot arrest this manifest tendency if we would. Eventually the State will be as bound to complete and to perfect what it begins as the moral and spiritual law itself, in pursuance of which the State acts, is bound imperceptibly, invisibly but omnipotently, to have its way in the heart of things, and in the hearts of men! This will not be a socialism that levels down. This will be the spiritual regnancy which levels up. Nor will the State be discouraged should the facilities it must ultimately provide be at first availed of by a very few. A splendid hospital is a public pride and a public benefaction. It is not a failure if it be not full of patients. It is not a failure if it does not "pay" in the things of the market;

it is an expression of the things of the spirit; it makes health and happiness to the suffering; it attests the justice, the altruism and the love of the State for humanity at large.

The few in our commonwealth who might go at first to such colleges or such universities—which would involve the teaching of medicine by the State—would not affect the duty of the State to provide for them; and the few at first who might attend would not long deter the children of the State from availing themselves of these privileges and rights in larger numbers. As the State is richer than all its private wealth; and as all its private wealth is protected by State laws, and bequeathable only by State permission; and as all State law is conditioned on State justice, and is self-maintained by State strength and by State conscience, so should, so will, State institutions of higher learning, and of the highest learning, be at least as good and as fine as any like institutions upon private foundations. The higher supply could at first be limited to the measure of the higher demand, but the demand would shortly increase, and the supply would be correspondingly augmented. I have, before other institutions in the past, enlarged on the benign factor of privation as a stimulus to the soul of the poor, bent on getting learning, but I am now satisfied that a poor child in a rich State is entitled to free education to the limit which is at the command of those not poor.

This may cost a season of protest in colleges and in hospitals, and may cost the State some reviling on account of both, in the minds of those to whom private foundations are a form of wealth or income. That is natural; that must be allowed for; it should not be forgotten, however, that from the State or from its municipalities, private medical foundations already receive a large measure of public money. They undoubtedly earn it. They undoubtedly deserve it. But the argument against State ownership and State conduct of hospitals and medical colleges could better be urged by others than by State beneficiaries in control of such more or less subsidized institutions. State institutions of this kind need not, as already said, displace private institutions of this kind. There are colleges and universities on private foundations in commonwealths maintaining State colleges and State universities. There could, there should, there will be hospitals and colleges upon private foundations, should this State establish others on its own foundations. The State could have relegated all higher education to private initiative and support. The State long did so. By refusing longer to do so, the State opened the way for itself as an educator from the foundations to the pinnacles.

Government is inexorably logical. Government as large as that of New York State may be halted from expansion. It may be checked by temporary considerations. But it will not long be halted or long be checked. Government is the

ultimate of public opinion. Public opinion in the end is expressed in government. The laws that cross that public opinion are changed. The constitutions that stand in its way are mended, or are interpreted, in line with it. There are few things more slow than the outcome of public opinion into law, within, around, over or through constitutions. The fathers—as if deliberately—sowed the path of progress or of change with obstacles so as to check the process of change itself. But the change is certain, though slow. The present trend of progress is manifest. It is toward the doing for the people by the Government of several vital things which Government has heretofore been disposed to leave to private initiative or to private combinations. The liberty thus accorded to private initiative or to private combinations has been abused. The shores of our time are lined with the wrecks of character and of manhood that could not survive the pressure of inquiry or live in the white light of impartial justice. Political parties to-day are desperately trying to evade the consequences of their own defaults. They are endeavoring to realign themselves around sham issues in mock contention. They are falling in many quarters to pieces under the destructive strain of spasmodic, desperate and panic-stricken insincerity. So the courtiers of King Canute in vain urged him to veto the incoming ocean. So did the shivering poltroon, pictured by the French artist, in the beginning urge the Creator "to conserve chaos." So did King George discard Pitt and Burke and lean on Lord North, only to lose his colonies and to make the bounds of freedom wider yet. In the light and under the force of the steady pressure of this ethical time, toward changed and better conditions and for new and purer instrumentalities—a pressure which can be charged with dramatic displacements and the reversal of many long established propositions—under the light and force of that pressure should be judged, and can be foreseen, the manifest destiny of the State to take much of the higher education, as it has already taken nearly all of the primary and secondary education, into its own hands. Complete medical education under State auspices may on these accounts be surely predicted and, what is of more importance, may be safely advocated and gladly accelerated and welcomed.

ADDRESS.

BY LEWIS S. McMURTRY, M.D.,
Louisville, Ky.,

President of the American Medical Association.

I DESIRE in the first place to express to you my pleasure, as a member of the Medical Society of the State of New York for fifteen years, at being present on this centennial occasion. I know from the programme what pleasure you will have in listening to the remarks of distinguished speakers who will address you. I know, too, how eloquently the felicitations of various members will be expressed to you upon

this happy occasion, when the profession of the State of New York has united after years of separation. I have great pleasure in being present on this occasion, and hearing these expressions, and participating with you as a member of the Society in its centennial celebration.

In the second place, I come especially to bear to you a message. As the official head of the National Association, I wish to express to you most heartily the felicitations of the profession in the entire country that you have now united in the State of New York, and become a constituent body of the American Medical Association; and I know in doing so I am but discharging a duty, and I would be remiss in my duty if I failed to do so. Gentlemen, sometimes it is well that we go from home to hear the news. Sometimes one from outside can measure conditions on the inside better than those who are participating in its affairs. And, if I may be permitted as one from a distance, I desire to express to you the great concern that the profession of the entire United States has had in the proceedings which have been going on for some time in your State, and which culminate here this morning. The Medical Society of the State of New York in 1847 appointed a committee, and called a meeting of the medical men from the various States, to unite and confer as to the best method of organization, with the view of advancing the interests of medical education in the United States, and considering other matters which concerned the profession. This act, originating in your Society, was the foundation of the American Medical Association. You are the parent body of the largest medical association that exists in the world. The anomalous and unfortunate conditions that have since arisen could not have been anticipated. You created this Association, and with your proud and fostering care it passed through the tender years of infancy and reached adolescence. The conditions that you look back upon could not have been anticipated, conditions doubtless that could not have been remedied. But times change, and we change with them. In the evolution of the affairs of the medical profession in America, changes have come until the American Medical Association practically came back to its mother. That relation was a tender and strong one. And you, with good feeling and spirit, came forward; and you have now returned and joined with your child that has outgrown you.

Gentlemen, it would be improper for me to occupy your time with a great many interesting suggestions, because of the programme, which is full. Perhaps upon some other occasion during the meeting I may have an opportunity to speak to you about the American Medical Association and the work it is doing. I want, however, to present one thought. Everybody in this twentieth century can discuss the advantages of organization. It prevails in all departments of human effort. In every avenue we find organ-

ization as a means of combining individual efforts. We would be out of touch with the world without organization. The development of medical science and the diffusion of medical knowledge, the improvements in sanitation, the enactment of sanitary laws in the state and national legislatures, quarantine, and everything that pertains to public health, the improvement of medical practice, the development of original work, have all been achieved through the efforts of certain individual members, whose hands should be held up by the great profession of which they are a part. In the State of New York, the center of civilization in America, you have not gotten one-half of the profession into the county or State societies. Of 120,000 physicians in the United States, not more than forty thousand of them are organized into societies. We have no concern about the advanced men of the profession. The Medical Society of the State of New York in its meetings has a few hundred men. These men you need not worry about. They are authors, teachers, advanced practitioners, all cultured men. We must reach out to the men not in the medical society, and lift them up or bring them in. You should get the doctor who rides with his saddle bags. Get not only the doctor in the small towns and hamlets, but the busy doctors in the large cities as well, who have not taken an active part in the Society. It is the development of such matters, and the bringing of the whole profession into one composite federation that will enable us to act together, and so make the organization better, and make it stronger, more erudite and more beneficent, than has ever been known in the past. It is to this work that I beg, as a representative of the National Association, to welcome you and to bespeak your co-operation. In doing so I cannot but express the delight with which every member of the medical profession of the United States, who loves his profession, will learn of the proceedings here. And the old Medical Society of the State of New York now comes again into its own, returns to the child which it created, and takes its place as the bright star in the constellation of medical organizations.

ADDRESS.

BY WILLIAM WILLIAMS KEEN, A.M., M.D., LL.D.,
F.R.C.S.,
Philadelphia, Pa.,

Ex-President of the American Surgical Association.

IT seems to me that what we should do here is not only to consider alone the history of the past century, taking account of stock of the achievements of medicine in all its departments, but also, so to speak, to write the history of the next century, upon which we are now entering, in which this Society will have a large part, larger even than it has had in the wonderful progress of the century which has passed. It has been my pleasure to know the medical

profession for more than forty years; and it is a wonderful history. As I look back upon it, and contrast the old surgery and old medicine and old obstetrics with the present, I am amazed. I am not discouraged, but, on the contrary, I firmly believe that far more will be discovered than in the past. I often say to my boys at the Jefferson that I envy them. I was born forty years too early. I would far rather be with them in the twentieth century than in the nineteenth. And the young men here before me, and the young men all over the State and country, are the young men who are going to do the best work in the next century. Look at what has been done during the last few years; look at the work of Crile and Cushing in their work on blood pressure and the use of adrenaline; look at the work of Meltzer in his researches on magnesium sulphate as an anesthetic; look at what has been presented during the last few days by Rogers and Beebe on the serum which will conquer exophthalmic goitre, as the serum treatment has conquered diphtheria. These are but a few of the prophets of the dawn. I tell you we are entering upon a glorious stage, and I would that I were a young man to take part in it. The work to be done by so many young men will further the interests of humanity and bring comfort and health to the sick and suffering.

ORATION ON MEDICINE.

BY SAMUEL B. WARD, A.M., M.D., PH.D.,
Albany, N. Y.,

Ex-President of the Medical Society of the State of New York.

THE Statute which made possible the incorporation of this Society was passed by the Legislature on April 4, 1806. The Society was organized on the first Tuesday in February, 1807, and consequently this meeting closes the one hundredth year of its existence.

It would appear that at that time medical attention was largely directed toward climatology and atmospheric and telluric influences, for at its second meeting in February, 1808, the Society offered two prizes for the best dissertations on the topography, geology and mineralogy of any county in the State, together with an account of the prevalent diseases in such county. The addresses of President John Rodgers in February, 1813 and 1814, are also largely devoted to the influence of atmospheric changes in producing and modifying disease, and it is surprising how ingeniously and satisfactorily he accounts for almost all manner of complaints. For instance: "Spotted fever appeared after cold and moisture united, and disappeared when warm weather came on." And again: "In our bills of mortality we find phthisis pulmonalis more frequent than formerly. The modern mode of dressing, particularly among young females, has been blamed by some as a great cause of this mischief; but

the state of atmosphere, and the greater variations of weather than formerly, have given a greater force to pulmonic complaints." And again: "The cold and moisture disposes to scurvy, as on the shores of the Baltic and in Holland."

Again in 1815 attention was called "to that section of the by-laws which requires every member to present to the Society all proper information respecting the geography and topography of the county in which he resides, together with an historical account of the diseases which prevail at any season of the year."

Again, in 1819 President John Stearns dwells at length in his annual address on this same point, although he characterizes as absurd the theory "That the globe possessed living faculties; the mountains were its respiratory organs; the veins of minerals its abscesses, and the metals its diseases." But he also says that Mr. Webster has brought forward enough facts "to induce a belief that the real source of many epidemic diseases must be traced to the interior of the earth. That subterranean fires are continually decomposing the materials of that region, and occasionally ejecting their gaseous results into the atmosphere, are facts corroborated by history, and by every volcanic eruption on its surface.

The conjoined influence of the celestial bodies, in aiding this effect, and also in the production of earthquakes and volcanoes, must be admitted by all who adopt the Newtonian theory of tides. Whether this influence is exerted through the medium of gravitation or of electricity is still enveloped in the arcana of nature. But it is an historical fact that such phenomena are succeeded by epidemic pestilential diseases, and probably produced by the deleterious gas which accompanies such eruptions. This may be the origin of those epidemics which, from the plague of Athens, to the yellow fever of New York, have been the subject of controversy in all ages, and which some, unable to explain, have therefore ascribed to a divine influence. This may be the 'To Theon' of Hippocrates."

A third prize was also offered in 1808 "for the best dissertation on the causes and best method of preventing and of curing the *typhus mitior*, or low nervous fever, which prevails in different counties of the State."

In 1809 a committee was appointed "to petition the Legislature for a law to prohibit the inoculation of the smallpox in this State," and in 1810 the County Medical Societies were requested to join in the effort. Vaccination, although only introduced by Jenner in 1798, had manifestly been thoroughly accepted in this State. Not a word is found in the printed transactions on this subject until President Romayne in 1810 refers to Jenner as having "taught us to elude a loathsome and often fatal disease, the Small Pox." In other parts of the

country, however, vaccination was still exciting great interest during the first years of our Society, and Volume I of the Medical Communications of the Massachusetts Medical Society contains a report covering over fifty closely printed pages, read June 1, 1808, and signed by John Warren, Jackson, Dexter, and John C. Warren. The law to prohibit inoculation was probably desired because the Society was convinced of the superior advantages of vaccination.

President Rodgers' address in 1815 was devoted to "puerperal" fever and was the first of several papers in our Transactions devoted to that subject. He admits its prevalence in large hospitals and says that this "has induced the opinion with some that it was a specifically contagious disease." In his judgment it is due to "the foulness of air in the wards, added to the collection of bad air under the clothing of the patients." He regards it as belonging to the genus *synochus* at first, quickly running into *typhus*; advocates light bed-clothes and the admission of fresh, cool air, with the administration of cool drinks and baths; deprecates routine bleeding; strongly advocates ipecac as an emetic and calomel as a purge; advises milk and lime-water as a diet, and during convalescence, wine and bitter tonics.

This same topic is the subject of President Eights' address in 1832. He says that at that time the annals of medicine of this country did not record a single authentic instance of this disease appearing as an epidemic. Quoting from writers, mostly foreign, he comes to the conclusion that it is infectious; that many cases occur in the practice of one physician, or nurse, while their neighbors escape; and that epidemics of scarlet fever and erysipelas are usually synchronous. Curiously enough his final word on this point is "Puerperal fever I consider in all cases to be an idiopathic or original disease." As to treatment he says: "It is a true remark that much harm is done by bleeding too little, but seldom by bleeding too much." He strongly advocates the use of cathartics, hot fomentations to the abdomen, diaphoretics and calomel, but objects to blisters, oil of turpentine and emetics.

Dr. Oliver Wendell Holmes' celebrated essay on this same subject was read before the Boston Society for Medical Improvement and printed in the *New England Quarterly Journal of Medicine and Surgery* for April, 1843. Starting with pretty much the same set of facts, Dr. Holmes arrived at a precisely opposite conclusion and one which is now universally accepted as correct. Nevertheless his position was hotly and acrimoniously combated by no less men than Professors Hodge and Meigs, of Philadelphia, in 1852 and 1854. Dr. Holmes' paper was republished in 1855 and soon thereafter began in this State, as elsewhere, to have its good effect in preventing this dire disease.

The annual meeting of 1818 was notable for the introduction and passage of a series of resolutions warmly advocating the formation of an American Pharmacopœia under the auspices of the several incorporated State medical societies and medical schools in the country.

The annual address of Dr. Alexander Coventry, in 1824, shows that at that time the attention of the profession had been definitely called to the fact that fevers and other diseases were often due to purely local causes; were endemic and not epidemic; were due to filth and other local conditions. His work was in the right direction and characterized by acute and accurate observations. He visited the city of New York in 1785, and says: "I confine myself to some observations on its locality, which, in point of salubrity, I feel warranted in asserting is superior to any city of magnitude, of which mention is made, either in modern or ancient history." "The citizens of New York at that time bore in their faces the bloom of health and no signs of endemic disease were discernible in their looks." Ten years later business called him to the city again, and he found that "the inhabitants bore the marks of endemic disease," which he attributes to the fact that "many acres had been gained from the sea, and converted, as I was informed, not into airy land, but a mass of putrefiable stuff, with which the most noxious swamp in Genesee could not compare." In 1820 he found matters still worse. He then proceeds to warn New Yorkers of the inevitable results of persisting in the course they were pursuing, and lays out an interesting sanitary scheme for the growth of the city. This involved the building all along the river-front of a wall of solid masonry, laid in water-proof cement, the space behind it to be filled in with primary rock or clean ballast, on which capacious warehouses could be erected, and from which wharves could be built out into the stream. "A deep and wide cut in the direction of Canal Street, from river to river, so that the tide might pass, ought to be made." Curiously enough he recommends that the sewers be all filled up and "every perishable substance left on the surface, where it must soon be dried by the sun, or be removed by the scavenger."

In view of the recent discoveries concerning the etiology of yellow fever it is interesting to note that President Coventry quotes from the *Revue Médicale*, for February, 1823, the report of an experiment of M. Guyon, of Port Royal, Martinique: "M. Guyon put on the shirt, while yet warm, of a man with yellow fever, wore it two hours, inoculated himself repeatedly with matter from blisters, and drank the black vomit; he went into the bed soiled with various excrement of a soldier sick with yellow fever and lay in it for six and a half hours. This patient died, and in his stomach was found a large quantity of black matter, yet M. Guyon remained in perfect health. It would be a waste of time to re-

capitulate the innumerable well-authenticated proofs of the non-contagious character of yellow fever."

During the first twenty-five years after the introduction of vaccination this method of protection against small-pox appears to have grown steadily into favor; but at about that time anti-vaccination cranks seem to have developed, and, as you all know, the genus has not even yet become entirely extinct. In 1831 Dr. Jonathan Eights, then president of this society, devoted his annual address to the consideration of what he called "Vaccina, Cow or Kine-Pock," in all its respects. His paper is almost a classic. His description of a genuine vaccination is admirable, and he points out definitely how the observer may distinguish between it and what we now know to be a streptococcus or staphylococcus infection; and his arguments in proof of the protective power of vaccination and the safety of the procedure, when the virus is properly selected and the operation properly performed, are incontrovertible.

With the session of 1831 ended the first quarter of a century of our Society's existence, and a few words concerning the progress of medical education during that period may not be out of place. Prior to 1806 the laws regulating the practice of medicine in this State were most lax. Almost any one who could induce others to trust him was at liberty to practice our art. But the act of April 4, 1806, authorized the qualified physicians and surgeons of each county to form themselves into a society, elect officers, make needful rules and appoint a Board of Censors to examine and license all applicants for admission into the profession in their respective counties. The applicant had to give evidence of having studied for three years with some practitioner, and of having reached the age of 21 years.

The same act provided for the formation of this Society, and gave it the power to appoint a Board of Censors in each of four districts, into which the State was divided, with like powers to license candidates who might pass examinations.

In 1818 the Legislature passed an act increasing the term of study to four years from which, however, one year might be deducted if the student had pursued classical studies during that length of time, after the age of sixteen years, or had attended a complete course of lectures in all the branches of medical science in a medical college of this State or elsewhere.

The next important law was that of 1827, which made compulsory three years of study and attendance on two complete courses of lectures of four months each, the last in the college by which he was recommended to the Regents of the University. He must also file a copy of his license or diploma in the County Clerk's office and become a member of the County Society of the county in which he resided.

At that time there were but twenty medical

colleges in the United States. Of these, two were located in this State—the College of Physicians and Surgeons in New York City and another of the same name at Fairfield, in Herkimer County. The former had seven professors, the latter five. Both schools were under the supervision of the Regents of the University, and their diplomas carried the same right to practice physic and surgery as did the licenses granted by the Boards of Censors of the State and County Societies.

For many years prior to the formation of this Society medical writing was devoted almost entirely to the promulgation of absurd and contradictory theories of disease. The solidists and humoralists had their day, to be succeeded by Boerhaave, Cullen and Brown. As late as 1790 Dr. Bush enunciated some principles, concerning which we quote his own words: "This system rejects the nosological arrangement of diseases, and admits only of a single disease, consisting in different forms of morbid excitement, induced by irritants acting upon previous debility. It rejects, further, an undue reliance upon the powers of nature," etc., etc.

In his introductory address before the Medical School of McGill University, Montreal, delivered September 19, 1905, Dr. A. Jacobi most truly remarks, "The actual progress of medicine began when the influence of mere theorizing was broken."

Time would be wasted if spent in an argument to convince this audience that medicine is one of the natural sciences, in fact, the most difficult and abstruse of them all, and that it can, like all the rest of them, be built on a secure foundation by the inductive method only. Facts must be observed and observed repeatedly and with the greatest care to avoid the introduction of errors. Grouping these facts, and reasoning upon them leads to the formulation of principles and general laws. It is noteworthy that in our transactions not a single theoretical paper is to be found. Every one of them deals in the observation of facts along some line or other. It is true that the conclusions were not always correct; and the lesson to be learned from these errors is that before we begin to reason and draw conclusions we must be sure that our supposed facts are really facts, and that they are all the facts bearing upon the subject under consideration. Probably no motto has led to a larger number of erroneous conclusions than *post hoc, ergo propter hoc*.

During this quarter of a century one notable aid had been given to our methods of diagnosing disease. It was in 1819 that Laennec's great work on auscultation was published in Paris. In 1821 it was translated into English by Dr. Forbes, of London. The claims for the value of this method were at first met with indifference, scepticism and ridicule in Europe; but Austin Flint* says: "The writer can testify that, as far back as

* First Century of the Republic, p. 421.

1832, the facts of auscultation entered largely into medical teaching." Skoda published his monograph on auscultation and percussion in 1839; but as late as 1845 Dr. Phillip, of Berlin, ridiculed Skoda's work. Considering the inestimable value of this method of diagnosis and its constant use to-day, it certainly seems extraordinary that so many years could have elapsed before it gained universal recognition.

It was during this same period also that percussion became really useful, in connection with auscultation, when almost simultaneously Skoda, Piorry, and Roy introduced the mediate method. The dulness of hydrothorax and ascites, and the resonance of pneumothorax and tympanites were known to the physicians of ancient Greece. Auenbrugger, in 1761,* published the first systematic work on the subject; but it attracted little attention until translated into French by Corvisart, Napoleon's physician, in 1808, with some comments appended by himself. Skoda retranslated Corvisart's translation and comments. Auenbrugger was familiar with immediate percussion only.

It was during this quarter of a century also, from 1825 to 1832, that Dr. Beaumont made his observations on Alexis St. Martin, and gave to the world the first satisfactory study of stomach digestion.

Up to and including 1831, our Transactions contain nothing of a scientific nature save the annual addresses of the various presidents. With 1832, the beginning of our second quarter-century, the volumes increase greatly in size, contain essays to which prizes had been awarded and other important papers read at the meetings; much the same general form as the recent volumes with which we are all familiar.

The two important papers read at the meeting in 1832 were the one of President Eights on Puerperal Fever, already referred to, and the prize essay on Delirium Tremens, by Dr. James Conquest Cross, of Lexington, Ky.

In June of that year, Asiatic cholera made its appearance in epidemic form in Quebec, and spread rapidly over this part of the country. In 1833, the two important papers treated of this epidemic. The first is by President Thomas Spencer. He locates the first epidemic of cholera at Jessore, a city nearly one hundred miles north-east of Calcutta, in 1817, though similar ones "had been described by Hippocrates, Sydenham, Morgagni, and a host of other distinguished teachers, and practitioners of our art." He follows Cullen in defining cholera as "vomiting and frequent purging of a bilious humor, anxiety, gripes, spasms of the legs." He follows Good's Nosology in defining *diarrhea serosa* as "watery looseness." The dejections almost entirely liquid, frequently metastatic, and still oftener produced by claterium, or other drastic purgatives. Sometimes urinous, occasionally "tinged with blood."

* *Inventum novum ex percussione Thoracis humani et signo abstrusos interni Pectoris Morbos detegendi.*

He regards the former disease the same as the latter, only "appearing under an aggravated and malignant form, as an epidemic." He admits his ignorance of the etiology of the disease, and says, "The first and moving cause of this, and all widespread epidemics, is known alone to Him, who has established those general laws by which universal nature is governed." His descriptions of the clinical history and gross post-mortem findings are most complete and accurate, and his manner of accounting for the symptoms most ingenious. In his judgment it is not contagious, but depends upon "the epidemic influence, intemperance, filth, poverty, indigestible meals, changes from heat to cold, cathartic drugs, and cholera reports, producing a sympathetic terror of the population." In the same volume is printed the report of Dr. Lewis C. Beck, who had the previous year been commissioned by Governor Throop to examine into the existing epidemic. He found that the first case appeared in Quebec, on June 8, 1832, and that the epidemic originated there as far as he could discover, as no previous case could be traced. He submits facts and arguments to prove positively that cholera is neither contagious nor infectious, and agrees in general with President Spencer as to its exciting causes.

Numerous other papers appear on the subject of cholera, all being obliged to admit, in speaking of its cause, that "a frank confession of ignorance is always more becoming than a labored attempt to conceal it." The contributing causes, already above alluded to as tending to reduce resistance in the individual, are most completely pointed out. It is also distinctly concluded that it is neither contagious, nor infectious through fomites. Dr. James R. Manley, of New York City, in a paper read in 1835, lays particular stress upon this point, sets forth the hardships which have been the results of certain rigidly enforced but perfectly useless regulations, and in the interest of humanity begs that they be abandoned.

In 1849 a second epidemic of cholera made its appearance in this State, and as a consequence the Transactions for that year and the following one contain several papers given up chiefly to arguments, *pro* and *con*, as to its being contagious. That a sick person in some way conveyed it to the well was clear; that it was not contagious in the same sense as smallpox and measles were, seemed equally clear to the majority; but no one as yet hit upon the proper solution of the difficulty.

From 1830 to 1840 intermittent and remittent fevers appear to have been quite common in those parts of the State where low-lying lands were being turned up for the first time, and several papers treat of these diseases. Very accurate descriptions are given of various localities where the diseases were prevalent, and the clinical histories of cases. In 1834, Dr. Alvin Foord read the Medical Topographical Report of the County

of Madison. His paper shows that at that time quinine was recognized as almost a specific, although we are warned not to give it while the tongue is still coated and the digestion disordered; cold affusion is highly commended in cases attended with "high excitement," and he calls attention to the fact that "popular remedies of various descriptions were employed, and often with entire success. . . . When no inflammatory disease exists, and it appears to be continued from habit, almost any remedy that makes a strong impression upon the system frequently arrests its progress, and thus a numerous class of remedies acquire a reputation as specifics. Many of these, such as hanging the disease upon a tree, by tying as many knots in a string as the patient has had paroxysms, and then suspending it, have their advocates, and frequently succeed. Thus it appears that the cure is sometimes effected by the influence of the mental upon the physical powers, a circumstance which seems to have been too little appreciated as a remedial agent by the medical profession. I have been told as a matter of fact that the paroxysms have been arrested, and the disease cured, by the subject of it climbing upstairs, or up a ladder, feet foremost, and descending in the same attitude that he went up." We may wonder whether Mrs. Eddy here discovered the germ of her alleged Science.

The first paper in our Transactions on the subject of Phthisis pulmonalis was the prize essay for the year 1825, by Andrew Hammersley, M.D., published in the volume for 1835. He says: "The prevalence of consumptive mortality, more particularly in this country and in Great Britain, has long been a theme of unfeigned regret to the philanthropist, and a cause of unmerited opprobrium on the medical profession." To show the mortality in the New England States, he quotes from the printed lists of the mortality of Portsmouth, N.H., from 1802 to 1811, which show 199 deaths from consumption in a total of 938, or over 21 per cent. He suggests, however, that it is probable that other conditions than true tuberculosis were included in the reported cases of consumption. His paper was a very complete one for its day, and contains some points still of interest. Among the causes that had been assigned as producing phthisis, he includes the following: "It was either some acrid, corroding humor produced in the brain, and, by some inexplicable means falling down upon the lungs, and destroying their texture; or it was the existence of some acrid or alkaline substance, or some acrimony of the blood, depending upon certain conjectural chemical changes. Even animalculæ have been supposed, by their irritating presence in the pulmonary tissue, to cause this disease." His main contention as to the pathology is "the existence of tubercles as the proximate or exciting cause of phthisis pulmonalis," and he warmly contends that it is not primarily an inflammatory disease, and never to be treated by bleeding and the like. He points out distinctly the injurious

effects of certain occupations, of deprivation of sunshine and fresh air, and the advantages of residence in a dry, clear climate.

It was in 1834 that a committee of three was appointed to look into the matter of the care, or rather the neglect, of the insane poor of the State. In 1835, this committee reported a memorial to the Legislature praying that a suitable building be erected and proper care instituted "of this unfortunate portion of our population." Thus was the seed planted for State care of the insane; the ripening of the fruit is within the memory of every one in the room. About this time several papers appeared in our Transactions on this subject, but the time permits of nothing more than this reference to them.

For some years after 1845 hydrotherapy was the fad of the day, as osteopathy is just now. The most extravagant claims were made for it as a universal panacea. John Balbirnie,* one of its advocates, says of it: "The treatment of disease now, for the first time in the various epochs and fashions of medicine, exhibits almost universal power, clearness, simplicity, certainty, beauty—attributes that assimilate it to the operations of the Divine hand. The water cure is founded on a rock, and all the winds and waves of persecution will in vain assail it." In commenting on this and other fads, of which the history of medicine is full, Dr. Bates likens the regular practitioner to the fixed star which twinkles only, but is the mariner's permanent and reliable guide, while the fad is the comet, attracting the attention of all the world for a short time, but never useful and soon passing into oblivion.

In his address in 1848, President Blatchford refers in enthusiastic terms to the organization, the preceding year, of the American Medical Association, and predicts for it a sphere of usefulness to the whole continent—a prophecy which subsequent events have fully justified. The same year a suggestion was made "to insist upon a knowledge of the French language (at least so as to read it readily) as a prerequisite to granting a degree." This is a clear indication of the supremacy of the French school of medicine at that time.

President Alexander H. Stevens, in 1850, gave an admirable address, setting forth the evils of the neglect of the laws of hygiene, the immense loss of life and of money thereby entailed, and urgently recommending the establishment of a State Board of Health. During the following years several good papers appear on this subject, and a standing committee on Hygiene and Medical Statistics became part of the Society's organization.

At about this time homeopathy began to flourish and many of the papers in our Transactions are devoted to exposures of its extravagant claims.

As early as 1818 a public meeting was held

* Quoted in Dr. Bates' paper, *Trans. Med. Soc. S. N. Y.*, for 1847, p. 31.

in New York City looking toward the establishment of a school for the instruction of deaf mutes, patterned after the Hartford American Asylum, which had been organized the preceding year at Hartford, Conn., under the supervision of the Rev. Thomas H. Gallaudet. In 1851 and 1852 Dr. Peter Van Buren read papers before our Society setting forth the necessity for State care of indigent deaf mutes. At that time only 160 were being cared for, scarcely more than one-tenth of the number within our borders.

The first mention made in our Transactions of the use of an anesthetic in midwifery is by Dr. George R. Burwell, of Buffalo, in a paper read in 1853. His statements throughout are practically those that are accepted to-day.

The year 1856 closes the second quarter-century of our Society's history. During that period medical work in this State was characterized by the systematic observation of diseases then prevalent—particularly cholera and typhus—and an effort, by getting together all the facts and reasoning upon them, to arrive at their causes and prevention. The popularizing of this method was of prime importance, even though the results were not as yet very encouraging. Our Society also took an active part in directing public attention to the very important matters of establishing a State Department of Public Health and institutions for State care of the insane and of the deaf and dumb. Its influence was also cast in favor of advancing the standard of medical education.

Our Transactions for 1858 contain three papers on cerebro-spinal meningitis, which had only a short time before appeared in this State in epidemic form, although it had been known in France for some twenty years. One writer hazards the opinion that it is caused by malarious exhalations; the other two content themselves with giving excellent histories of cases, without speculating on the etiology.

In 1859 a committee of this Society, appointed for the purpose of considering the subject of vaccination, reported that smallpox was more prevalent than at any time since its prevention had become possible, and suggested as a remedy the passage of a law "which shall authorize and empower the trustees of each of the several school districts of the State to exclude from the benefits of public instruction all who have not been vaccinated." Thus the credit of originating the present law on this subject belongs to our Society.

The Transactions of 1860 contain the first article on hypodermic medication, by James D. Sturdevant, of Rome. He assigns the credit of the discovery of this method to Dr. Alexander Wood, of Edinburgh, who published his paper in the *Edinburgh Medical and Surgical Journal* in 1855, although to Pravaz undoubtedly belongs the real priority. It was in 1860 also that a committee was appointed to urge upon the

Legislature the appointment of a State Commissioner of Lunacy.

Diphtheria made its appearance in epidemic form in this State about 1858, and the Transactions of 1859, and several years following contain articles on this subject. The only point of particular interest in connection with them is that there was still discussion as to whether it was or was not contagious.

Our volume for 1861 contains the history by Dr. A. G. Purdy, of Madison County, of a remarkable case in which "Her physicians, nurses, parents and neighbors, all concur in the statement that for about six years the suppression (of urine) has been complete; that for eight weeks past she has not had an evacuation of the bowels. I cannot say there is no deception in this case, but think the above statement substantially correct." These conditions are accompanied by a peculiar blackening of the skin, vomiting and expectoration of pieces of charcoal, and the like, and the patient was taken to New York City and there exhibited as "the charcoal woman." Our volume for 1863, in an article by Dr. Lewis A. Sayre, exposes the fraud and deception on the part of an hysterical woman with the connivance of her physician.

The same volume contains an important report by a committee of which Elisha Harris was chairman, urging upon the people of the State and its Legislature, the prime importance of systematic drainage for New York City and many other parts of the State. It was about this time that the treatment of peritonitis with enormous doses of opium came into vogue, having Alonzo Clark as its warm advocate; and Dr. Henry S. Downs, of New York City, publishes the case of a child ten years of age who in eleven days took 148 grains of morphia, besides opium in other forms, without the slightest symptom of narcotism being produced.

The first report in our Transactions of a successful tracheotomy in diphtheria is found in the volume for 1863, by Dr. William Gilfillan, of Brooklyn.

The volume for 1865 contains two articles on the Eye, one by C. A. Robertson, of Albany, and the other by Henry D. Noyes, of New York, and these mark the beginning of the era of specialties.

In 1867, at the instance of the President of the Society for the Prevention of Cruelty to Animals, a bill was introduced in the Legislature asking for the abolition of vivisection. Prof. John C. Dalton made an able address before our Society, and a committee was appointed to oppose its passage. Some of you present to-day will recollect how bitter the controversy was and how long it lasted. No serious impediment has ever, in this State, been thrown in the way of this most important means of increasing our knowledge of physiology and

pathology, although in 1875 Mr. Bergh vigorously renewed his attack.

In 1867 the dentists of the State assembled at Utica for the purpose of securing legal enactments tending to regulate their practice, and in the following year our Society, through a committee, memorialized the Legislature on the subject. You all know that the effort was eventually entirely successful.

In 1865 Dr. G. J. Fisher, of Sing Sing, began the publication of an article on Diploteratology, which was continued in the succeeding three volumes. It is by far the longest, best illustrated and most complete paper in all our Transactions.

Our volume for 1868 contains a report of delegates sent by this Society to attend the first International Medical Congress at Paris on August 16, 1867. The account they gave of their reception is quite amusing, and not at all flattering. They concluded, however, that there was enough of scientific interest to pronounce the meeting a success. At the same meeting Marey's sphygmograph, which had just been brought to this country by Dr. E. R. Hun, was shown to the Society by Dr. S. O. Vanderpoel. The first mention of the use of carbolic acid and of glycérine occurs in this same volume.

In 1870 a resolution was passed by the Society and a copy ordered sent to every medical school in the State, expressing the opinion that it was necessary to make "didactic teaching and clinical instruction in insanity and all other cerebral and nervous diseases obligatory as a part of the curriculum of study. In the same year an effort was renewed, which had failed in the three preceding years, to secure legislation making compulsory the registration of births, deaths and marriages. In the same volume is published a paper by Dr. Wm. J. Orton, of Lisle, urging the view that one of the causes of tuberculosis was probably of a zymotic nature, as suggested by Dr. Budd and others, but that an excess of phosphorus in the system was probably equally essential.

The volume of 1871 contains a paper, quite new and important at that time, by Dr. Joseph G. Richardson, microscopist to the Pennsylvania Hospital, on the recognition of the elastic tissue of the lung in the sputum, as a means of diagnosing pulmonary tuberculosis. The article is noteworthy also as being the first I have found, in a careful review of our publications, in which a patient's temperature was accurately noted in degrees Fahrenheit. He says of a tuberculous patient's temperature, "It was never found to be below 101 degrees and was frequently 104 degrees." This statement reminds us of the vast aid which the profession received at about this time from the introduction of the clinical thermometer. It was in 1870 or in 1871 that my friend, the late Dr. Lockwood DeForest Woodruff, soon after returning from a visit to Europe, presented me with a black morocco case. On opening it I found it to contain a pair of clinical thermometers—the first I had ever seen. They

were nine or ten inches long; one was straight, for use under the tongue or in the rectum, the other bent at an angle, so that when the bulb was in the axilla the stem would lie flat across the chest. The graduations were not on the glass, but on an ivory scale attached to each. The stems were cylindrical, and the very fine column of mercury was not magnified, as it now always is, by a convex lens front. They were not self-registering, but had to be read while still in position; in the evening, or in the half light of a sick room, and especially if placed in the rectum, this was no easy matter. Still I remember well how proud I was at being the possessor of the best instruments of the kind then in existence. The cost was twenty or thirty times that of the perfect little instrument of to-day.

The publication of Wunderlich's work in 1869 (*Die Verhalten der Eigenwärme in Krankheiten*) gave an impetus to the study of the relation of temperature to disease, and he and Liebermeister deserve full credit for compelling the attention of the profession to this most important aid to diagnosis, prognosis and treatment. The subject was not, however, entirely a new one, for Boerhaave and Van Swieten had referred to it, and Currie had recommended hydrotherapy for the relief of excessive temperature.*

Before 1872 the practice of venesection had by degrees become almost obsolete; but in that year a paper was read by Dr. A. W. Tupper making a strong plea for its retention in suitable cases, and claiming that there were many more such than the practice of the day would seem to indicate.

In our volume for 1874 appear two papers by the late Dr. S. O. Vanderpoel, one on the General Principles Affecting the Organization of Quarantine, and the other on the Transmissibility of Yellow Fever and Cholera. His views were boldly stated and supported by an abundant array of facts, though not in accord with such as had been previously generally held. He contends that while yellow fever is undoubtedly transmissible, it is *not* contagious, from a person, as smallpox is. He points out that the germ is frequently confined to the holds of the ships, where the bilge-water has access, and exerts its influence only after the hatchways are opened. He points out that it "may be carried by currents of air for greater or less distances . . . for over a thousand feet." He also points out the fact that remaining even a year in a cold latitude will not free a ship from the germs of the disease, a fact communicated to him by Dr. A. N. Bell, of Brooklyn. How easily all this is explained when one considers the *stegomyia* and its natural history. With reference to cholera he says, "it is transmissible and contagious from the sick to the healthy, not by contact with the bodies of the

* Complete information on this topic may be found in the following: Wunderlich, *loc. cit.*; Berdoe, *The Origin and Growth of the Healing Art* (London, 1892); Liebermeister, *Handbuch der Pathologie des Fiebers*; *Real-Encyclopaedie der gesammten Heilkunde*; Lewinski, *W. Deutsche med. Wochenschrift*, 1885, p. 492.

sick, but with a material poison thrown off from their bodies, and capable of being conveyed to a distance." He claims for the production of this, as of yellow fever, the necessity of the presence of a specific germ. "The poison of cholera is cast off with the characteristic discharges of the alimentary canal." "For the immediate transmission of cholera *impure water* plays an important part."

The volume for 1877 contains a valuable paper by the late Austin Flint, Sr., ably advocating the theory, not by any means new, that pneumonia is an essential fever; he admitted his ignorance of the *materies morbi*, as he was also obliged to do in the case of typhoid, but distinctly claimed their similarity. In the same volume a paper by Dr. E. V. Stoddard, of Rochester, urging the view that typhoid fever needed for its production a specific germ from a previous case, and that drinking water was the usual method of conveying the disease, shows that even at that late date these questions were not entirely settled.

The volumes of about this period contain a large number of papers on the use of various drugs in different diseases. Many of them since have dropped into "innocuous desuetude," such as baptisia tinctoria in typhoid fever; but our volume for 1879 contains a warning by Dr. A. Jacobi as to the dangers of the indiscriminate use of chlorate of potash, which proved most useful. The same volume contains a notable paper by the late Dr. Alfred L. Loomis, on the Adirondack region as a health resort for tubercular patients, which has been the means of restoring hundreds and thousands of invalids to health and usefulness.

The year 1881 closes the third quarter-century of our Society's existence. One notable thing about this period is the rise and rapid growth of the specialties. As before stated, the first paper was presented in 1865; the volume for 1881 contains fourteen articles by specialists. The introduction of the sphygmograph, which, however, has not in practice justified the claims at first made for it; and the coming into use of the clinical thermometer; marked improvement in ophthalmoscopes and laryngoscopes; the first International Congress in Paris; continued studies of contagious and transmissible diseases, with consequent improvement in quarantine methods; differentiating between typhus fever and typhoid; including pneumonia among the essential fevers; an endeavor to show that pulmonary tuberculosis was transmissible; and the introduction, in 1880, by Dr. Joseph O'Dwyer, of intubation of the larynx to replace tracheotomy in diphtheria, are among the notable occurrences of this period.

In 1882, Austin Flint, Sr., presented a remarkably able paper calling attention to the great importance of the disappearance of liver dulness, and its replacement by tympanitic resonance, as a symptom of intestinal perforation, and making the following extraordinary prediction. "Open-

ing the abdominal cavity, closing the perforation by proper surgical means, and washing out all irritating matters, it is not highly improbable will be a method sanctioned by its successful employment."

The first reference which I find to the bacterial theory of tuberculosis is in a paper read by Dr. A. Jacobi, in 1884. Speaking of Hans Buchner, he says, "In his belief phthisis can be prevented by keeping out the bacillus."

An excellent paper appeared in 1886, by Dr. Alfred L. Loomis, enforcing the importance of arterio-fibro-sclerosis as a general disease, and not confined to the kidneys alone. It was not put forth as an entirely original idea, but did much to draw the attention of practitioners in this State to what is now universally recognized as a very usual and very important condition. In the same year our first paper on ulcerative endocarditis appears, from the pen of Dr. H. R. Hopkins, of Buffalo. Like the preceding, this subject was not new, but the affection was at that time so rarely recognized before death that the article was most timely in calling attention to it. The same volume contains two papers on the subject of the bacteriological examination of drinking water, one by Dr. William Hailes, and the other by Dr. F. E. Martindale. What is now a routine, every-day process was twenty years ago in its infancy.

In 1887, Dr. J. O'Dwyer read a valuable paper, detailing the improvements he had been able to make in the process of intubation of the larynx.

As late as 1888 the question of the bacterial origin of disease was still considered by the general practitioners so far *sub judice* that President Alfred L. Loomis thought it worth while to make it the subject of his anniversary address, and a very masterly one it was—calm, judicial and convincing. In this year was first put into operation in our Society the plan, which has since worked so well here and elsewhere, of having a symposium on some important disease of general interest, different speakers treating of it from different points of view and in different relations. In the same year Dr. J. Leonard Corning made a further contribution on local medication of the spinal cord, his first paper having been published in 1885. We all know how important the subject has recently become.

In 1889, a valuable paper by Surgeon George M. Sternberg, U.S.A., recited the direct proof by laboratory experiments of what Austin Flint and others had previously regarded as probable, from a clinical point of view, that lobar pneumonia was a specific infectious disease. In the same year another author uses the phrase "If the germ theory of disease is a correct one, and it would seem to be;" and this was only seventeen years ago.

As an illustration of how slow the human mind is to grasp the full meaning and importance of new facts and especially to act upon them, we may note that in 1890, sixteen years ago, Dr.

Paul H. Kretzchmar read a paper on the "Isolation of Consumptives," in the course of which he says: "We know that the source of contagion is contained in the sputa; we also know that as long as these expectorations remain in a moist state they are not apt to infect anybody, but that the dry sputa, becoming pulverized, allowing the poisonous germs to be carried away into the surrounding atmosphere, are alone responsible for the dissemination of the disease." Yet even today in many localities the precautions which naturally flow from these simple and universally-admitted facts are not enforced with anything like the rigor they deserve.

One of the symposiums in 1893 was on carcinoma, and it is probable that the interest thereby aroused in this very important subject was a prime factor in starting the elaborate investigations which have since been made in this State.

Our volume for 1892 contains a paper by Dr. Carlos F. MacDonald, giving a scientific record of the first seven cases in which the death penalty was inflicted by electricity. His conclusions have been justified by all the experience which has since been had, and this method is now admitted to be the least objectionable which has yet been tried.

In the symposium on diphtheria, in 1894, in a paper on its pathology, by Dr. Thomas E. Satterthwaite, appears the first reference to the use of antitoxin. He gives priority to Kossel, who, in March and April, 1893, thus treated eleven children, with nine recoveries, although "these cases were undoubtedly severe ones." In the same symposium Dr. A. Walter Suiter is the first to propose that "the State Board of Health should undertake the specific diagnosis, at the instance of the attending physician, in all cases admitting of the slightest doubt," and that laboratories for the purpose should be established and maintained at convenient points in the State.

In 1896 Dr. Willy Meyer presented a valuable paper containing some original observations on the early diagnosis of tuberculosis of the kidney, a subject which has since been more completely worked up on the lines he indicated.

Our volume for 1897 is a notable one on account of the "Discussion of the relation of impure water to disease, and the cure and prevention of the latter." All of the scientific investigations since that date have added little to what is there stated as to his relation, and the methods there recommended for the purification of city supplies have not been materially improved upon.

The first paper on "The X-rays in Medicine and Surgery" appeared in 1898; and in the same year Dr. John H. Pryor, of Buffalo, called attention to the fact that of the 13,000 annual victims of pulmonary tuberculosis in this State the large majority died because they were too poor to afford the steps necessary to recovery; that it was the bounden duty of the State to care for them, as well as an important economy; and plead for the establishment of a State hospital for in-

ipient cases in the Adirondack region. As a result, the State Senate appointed a committee to investigate the subject, a favorable report was made, and the next year a bill was introduced establishing such an institution. As you all know, it is now accomplishing excellent work at Ray Brook. A series of nine papers in 1900 on "State Care of Tuberculous Patients" contributed largely to this result.

The first Tuberculosis Congress was held in London in 1901, at which Koch gave utterance to opinions which startled many in the profession, and are frequently referred to in the succeeding volumes.

Probably no better tribute could be paid to the value and efficacy of Jenner's discovery than that to be found in a paper in our volume for 1903, by Dr. P. H. Bryce, Secretary of the Provisional Board of Health of Ontario, Can. He says, and there is no reason to doubt the truth of the statement, that "until the last three years the majority of living physicians in America and Canada had never seen a case of small-pox, and, as it has happened, the great number of cases that have been seen on this continent recently have been so mild that we have to go back to the days of Sydenham, in the seventeenth century, and of Van Swieten, in the eighteenth, to find a parallel for this anomalous type of disease."

The last twenty-five years have seen most radical and important advances in both the science and art of medicine, and notably in the methods of *preventing* disease rather than of *curing* it.

The discovery that many diseases were the result of the introduction into the body of minute microscopical organisms—protozoa and bacteria—outranks in far-reaching importance any other medical discovery of the Christian era. As early as 1849 the bacillus of anthrax was seen in the blood of animals dead of splenic fever. In 1863 Rayer and Davaine proclaimed this organism to be the cause of the disease, but it was not until 1876 that Koch isolated and cultivated it. Then followed the discovery of the amœba dysenteriae (1871) by Loesch; of the spirillum of relapsing fever (1873) by Obermeier; of the actinomycetes (1877) by Bollinger; of the gonococcus (1879) by Neisser; of the plasmodium malariae (1880) by Laveran; of the trypanosoma evansi (1880); of the bacillus of malignant œdema (1881) by Koch, though this was identical with the *vibrio septique* which Pasteur had seen much earlier; of the bacilli of tuberculosis, typhoid and cholera (1883), all by Koch; of the bacillus pneumoniae (1883) by Friedlaender, by whom also, working with Weichselbaum (1884), the diplococcus pneumoniae was shown to be the cause of lobar pneumonia, although the organism had been previously isolated by Sternberg and Pasteur (1881); of the organism causing diphtheria, first grown in pure culture by Loeffler (1884); though it had been observed early in the 70's by Klebs, and hence is known as the Klebs-Loeffler bacillus; of the bacillus proteus (1885)

by Hauser; of the meningococcus (1887) by Weichselbaum and Jaeger; of the bacillus of tetanus (1889), isolated by Kitasato, though previously observed by Nicolaier (1885); of the proteus fluorescens, causing Weil's disease (1890) by Jaeger; of the bacillus of influenza (1891) by Pfeiffer; of the bacillus pestis (1894) by Kitasato and Yersin, and of the bacillus dysenteriae (1902) by Shiga. To this list will probably be added an intracellular protozoön, described by Councilman (1904), as causative of small-pox; a protozoön, by Mallory (1905), causing scarlet fever; and the spirocheta pallida, causing syphilis, by Schaudinn (1905).*

To Koch more than to any other man belongs the credit of having initiated scientific proof of the causative relation of bacteria to disease. He first showed that it was possible to isolate these organisms in pure culture, to cultivate them indefinitely, to produce in healthy animals a given infectious disease by the injection of the proper pure culture, and by continuous inoculation from a diseased to a healthy animal to continue the process at will. The use of the aniline dyes, first suggested by Weigert, was an invaluable aid in conducting these investigations.

One objection advanced against the germ theory of disease is the fact, which we must all admit, that while the opportunities for investigating the acute exanthemata have always been, and still are, most abundant, and they present clinically all the features commonly attributed to germ diseases, yet the causative germs have not been isolated and demonstrated to the satisfaction of all. I do not suppose, however, that there is any one in this audience who does not believe that these germs will also be discovered sooner or later, and that when they are the reasons for the delay will also become perfectly apparent.

Not long after the establishment of the germ theory of disease came the most important therapeutic discovery of antitoxins. In December, 1890, the first experiments on this line were published. Time forbids our going into details; but the saving of life by their administration is simply incalculable. To Behring, Roux and Kitasato most credit is due.

Nearly all of the other important advances in this last quarter century flow from the discovery of the bacterial origin of disease. Among these we may mention as most prominent the purification of water-supplies and the disposal of sewage; the efforts toward prevention of tuberculosis, and the importance of its early diagnosis; providing of antitoxins by the State; and municipal control of milk supplies.

But good work has been done in other directions also. The practitioner has been furnished an invaluable aid in combating disease by the establishment and perfection of training schools for nurses. Many original investigations have

been carried to successful issue in cerebral localization, and in the study of the functions of the spinal cord. Diseases of the blood itself, and changes in the blood accompanying other diseases, have been carefully studied, and no one can successfully practice medicine to-day without aids in this direction which were absolutely unheard of twenty-five years ago.

Physiologists have long had in their laboratories instruments for measuring the pressure in the cavities of the heart and in the blood-vessels. The first portable clinical apparatus for measuring the arterial pressure in a patient was devised by von Basch in 1876. The instrument has been improved by Riva-Rocci, Janeway, Gaertner and others, and in one of these forms is in daily use by many of us. It still remains to be seen whether the facts which it furnishes are of sufficient practical importance to justify the claims that have been made for it, or whether it will suffer the fate of the sphygmograph.

It is true that Finlay, many years ago, suggested that yellow fever was conveyed by the mosquito. But theories and suggestions do not carry much weight; what is demanded nowadays is proof, followed by practical results. The whole history of medicine tells of no more logical, satisfactory and brilliant piece of work than that done by Reed, Carroll, Agramonte and the lamented Lazear, in 1901, proving beyond cavil that the *stegomyia fasciata* was the intermediate host and carrier of the yellow fever germ. The identity of the germ has not yet been discovered; but all the details of its transmission have been laid bare; the disease was banished from Havana, and the means of saving thousands of lives and millions of dollars made perfectly clear. Verily, we have great reason to be proud of belonging to a profession which has produced such men and such results.

It seems clear from what has been said that the past century has borne more fruit in our profession than any of its predecessors. The allegation has been made that our country has not contributed to the advance in our science as much as it ought; it certainly must be admitted that it has not yet contributed as much as either Germany or France. But we are still young; we have only recently turned our attention in this direction; the large majority of our recent graduates have hitherto been compelled to devote themselves at once to earning a livelihood. Until recent years we have had very little encouragement or pecuniary aid from the government; our millionaires have long been most generous in their support of hospitals, libraries and other philanthropic institutions, but only recently have the benefits to be reaped from scientific investigation appealed to them. Laboratories have now been started all over the country in which original investigations have already been made; young men are being trained in scientific methods; no better work has been done anywhere, at any time, than by our yellow-fever commission in Cuba; and it is per-

* 1. References: Loeffler, Vorlesungen über die geschichtliche Entwicklung der Lehre von Bakterien; Puschmann, Geschichte der Medizin; Berdoe, The Origin and Growth of the Healing Art.

fectly safe to predict that the future will present a picture of which our successors will not only not be ashamed, but of which they will have every reason to be very proud.

ORATION ON SURGERY.

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FEW anniversary celebrations have ever been held in this country that have had, or can have, a wider significance than that in which we are now participating. It marks not only the centennial of a great and influential Society, in the greatest and most influential State in our Union, but it signalizes also the reunion of men and of professional interests which have been too long kept apart by false sentiment and inability to maintain a common point of view. The occasion, then, is so memorable that I feel almost aghast at the task assigned me of trying suitably to characterize the surgical work which has been accomplished, especially within our own limits within the past century. At the same time, I value most highly the compliment conveyed by the invitation to deliver this centennial oration. Growth in population in this State has almost kept pace with advance in the natural sciences. When Dr. Fisher delivered his presidential and anniversary address before this Society in 1875, he reminded us that, when the law which created it was enacted, the State of New York was then divided into thirty-five counties, instead of into sixty, as at present, while its entire population then was about 700,000. He told also that there were then about eight hundred members within the State, such as they were, not a few of whom "sadly needed regulating." Buffalo, the western metropolis of the State, was then a village of 1,500 souls, whereas it now comprises over one-third of a million inhabitants. This was, to be sure, before the second war with Great Britain, in the course of which our western frontier became a line of no small strategic importance.

In 1820, Sydney Smith voiced that memorable cynical and sceptical query of his as to what Americans had done, not only asking, "Who reads an American book," but saying, "What does the world yet owe to American physicians and surgeons? What new substances have their chemists discovered?" It must be said that at that time they had done little, and assuredly that little had not come to Smith's knowledge, partly because of his own prejudice, and partly because information traveled slowly in those days. But if the great literateur and cynic of his day could come to life again, and familiarize himself with what Americans have done since he disappeared from the world's stage, he would have to express himself in very different terms. In reply to his query as to what our chemists have discovered, we could point, for instance, to chloroform, which was discovered by Guthrie, of

Sackett's Harbor, and to numerous other anesthetics which, if not first discovered in this country, were first utilized here. I think we may all well agree with Dennis when he says: "It is an actual fact that if you were to strike from the notable surgical achievements and writings of the world what has been contributed by America during the past few decades, there would be left but little new and original work for the older nations to claim as their own."

I do not know how I may better characterize one aspect of modern surgical progress than by quoting from an address delivered at the opening of the University College Hospital, in London, in the fall of 1873, by Mr. Erichsen, at that time justly considered to be one of the foremost of living British surgeons. In this address he dealt largely with the subject of *Finality in Surgery*, and expressed himself regarding it as follows (*Lancet*, Oct. 4, 1873, p. 489):

In no department of science had intellectual development brought greater changes in a comparatively brief space of time than in medicine. In surgery, it appeared to him, there were two great schools: The Practical and the Scientific. A generation back the Anatomical School had reached its acme. Thirty-five years previously surgery, as a manipulative art, had fallen into a sluggish and inactive state, and no advances had been made in the two greatest operations of surgery since Cheselden, a century before, had introduced his operation, or since Hunter had immortalized his name by his procedure for aneurism. He then went on to say: "But there must be a final limit to development of manipulative surgery. The knife cannot always have fresh fields for conquest, and, although methods of practice may be modified or varied, and even improved to some extent, it must be within a certain limit. *That this limit has nearly, if not quite, been reached will appear evident if we reflect upon the great achievements of modern operative surgery.* Very little remains for the boldest to devise or the most dexterous to perform." After which he very briefly alludes to the studies of Lister, who at that time was pursuing his painstaking researches almost within gun-shot distance of the place where Erichsen stood while making these remarks, researches which revolutionized the surgery of his day, and made that not merely possible, but easily practicable, which before had seemed unjustifiable or even criminal.

In addition to the above, he called attention to the fact, as it then appeared, that the success of operations bore no relation to the skill with which they were executed, and that the mortality after certain operations was excessive, especially so after the major amputations; that this rate of mortality had not been diminished of late years, but was particularly high in hospitals; and that possibly it was dependent upon determinable and removable causes.

During a series of lectures given in January

following, he elaborated especially upon the third proposition, namely, the agencies which determined mortality after operations, considering that they constituted an exceedingly telling and serious arraignment of the surgical methods of the day.

As remarked above, not only were these statements made while Lister was actively at work, but the whole pronouncement was made at about the time when the Vienna School of Surgeons was beginning to demonstrate the possibility of an entirely new type of operative attacks upon the viscera, and when Billroth and his pupils joined forces with the experimentalists who were demonstrating how we could remove with success the larynx and the pylorus, and attack other parts previously considered sacred so far as concerned the surgeon's knife. What has been accomplished since Erichsen's time almost equals all that which had been accomplished up to his time; and it is both pleasing, and, to us, a matter of pride, that no small portion of these added accomplishments is to be credited to the surgeons of New York State.

Dr. Emmet has recently published his reminiscences, in which, referring to the early teaching of the value of cleanliness in the practice of surgery, he states: "Those who are familiar with my teachings at the Women's Hospital have heard me reiterate in my clinics as an aphorism, "The death warrant of many a patient is carried under the finger nails of the operator. Before I ever heard of the existence of Lister I taught thus." He showed furthermore how, as early as 1868, he had in the Women's Hospital building a steam bath in operation for the purpose of cleansing and preparing patients, where every case was prepared by several baths, with the free use of turpentine soap. He indicates furthermore that in 1871, his colleagues, failing to appreciate the advantage of such preparation, decided to tear out the bath to make a reception room for patients of the outdoor clinic.

In the marvelous surgical accomplishments of the past thirty years we see the tremendous effect of the development of a theory and its application, since not until the germ theory of disease had been tested thoroughly and proven reliable by scientists (among whose names that of Pasteur must always be mentioned first), could rational methods be adopted for combatting the minute and deadly enemies by which mankind is always surrounded. And although we have not yet solved, by any means, all of the problems (among them those which have to do with explaining variations in vulnerability of different individuals, or of the same individual under different circumstances) we nevertheless have solved enough to make us feel that a very large proportion of the scourges and pestilences, medical and surgical, of times past are now preventable diseases. The far reaching effect of this in the home, the hospital, the military campaign and the mili-

tary field hospital need scarcely be called now to your attention.

Another theory which must be credited to the past century has had much to do with explaining many problems that interest us, perhaps not so much as surgeons, but as scientists, namely the *theory of evolution*. In these earlier days this theory was rarely correctly stated; too often at present it is not correctly judged, and comparatively few can grasp its entire significance. In its briefest expression it means the establishment of an organic continuity between the lowest and the highest forms of life; but, taken in conjunction with an accurate knowledge of embryology, it has much to do with the explanation of many of the congenital defects and arrests of development with which we as surgeons have to deal.

The two greatest discoveries of the past century are one of British, the other of American origin; both, in other words, of Anglo-Saxon offspring. I allude, of course, to Anesthesia and Antiseptis. While New York State had no conspicuous part in the early development of either, it must nevertheless be said that New York surgeons have been quick and prompt to seize upon the discoveries thus placed before them, and have been enthusiastic in their later development and improvement. When this Society was organized it was as necessary then as ever to intoxicate or narcotize patients before operations, and still to see them suffer the agonies of the torture chamber, agonies which no amount of sympathy or skill of the day could mitigate beyond a certain point.

When Wells introduced nitrous oxide gas, when Morton promoted the use of ether, and when Simpson first administered chloroform, there were placed before the profession, within a short period of time, three of the greatest blessings which a kind Providence has ever vouchsafed to mankind. It is late in the years now to describe the horrors of the old-time operating room, or even to quote the vivid descriptions either of surgical clinics of the time or of the feelings of the operators who took part in them. If one desires to seek descriptions of such gruesome scenes he may find them, but will read them as one reads accounts of the Inquisition and its tortures. But this has all disappeared, and that the performance of an operation can now be robbed of all that makes it unpleasant and disquieting is one of the marvels of the century and one of its greatest accomplishments.

Indeed it means much more than the abolition of suffering; it means that that which was previously beyond human endurance is now placed easily within it; it means that that which previously no one thought of attempting is now within easy accomplishment; and that that which was formerly considered inhuman and unjustifiable is now regarded as humane and scientific. But to this audience and at this

time it is unnecessary to enlarge further upon this aspect of the century's achievements.

Before the introduction of anesthesia the surgeons who were considered most skilful were those who could operate the most rapidly. This was not unnatural, since the greatest possible abbreviation of the period of suffering was most desirable. Those were the days of what has been called "The Anatomical Surgeons," when the principal advances made were in the direction of more accurate knowledge of anatomy. Such operators, for instance, as Dieffenbach in Germany, Syme in Great Britain, and Mott in this country, won most enviable reputations by their rapidity and dexterity. Still it is doubtful if any of them excelled in this respect James R. Wood, who is remembered to-day by a considerable proportion of this audience.

The introduction of anesthesia took away the most imperative need for rapidity, and the introduction of antiseptics required more time for attention to detail. In consequence, there grew up a certain school of men who seemed to feel that time was no object in operating, and that so long as the patients were comfortably asleep the principal indication was thereby met. It did not take long, however, for the profession to learn that the anesthetic itself is by no means a harmless agent, to be administered for indefinitely continued periods, but that it has its own disadvantages, and that the shorter the time during which the patient is kept under it the better for him. We have accordingly reverted somewhat to earlier conditions, and have learned that while time should not be sacrificed to other conditions of greater importance it nevertheless is of value, and that he is the best operator who, other things being equal, saves time so far as he can.

In addition to the boon already conferred by the introduction of general anesthesia, we may turn next to the employment of cocaine and other similar drugs for the production of local anesthesia. We may take pride in the fact that the discoverer and promoter of cocaine, Dr. Karl Koller, is now a resident of this State, and that the first suggestion in the direction of intraspinal anesthesia was made by Dr. Leonard Corning, of New York. Certainly American surgeons have done as much as those of any nationality to extend the usefulness and to minimize the unpleasant features of all these local anesthetics; and, among them all, perhaps none have been more active than residents of this State. And now, within the past few weeks, Dr. Meltzer, of New York, has shown the analgesic effects of solutions of magnesium sulphate, and with his researches has opened up a new pathway for fresh studies in neuro-pathology and local anesthesia.

But what shall now be said of the changes effected by the introduction of antiseptic methods? There are those here who can look back further than I can, and yet it has happened that

quite within my easy recollection the whole aspect of surgery has been changed by the work of Lister and his coworkers. I can remember my first season as house surgeon, in one of the largest and newest of the Western hospitals, when throughout that long and to me sad season scarcely one patient was submitted to any major or semi-serious operation who did not die of blood poisoning. I saw men die after the current treatment of the day for varicose veins; I saw them die after what seemed to me even minor operations. Scarcely a patient entered the hospital with a compound fracture whose doom was not sealed. Tracheotomy was a useless performance; trephining was interesting as a spectacle, but useless as a resource; even internal urethrotomy became a fatal procedure; and so throughout the list. This was in the years of grace 1876 and 1877.

At this time Lister had practically perfected his methods, but they had not reached us. They did not reach us until after my term of service had expired. With the later introduction of these methods into that same hospital it was metamorphosed from a charnel house to a real sanitarium, where surgical patients recovered their health. Thus my first experiences in surgery were of the saddest, in a civil and civic hospital, where the fatalities of a military hospital during the most septic period of our Civil War were almost duplicated. This was my introduction to practical surgery. Such experience as was mine, by which I was almost disheartened, was duplicated by that of every other young man of the time in similar environment. It had been the experience of our elders for years. They had become hardened to it.

What, then, can be said of the man and the method by whom and by which all of this horrid reality was changed, so that the practice of surgery became a pleasure rather than a solemn duty. The younger men who have entered the profession within recent years never can appreciate what it meant to practise in those earlier days, which yet are not so long past. Only he who has seen case after case of compound fracture go to the ground, as the result of preventable infection, can fully appreciate the necessity for the precautions which we take to-day, or can have within him that true feeling of reverence and love for the man who brought about this revolution. That to Pasteur a monument has been erected, and that Lister has been made an English lord, constitute but a small part of the respect and honor we should yield them. This, perhaps, is the best which a government of the aristocracy can do; but there is a higher position and a nobler one which they occupy, and ever will, in the heart of every surgeon, as of every one who is capable of appreciating what has been accomplished through their life and labors.

What shall be said next of the extension of research by which surgical pathology has been wedded to the study of surgery as an art, and made an inseparable part of a surgeon's self prep-

aration for his work? Next to asepsis and anesthesia the evolution of the surgical laboratory and the work done therein constitute the most conspicuous advance in the science of surgery made during the past century. Not that surgical pathology is by itself a subject distinct from general pathology, but that it implies the application of the principles of general pathology to surgical problems. Here, as in many other places, the microscope and the test tube for minute work, and the introduction of experimental methods, both in the study of disease and the perfection of technique, have afforded opportunity for most wonderful discoveries and most striking progress.

I would divide the work done within a surgical laboratory under two headings—the minute and the gross.

Under the title of minute work I would include that which is purely histological, that which would be ranked as bacteriological, and thirdly, that which may be perhaps best spoken of as biochemical. By the histological, the nature of the tuberculous, leprosy, actinomycotic and numerous other morbid processes has been singularly cleared up, while nowhere has it shown to better advantage than in clarifying and enabling us to classify our knowledge concerning the minute structure of morbid growths. The works that have been published, for instance, on tumors alone, within the past four decades, would fill more than one shelf in any large library.

Under the heading of bacteriological work I would include, simply as illustrative examples, the most conspicuous of the earlier researches which, begun by Pasteur, were discussed by Tyndall, and later utilized by Ogston and Lister, and which resulted in that most important advance which we sum up under the title of *The Theory of Sepsis and the Practice of Asepsis*. It matters little now that all the original minutiae of Lister's antiseptic technique have been changed. The broad general principles upon which they were based become ever clearer and clearer, and the luster attaching to his discovery is in no way dimmed by the fact that, for instance, carbolic acid has been almost excluded from surgical practice, or that other things have taken its place.

So with regard to the origin and nature of tetanus. It remained for Nicolaier and Kitasato to demonstrate the specific organism concerned in the production of this disease, and to show how resistant and peculiar in its activities it really is; but the disease once recognized as of germ origin became, at the same time, preventable, and even manageable in a much larger proportion of instances than ever before was possible, and lock-jaw is no longer the scourge of military and civil hospitals as was formerly the case.

So with tuberculosis. What Villemin and Koch did with this disease they did for the world at large, physicians and surgeons alike. Through their labors and those of their colleagues, this disease, which furnished from one-fourth to one-third of the patients in every large surgical clinic

became intelligible, and even at last curable, while the nature and pathology of the greatest scourge of humanity were revealed.

When Neisser discovered the specific nature of the gonococcus he rendered a like service; and now, through painstaking work of many investigators, it appears that the specific nature of syphilis is at last revealed. Working by methods which may be rudely classed as bacteriological, Pasteur discovered enough concerning the nature of hydrophobia to take it out of the category of inevitably fatal diseases and place it among the curable, even the preventable, maladies.

Of the biochemical researches which concern the surgeon, we cannot speak without thinking of tuberculin, which proved in the main a disappointment, and yet which had its important rôle to play, and of the antitoxins with which we now treat diphtheria, septicæmia and tetanus, as well as the serums or similar preparations like those, for instance, devised by Calmette and Vital respectively in their so-called "antivenene" and "antiophidic serum." These serums appeal to us perhaps but slightly or not at all, yet think what they mean in India, where more than 20,000 people perish every year from the bites of venomous serpents. Serotherapy, then, has come to stay, as one of the most conspicuous illustrations of the results worked out entirely within the walls of surgical laboratories, the product alike of inductive reasoning and experimental research.

Of the gross work of a surgical laboratory I can give only illustrative examples, and will begin perhaps with the general subject of anastomosis. When Senn began his work upon this subject and published his first experiences with intestinal anastomosis he employed methods which were crude compared with those now in vogue, but they have since been widely extended and made available in various ways, of which in the beginning no one dreamed. That plates have been entirely discarded, that buttons and all intermediary pieces of apparatus are doomed and will surely disappear from surgical technique, is but the natural outcome of the improvements in technique, which are inevitable in any such instance. They have all served their purposes, they have shown us what can be done and what should not be done, and will ever redound to the credit and the ingenuity of those who devised them; but major surgery reverts ever to simple forms, and that method will prove the best which is the simplest and least difficult of performance. The anastomotic method has been extended not merely from one part of the intestine to another, but from gall-bladder to the bowel—though this is to-day rarely done—and from the stomach to the duodenum, or to any other convenient part of the alimentary canal, while even by transdiaphragmatic methods it has been suggested to anastomose the stomach to the œsophagus above the diaphragm.

The lessons thus taught by this work upon the bowel led to more vigorous prosecution of experi-

mental work upon diverting other currents or other functions of the body and rearranging them to suit new needs. Thus, for instance, the method of nerve grafting has been widely extended, and made available in a large number of cases of infantile and other palsies, as well as for establishing nerve communication around injured or excised nerves. Of this, perhaps, there is no more conspicuous illustration than the treatment of facial palsy by transplantation of the hypoglossal or the spinal accessory into the facial nerve. Nerve suture also has become a general expedient and one which it is criminal to neglect when called for.

Similarly tendons have been disengaged from their proper insertions and replaced anew, so as to utilize the power of muscles still active, and atone for paralysis of parallel or even antagonistic groups. Tendon suture and tendon grafting, then, have become every day expedients for the correction of deformity and the restoration of function, in which they have been wonderfully successful.

Among the tubular connections of the body the ureters deserve mention here, since most creditable and encouraging work has been done upon them by Kelly, Van Hook, Young and others; and we have learned that ureters, like the intestines, may be resected, transplanted or anastomosed, as occasion may demand.

Similarly, even the blood vessels have not escaped the investigators' attack, and we have learned that they may be sutured, either longitudinally, or even by end to end suture, as the researches, especially of Murphy, brilliantly have demonstrated.

No more remarkable illustrations of what can be accomplished, at least in the laboratory, have been reported than those from the Hull Physiological Laboratory of Chicago University, by Carrel and Guthrie (*Am. Medicine*, Dec. 30, 1905, p. 1101). These experiments include such feats as reversal of circulation in veins and arteries, replantation of completely severed limbs, and transplantation of the kidney and thyroid. Such experiments as the following, for instance, were performed: The heart of a small dog was extirpated and transplanted into the neck of a larger one by anastomosing the cut ends of the jugular vein and of the carotid artery to the large vessels of the heart. The circulation was re-established through this heart, and it showed fibrillar contractions, beating at the rate of 88, while the normal heart was beating 100 per minute. Similarly a kidney was extirpated and transplanted into the neck, anastomosing the renal artery to the carotid artery, the renal vein to the jugular, and causing the ureter to empty into the œsophagus. On the third day the circulation was normal, and good excretion of urine was going on. So, too, with the thyroid, which was extirpated and replanted, with reversal of the circulation. Forty days later it was easy to recognize systolic expansion of the gland.

The experimental investigations thus far recounted have had to do with the principle of anastomosis, either of tubular or conducting structures of some kind. They exemplify what may be considered a general principle, applied to widely varying parts.

Take next the laboratory investigations concerning blood pressure, on which many have worked, but regarding which none have done more brilliant work than Crile and Cushing of our own country. They have revolutionized our notions regarding surgical shock; they have shown the importance of both recording and maintaining blood pressure; they have demonstrated the value of the proper use of salt solution, and particularly they have given experimental proof of the marvellous nature of that singular substance adrenalin.

While so much has been done with the blood vessels, still more has been done with the blood itself, and blood analysis has reached a development and accuracy which cause it to rank with urinalysis, both in complexity and value. For surgical purposes it began rather with estimation of the amount of hemoglobin in the blood, by methods which hardly were microscopical. Soon, however, the microscope became the most important instrument of precision in this direction, and now a careful study of the blood has become a matter of routine, alike in surgical and medical studies, yielding returns which are often of the greatest value. About all that was ever done in this direction one hundred years ago was an inspection of the so-called "buffy coat" after venesection.

It is quite unnecessary to allude to the minute developments in urinalysis, which have not merely materially complicated it, but have made it a most valuable aid in diagnosis. Other fluids of the body have alike been investigated. There are those who claim to gather much of diagnostic value from a minute microchemical examination of the saliva, while the importance attaching to an examination of the cerebro spinal fluid is year by year increasing. Whatever of value these studies may have has been derived from work done first in the laboratory.

Almost our entire knowledge of cerebral localization has been gained in the anatomical and surgical laboratory, by a score of diligent investigators, a list of whose names should, by common consent, be headed by Sir Victor Horsley. No one has approached him in accuracy of localization of intracranial tumors, or in daring operations for their removal. A great deal has been done also in explanation of the various traumatic disturbances of the brain included under the terms "contusion" and "compression." Perhaps in this line of investigation the French surgeons have taken the lead, and yet much has been done at home. Until their work, no one appreciated the importance of the minute lacerations and punctate hemorrhages which occur along the ventricles, and in the substance of the

brain. The degree of compression which the brain will safely withstand, and that which becomes injurious, seems now to have been pretty clearly established.

So with regard to infectious processes within the cranium. The researches and publications of Sir William Macewen have brought us a clear knowledge of the subject, which no one had attained until he began his work. The relations between the various sinuses of the face and cranium and the interior of the brain box have been thus impressed upon our knowledge, and in such a way that surgery may now usually anticipate the evils of intracranial suppuration, if only the surgeon be given an early enough opportunity.

In the surgery of the spinal cord everything has been done, and not alone in the matter of localization of lesions and of tumors and their successful removal, but it has remained for American surgeons—Harte, of Philadelphia, and McCosh, of New York—to show that suture of a completely divided spinal cord may be successfully made, with at least partial restoration of function, a demonstration which the ordinary laboratory has not yet afforded. Compression paralysis, moreover, has been made amenable to surgery, at least in many instances, whether a result of morbid processes, as in kyphosis, or of recent traumatism, and relief has been afforded which could not possibly have come in any other way. All of this is the outcome of work done in the laboratory.

Study next what has been done with special organs, and take first the heart. The earliest teaching of the century gone by and, in fact, until recently, was that perforating wound or serious traumatism of the heart was necessarily fatal. Rare clinical exceptions to these statements having been noted, the matter was studied experimentally, and it was learned that not only was this not necessarily true, but that much could be done with the heart, even *in vivo*; and thus sprang up the whole modern surgery of the heart, which includes not merely aspiration or opening and drainage of the pericardial sac or incision into it for the purpose of breaking up adhesion, but includes actual attack upon the heart itself, there being now on record not a small number of instances of gunshot or stab wound where the heart has been exposed, the injury discovered, and the heart substance sutured while still beating. A number of lives have been saved in this way which else would have been inevitably lost. More than this, massage of the organ has been successfully practiced for collapse following anesthesia, and it has been shown to be not only feasible, but a justifiable procedure in such instances to open the upper abdomen, if it has not already been opened, and through the diaphragm deliberately to seize or manipulate the heart, combining such massage with artificial

respiration, and compelling it to expel the blood which may empty into it, thus in several instances snatching the patient from a yawning grave. Crile especially has shown how successful this measure is upon animals, and has given the principal impetus to its practice in the operating room. Therefore, the heart is by no means exempt from the attack or kindly treatment of the surgeon.

The lungs have been made almost equally amenable to surgery. We have learned that we may open the thorax for removal of growths involving the thoracic wall without that dread of collapse of the lung which used to be everywhere felt. Consequently extensive resections of the thorax are practised, which not very long ago were not even dreamed of, for that chronic disabling condition of empyema, ordinarily with some fistulous opening, which, as we used to see these cases, would never heal, but gradually brought about the destruction of the patient. Such conditions are now treated by more or less extensive, sometimes quite widespread excisions of portions of the chest wall, simply to permit of its collapse, in order that its surface may meet that of a lung bound down and contracted by old disease processes. The earliest suggestions in this direction were made by one of our countrymen—Warren Stone. They were later improved upon by Estlander, who usually receives all the credit for it. Beyond this the lung is often invaded for abscess, gangrene, less often for hydatid cyst, tuberculosis or other granulomata, and even the more distinct tumors.

The operation of opening the larynx for suffocative conditions is an old one, but the extension of the method for any other condition than that threatening immediate death is a very modern development of the old idea. The earlier attacks that were made upon it were for the purpose of removing morbid growths or attacking local lesions. The suggestion and the introduction of still more radical attack, *i. e.*, its complete extirpation, are due to the modern Vienna school of surgery, where under the commanding genius of Billroth were devised so many new operations; but the possibility of successful laryngectomy was first demonstrated in the surgical laboratory by Gussenbauer at about the beginning of the last quarter of the previous century. It remained for Billroth to practise it successfully on man, and then for surgeons all over the world to rapidly demonstrate the feasibility and the advantage of the operation in selected cases. That it is done perhaps less often now than fifteen years ago simply means that surgeons have learned that morbid growths involving the larynx can often be as successfully treated by thyrotomy, with erosion, as by complete removal. In addition to this the possibility of resection of a portion of the trachea has also been demonstrated, both experimentally and clinically.

On the esophagus extensive operations have been successfully practised, and foreign as well as American surgeons, Bryant particularly, have shown the possibility of attack both upon the esophagus and the lower end of the trachea, even the great bronchi, exposing them posteriorly through an opening made at the back of the chest. These operations were devised for removal of foreign bodies, but may be made available under other circumstances. The most extreme development in this direction is, probably, a suggestion to make an anastomosis between the esophagus and the stomach through the intervening diaphragm which has been shown possible, at least upon animals. It can hardly be expected that the measure will ever be popularized or extensively practiced.

Of the alimentary canal, what might not be said? No inch of it has been exempt from experimental attack or surgical procedure. When Billroth and his pupils first suggested excision of the cancerous pylorus the measure was heralded as a miraculous advance in surgery, as were also the earlier extensive resections of the intestinal canal. At present these operations are almost every-day performances, and evoke little comment. We have learned that there is practically nothing which cannot be done with the alimentary tube, from one end to the other; that no one part or section of it is essential for vital purposes; that the entire stomach may be removed, and that several feet of intestine can be easily and comfortably spared. We have learned, in addition, that all such lesions as ulcer and those produced by ulcerative process are surgical conditions, and demand surgical treatment, that the consequence of pyloric stenosis which does not yield to medicinal and non-operative treatment may be atoned for by a plastic or an anastomotic operation, and that these operations in the hands, at least, of certain experts have about them a degree of safety which is marvellous.

In addition to all this, the past twenty-five years have brought us a revelation regarding the possible morbid activities of the vermiform appendix, and the disastrous consequences which may ensue upon involvement of this little tube. Not only may it itself become gangrenous, but it may be the occasion of a spreading gangrene of the neighboring intestine which shall determine the destruction of many feet of that tube. For such widespread gangrene I have myself in one instance removed nearly nine feet of bowel, in another six, and in two others but little less, in all four instances successfully, and I have further shown, after a study of reported cases, that it would appear that the more extensive intestinal resections yield an even larger amount of success than do the lesser ones.

The intimate relation which should exist between pathology and surgery is perhaps nowhere better demonstrated than by the facts in the case concerning appendicitis. The work of the

surgeon as such does not lead him to make autopsies, as does that of the pathologist; and, seeing cases of what used to be considered perityphlitic abscess at a time when the parts were completely bathed in pus and early conditions unrecognizable, he failed to appreciate the fact that the appendix was in these instances primarily at fault. So soon, however, as the pathologist himself appreciated the fact and made it known, as did Fitz, then the surgeon was quick to furnish the remedy, and it remained for McBurney and others, especially New York surgeons, to devise and popularize the now common operation.

Regarding the pancreas, a large amount of experimental work has been done, by which many problems have been cleared up, even if not finally solved. In this experimental work many Americans have been engaged, none among them, however, doing better or more telling work than my colleague, Dr. Williams, in the University of Buffalo. The acute pancreatitis which might have been suspected twenty-five years ago on *a priori* grounds is now a demonstrated fact, with an equally demonstrated remedy. We have, then, to-day as measures practiced for pancreatic conditions, which are sufficient with many of them, save those which are distinctly cancerous, either open operation, with both anterior and posterior drainage, for the inflammatory and necrotic conditions—incision and drainage, with, possibly, extirpation for pancreatic cysts—and biliary drainage for those more slow forms of chronic pancreatitis which are inseparably combined with disease in the biliary passages themselves.

Likewise the liver is no longer sacred ground, but in itself and in its adnexa it is now frequently exposed to surgical attack, and with a marvellous amount of resulting benefit. Of the viscus itself it may be said that we not only open abscesses and hydatid cysts, but that we remove more or less extensive portions when involved in localized tumors or malignant growths. I have under my observation a patient from whom, nearly five years ago, I took away not only a large cancerous gall-bladder with enormous calculi, but a goodly portion of the surrounding liver. She is to-day doing her own housework, and in all these respects as well as ever in her existence.

When the liver is displaced it may be fastened up in place, just as is done with the kidney. This is the operation of hepatopexy, while when its vessels are leaking too much serum into the abdominal cavity, and we have a condition of ascites following cirrhosis, the stress may be taken off the hepatic circulation by producing adhesions between other portions of the parts within the portal circle, and thus creating anastomoses between portal extensions and the systemic venous circulation. This is the so-called operation of omentopexy, associated with Morrison's and Talma's names; but it should be extended to the contact surfaces between the omentum, the liver and spleen, with the overlying peritoneum, so

that adhesions may occur at as many points as possible.

The spleen becomes a legitimate object of surgery when crushed or ruptured by injury, when displaced so as to become troublesome, or when the site of abscess or of tumor. Moreover, its complete removal is indicated in cases of so-called splenic anemia, or Banti's disease, where the measure has given good results. Splenomegaly due to leukemia or to malaria is rarely if ever benefited by surgical attack, but the spleen may be removed for tumors of all sorts when they occur, as well as for hydatid cysts, extensive tuberculous disease or extensive injury, when nothing short of extirpation would seem to suit the occasion.

Very much has been done with the so-called ductless glands, among which the thyroid is the most prominent and most often attacked. The amount of time spent by different investigators in making out the functions of the thyroid and the thymus has been enormous, and the number of men engaged in such studies numerous. That this is true will, among other things, indicate the difficulty of the subject, as well as the importance attaching to it. These studies have led to the introduction of the various animal extracts, of which those made from the thyroid, the thymus, the pituitary body, the ovaries and the testes are in general use. Each of them finds its proper place and may be dispensed to advantage under certain circumstances. All this work was at least begun and long continued in the laboratory, and not tested upon the human being until ample reason had been afforded by results of the experimental investigators. In consequence the treatment of cretinism and myxedema has become now rational and scientific, while the indications for operations upon the thyroid in the various forms of goitre are clearly defined, the only possible exception to this statement being in the case of exophthalmic goitre, where men still differ somewhat according to their notions concerning its pathology.

A large amount of laboratory and experimental work has been done with the bones and joints. Gluck perhaps led the way in this respect and his efforts to devise an artificial substitute for the living joint were most ingenious, but failed because they must have failed. Murphy has accomplished much more of late by utilization of muscles and fascia than anyone ever could expect to with ivory balls and sockets driven into bone ends.

This is but little of what might be said as to the value of work first carefully gone over in the experimental laboratory. There is another category of surgical procedures of which it might be said that they are the outcome rather of clinical observation than of laboratory work. Nevertheless even here it is impossible to separate as between an inspiration which may lead to a brilliant clinical performance, and the previous laboratory

knowledge upon which the former was based. Thus, for instance, in 1883, Van de Walker, of Syracuse, reported the case of an abdomen which he had opened, supposing that he had to deal with a minor form of hydrocs. After incision and inspection it was discovered to be a case of tuberculosis of the peritoneum. The complete recovery of the patient led to the introduction of cœliotomy as a curative measure, and the amount of good that it has accomplished is very great. An experience similar to that of Van de Walker was that of Spencer Wells, who had to deal with a case supposed to be ovarian dropsy, which proved again to be tubercular peritonitis. Some surgeons simply open and evacuate, some wash out with salt solution, while in my own hands I have had the most encouraging results from complete evacuation and lavage, and then the introduction of a solution of one of Crede's silver salts, deliberately leaving some of the solution in the abdominal cavity while closing it.

Operations for the radical cure of hernia have been practised from the earliest days of surgery, becoming perhaps a little less crude with each advancing century or surgical cycle. In this country we have seen the gradual introduction of domestic methods to take the place of those of foreign surgeons, and the number of American surgeons who have concerned themselves with the radical cure of hernia is great. From the earlier and subcutaneous forms of aseptic operations intended to take the place of the frightfully radical and dangerous operations of Gerdy, Wutzer and others, we may mention the subcutaneous suture method, which, I believe, to have originated with Dowell, of Galveston. The method was short-lived, however, because, with the growing acquaintance with aseptic technique which soon came to us, it was learned that extirpation of the sac was an essential part of any well-performed radical operation for this purpose. There are few important procedures in which a larger number of devices or modifications have been suggested than in these. While every one desires to close the inguinal canal, there are so many ways of accomplishing this that one may well hesitate as to which is the best. Most all of them have included the introduction of sutures made of some foreign material, while Andrews and McArthur have sought to use a strip of the abdominal fascia, or some similar structure furnished by the patient's own tissues. Of late I have used, with gratifying success, when the length of the hernial sac permitted it, after ligation and fixation of its neck, either the entire sac twisted into a small cord and used as a suture, being passed from one side of the ring to the other by means of a large needle with a large eye; or, when the sac is too large, I have not hesitated to make a strip from a portion of its structure, and used this for the same purpose, after extirpating the balance. In this way I have found suture material of ample length of fresh animal tissue, which

is sure to be aseptic, which utilizes something that else would otherwise be completely removed, and saves taking away a strip from the edge of the canal, and thus widening or in any way weakening it.

Moreover, in addition to the deliberate performance of these operations they can be combined with nearly all operations for strangulation, in such a way as to afford not merely temporary relief but permanent cure, and this without appreciably enhancing danger, save in exceptional cases. Moreover, femoral and ventral herniæ in general are practically all amenable to some general applications of these methods.

Of laparotomy as a general measure we have lost all our dread. As performed for the relief of intussusception it was first done upon a negro slave by Wilson in 1831. His patient had suffered for seventeen days; nevertheless, the entangled intestine was successfully released and the patient made a complete recovery (Dennis). It was not, however, until after Lister's triumph that abdominal section became by any means a safe operation. At present it is everywhere performed, unfortunately, too often by those who have had insufficient experience. If in any way the mortality at present attaching to it should seem unduly large, although in reality small, it is partly ascribable to the fact that too many of the younger surgeons of the country think to win their spurs in the profession by a series of cases of abdominal section, for which it may be that experience and training have not yet fitted them. The larger one's experience becomes in this direction the less certain he is as to interior conditions from exterior examination, and the more guarded he becomes in the descriptions of what he expects to encounter. Thus it too often happens that a case which appears simple is complicated in a way to demand the ripest experience of an expert operator. The last quarter of the century has seen an extraordinary increase in the number of abdominal sections done in all parts of the world, for which there is perhaps much good reason. As the factor of safety has increased one sentimental objection to its performance has disappeared, while the great advantage accruing by substitution of accurate knowledge acquired by the operative method for previous guesswork is obvious, even to many patients. Moreover, the importance of early attack upon cases of cancer is more and more widely appreciated, and I fear no opposition to a statement, which may be regarded almost as a challenge, and one that I have frequently made, that a well-grounded suspicion of intra-abdominal cancer justifies a well-performed exploratory operation, directed, first, to its determination, and, second, if possible, to its removal. In cases of cancer of the stomach, for instance, to wait until the diagnosis can be made by the sense of touch, from the outside, is to wait until the patient has passed a period of safety; whereas, if, so soon as cancer is suspected, a judicious operator were entrusted with the case he

might do much to prolong life and make it comfortable, even were it still too late to make a radical operation. If this be true of cancer of the stomach, it is equally true of most other visceral cancers in parts which are open to surgical attack.

Laparotomy, then, as a general procedure, is perhaps not performed too often, but is, at all events, performed by too many operators. And here, perhaps, as well as anywhere else, fault might be found with one of the growing evils, as it appears to me, connected with the development of the last two decades. I refer to the Post Graduate Medical Schools which are scattered through various parts of the country, where men, especially those to whom surgery appeals, either from one motive or another, spend a few weeks in witnessing abdominal operations, expecting then to go home and repeat the performances of the trained operators whom they for a brief time have watched. I commend the acquisition of knowledge, but have had frequent reason to fear that it is sometimes followed by a determination on the part of the surgeon to "do," leaving it to the patient to "die." Suitable training for abdominal surgery cannot be acquired by a residence of a few weeks in New York City, or any other large capital.

Of course you will say I have so far omitted all reference to that epoch-making operation of MacDowell's, who performed his first and historic ovariectomy ninety-seven years ago, *i. e.*, in 1809. So much has been said about it, and it is now so generally known and widely credited that it seems hardly necessary to do more than mention it as perhaps the most historic event in surgery in America in the first part of the previous century. Of that to which it has led other writers of far more graphic power have written at length. It is to the everlasting credit of an American, as well as of America, and it is a great pity that Sidney Smith had not appreciated its significance ere he uttered his sneer. When, in 1821, Nathan Smith did ovariectomy in Connecticut, while still ignorant of MacDowell's performance, upon which he improved by dropping the pedicle into the abdominal cavity, he certainly gave it great encouragement. Allan G. Smith also successfully imitated it in Kentucky, in 1823, and D. L. Rogers in New York, in 1829. Not until seven years later than this was the operation first performed in England, and not until fifteen years later in France. In the surgery of the ovaries, and of ovarian cysts, much, nay, nearly all, is due to the work of American surgeons. T. G. Thomas, in 1870, first devised and successfully made a vaginal ovariectomy, while Battey popularized vaginal oöphorectomy in 1872, and Sims contributed of his own methods and experience in making the vaginal route an effective and serviceable one for a variety of pelvic conditions.

Of further work within the pelvis it may be safely said that American surgeons have contributed more that is of value than those

of any other nation. There is not an operation of any character which has not been greatly improved by them, while many of most distinctive value have been originated here. The greater part of this work has been done in New York by the surgeons of the Women's Hospital, but much credit should be accorded, in this consideration, to the work and teachings of Price, Kelly, Martin, Dudley and many others.

While speaking of the pelvic organs we might as well perhaps say here that which can be said regarding the surgery of the prostate and of the bladder. In no country have the results of prostatectomy been more successful, nor the methods more simplified nor improved. To Belfield, to Goodfellow of San Francisco, to Alexander and Fuller of New York, and to many others, must be accorded the credit for either the introduction or the practical perfection of methods, both for suprapubic and perineal operations, which have made these radical operations comparatively safe and most satisfactory. If one may judge by the interest manifested at the meeting last year of the International Society of Surgery in Brussels, there was no topic which men discussed more actively nor more interestedly than prostatectomy, while the three hundred surgeons present seemed nearly equally divided in opinion as to the respective merits of the two routes. It is not purposed to go into this question here, but simply to record the fact that to-day there is scarcely a topic in surgery which evokes greater interest.

It was the work done by Otis upon the normal caliber of the urethra which led to the perfection by Bigelow of his method of litholapaxy, or evacuation by crushing in one sitting, of vesical calculi. Until he introduced his large tubes for the purpose this had not been practicable, not at least in a large proportion of cases. Bigelow's methods have not been improved upon within the past twenty-five years, thus constituting a notable exception to the work and the procedures of most surgeons.

The cystoscope is really an American device, and in the promotion of the work which its use has permitted Americans have largely figured, while in the perfection of its mechanical design the surgeons of New York and Baltimore have pleasantly vied with each other. In the surgery of the rectum and the large intestine no men have done better work nor made more advances than have our own surgeons. The number of chairs now devoted to the teaching of this subject as a specialty, in various colleges of the country, and the number of text-books upon the subject, give eloquent testimony to this statement.

In fact, if one may refer to text-book work the number of books published by American surgeons within the later decades, especially of the past century, is something more than memorable, it has become almost appalling. These works are not alone text-books intended for the student, but cover a large range, in fact, almost the entire

range of surgical specialties, and bespeak an activity of study and an amount of work which has made it almost impossible for one man to be equally well versed in all directions. This has had much to do with the splitting up of general surgery into specialties, which have, therefore, become almost a necessity. At the same time, the past ten years have witnessed one notable transition, *i.e.*, the passing of one of these specialties. While gynecology is as much a study as ever, there are few men now who pose as specialists in this subject. They prefer to call themselves rather "abdominal surgeons," indicating thereby the extent to which abdominal section has become a part of the treatment of the pelvic viscera, and indicating as well that the female pelvis is no longer regarded as a distinct cavity of the body into which no one might intrude save he who posed as a gynecologist. As a matter of fact, this was originally a purely artificial distinction, having nothing to justify it save that the studies and tastes of certain great men took them solely in this direction, and that, working in this field, they showed how it had been a neglected part of the body, and how general surgical methods and principles were equally applicable here as elsewhere. Thus, for a generation, gynecological surgery was made to appear as a distinct and sharply circumscribed kind of work, and general operators were discouraged from attempting it. These artificial distinctions have been cleared away, and it has been shown that the distinctly surgical part of gynecology is nothing more than is described above, whereas the non-surgical treatment of the diseases of women is becoming a rather neglected study, fascination attracting men to the former rather than to the latter line of work.

The development of the Medical Museum has done much to extend the capabilities of surgery. The museum is perhaps almost as old as the art, but the suitable collection and arrangement of specimens never became in itself an art until John Hunter taught how not only to collect but to correlate and arrange specimens in such a way that they should yield their full measure of instruction. The collections made in this country by Dr. Wood in New York and Dr. Warren in Boston rank among the largest individual enterprises of this kind, and have each been the nucleus for museums of great importance; but the largest and most creditable enterprise of this kind on this side of the ocean is due to the sagacity and industry of the officers of the Surgeon-General's office in Washington, Drs. Woodward and Otis being mainly entitled to the credit for its beginnings. The lessons which any one may learn from a careful inspection of the specimens therein contained can be made as valuable as any ordinary attendance upon clinics.

What has been said of museums may be repeated also with regard to libraries. This country has now several large collections of medical books, which practically equal in value the most

famous collections abroad. Our Army Medical Library in Washington is supposed to be superior to any in the world; while the collections contained in Philadelphia, New York, Brooklyn, Boston and Chicago are most creditable and most valuable. They serve, as did centuries ago the great Alexandrian collection, as shrines, to which from all over the country pilgrimages are made for the purpose of literary research, while, by wise provision, most of them are made available to those who can not make such journeys, in that rare books are sent all over the country to those who need and know how to use them. The extent to which these, with many other public and private collections, are made useful appears especially in this. If we study the surgical literature of the past fifty years, by periods of decades, we shall see with each advancing period how much more prevalent has become the habit of tabulation, with other evidences of wide study and search for reports of cases, statistics, etc.

In addition to this, the most creditable publication in the world's medical literature belongs to this country. Needless to say, I refer to the *Index Catalogue* and the *Index Medicus*—both to those colossal volumes which are now issuing in the second series from the Surgeon General's Office, as a Government publication, and also that monthly publication which owed its inception to Billings and Fletcher, whose publication was for a short time suspended for lack of support, but which is now again resumed under the auspices of the Carnegie Institute. Surely no better use could be made of invested funds than the continuance of this great work, and surely none better appreciate its value than those who have occasion often to consult its pages. In this matter our profession and our Government lead the world.

We who are to-day so accustomed to calling in the services of a trained nurse, regarding it as the simplest and most natural of acts, are too likely to forget the tremendous aid which trained nursing has given to our art, and the extent to which we now rely upon that which we, after all, have not so very long had within our grasp, *i.e.*, the assistance afforded by trained nurses; and it is worth while to stop for a moment to consider the origin and development of that profession, since our own State has had very much to do with it. A number of years ago, Dr. Gross wrote, "Millions of human beings perish annually in the so-called civilized world for the want of good nursing." In 1882, the Bureau of Education in Washington issued its Circular No. 1, detailing the inception, organization and management of training schools for nurses. It would appear that the first general and systematic training for nurses was given in Bellevue Hospital, in 1872, although ten years previously something of the kind had been attempted in the New England Hospital for Women and Children in Boston. Nevertheless, the Bellevue school is gener-

ally credited with being the parent organization in this country.

In 1873 schools were also established in the State Hospital in New Haven, in the Massachusetts General Hospital in Boston, in the New York State School for Training Nurses in Brooklyn. At all events, it was the Bellevue School which was the first in this country to grant a diploma. Its influence became widespread and most beneficial.

There are now probably at least 20,000 graduate nurses in the United States, while the number of schools is constantly increasing. If nursing be included as a part of medicine then it may not be so necessary to make a division in the distribution of honors. However, it must be said that a considerable part of our advance during the last twenty-five years has been due to the improvement in general nursing which has been effected through the influence of these schools. The skillful trained nurse is the surgeon's best adjutant, and until nursing can be dispensed with we shall never be able to dispense with her services.

One of the most important surgical developments of recent times has been the more rational treatment of cancer. While the etiology of this scourge of humanity is still not clear, and while men who are giving up their lives to its study are still disputing as to its nature and origin, we have nevertheless learned a great deal about it. That it ranks next to tuberculosis in the mortality table of this State, for instance, and that it killed nearly six thousand of our inhabitants last year must stamp it as a matter of the greatest importance and should encourage all possible effort to unveil its mysteries. It stands to the credit of the State of New York that it was the first government in the world to inaugurate an institution for the scientific study of cancer, and the State Laboratory for the Investigation of Cancer, in connection with the University of Buffalo, is entitled to the credit of being the pioneer institution of its kind in the world. As yet neither there nor elsewhere have been worked out such final results as to justify one in claiming positively any given origin for this disease. Without committing its staff, therefore, or without placing responsibility for the statement upon any one else, I nevertheless feel no hesitation in saying that among the most careful workers and thinkers in the world to-day the parasitic theory is assuming an ever-growing importance; and I say this advisedly, and in spite of the opposition which such a statement frequently creates, and in spite of objections which may be raised against it. The statement is the outcome of personal acquaintance or correspondence with the men whom I consider the keenest in this line of research, as well as of familiarity with what has been recently written by them and by others. The trouble has been that the profession are not yet ready for the statement, and one may easily prophesy that for a long time they will not re-

ceive it, not, at least, without most serious questioning, nor, for that matter, should they. Nevertheless, all other lines of investigation lead up to mere negation, whereas work done in this direction leads ever to more and more fruitful results.

It is of sufficient importance to remind you here, by way of digression, that cancer occupies a unique position in the classification of diseases. It is, perhaps, the only disease of which it can be said that in and of itself it has no symptomatology, to which may be added that it has scarcely a distinctive sign by which it may with certainty be recognized. One must take several factors into consideration in diagnosing even a superficial growth, and deep growths baffle the best of diagnostic skill. In cancer of the stomach, for instance, there is not a single feature which is not met with in other cases, and the same is true of almost every organ of the body. This is a sad confession to have to make regarding a disease which kills annually in our own State six thousand individuals, but it lends plausibility to the general wisdom of making early explorations, since only in this way can the senses of sight and touch be brought into advantageous co-operation with the arguments obtained by inductive processes alone.

But it is not my object in this address to go deeply into this subject. It must be said, however, that the studies just alluded to have led to a very much clearer recognition of the clinical aspects of cancer, and, consequently, to much more accurate notions regarding its treatment. In some respects, at least, most surgeons are now agreed, namely, that cancer is in the beginning a local disease, and, as I am fond of putting it, *if* it could be recognized in time, and *if* it could be made accessible, and *if* it could be early and thoroughly removed, it would be, in most cases, at least, a curable disease. However, the "ifs" in the above statement are exceedingly important, and the very nature of the disease makes it impossible to successfully apply these canons of treatment in many instances; but the statements do apply to all cancers which are within reach and which may be diagnosed early by any one of the various means or methods serviceable for the purpose. And matters have now gone so far in the direction of earlier recognition of, and surgical operations for, deep-seated cancers, especially within the abdomen and even the cranial cavity, that I have never hesitated to lay down the following rule, with a challenge to any one who may desire to controvert it; namely, that a well-founded suspicion of deep-seated cancer justifies, in the first place, an exploratory operation, directed at first toward its recognition, and secondly, if possible, toward its relief. Were application more frequently made of this general principle by competent men (let us hope never by incompetent men) we should have fewer deaths from this awful disease.

The development of so-called military surgery (under which name we will for the purpose in-

clude camp sanitation, military hygiene and all that goes to make for the physical welfare of armies) has been another most conspicuous feature of our growth. Contrast the various pictures presented by a study of the wars from the beginning of the last century to the beginning of this. Contrast also the modern treatment of gun-shot wounds with that in vogue even during our Civil War. How many are there who yet remember the perils of gun-shot wounds, and the still greater perils afforded by the military hospitals, in which hospital gangrene, septic infection, and sepsis in general, stalked as might ghouls in a charnel house. Compare a picture presented by such a spectacle with the latest statistics afforded by the Japanese in their care of the injured and wounded. What could be a more telling arraignment of all old methods, or a more convincing argument in favor of the new. While the medical staff of our own army are keenly alive to this, the general staff and the line officers have scarcely yet awakened to the meaning and significance of these pictures, and it has been a most difficult matter to impress our national and State legislators with the fact that it is much easier and cheaper to prevent disease than to cure it, and that the opinion of officers not trained in sanitation is of little or no value concerning sanitary matters. It has been impossible until very recently to introduce teaching of these subjects in our war schools at West Point, Annapolis and Leavenworth, and the lessons concerning the disastrous sacrifice of life caused by ignorance in this regard on the part of line officers, during the recent war with Spain, have not been utilized as they should have been. The Japanese have taught the world a lesson of the greatest value in these respects, and it remains now to be seen how quickly the world at large and, what is of more importance to us, our own government will profit by the lessons thus inculcated.

Another conspicuous feature of the century's growth and progress has been the development of the perfected modern hospital, which bears no more relation to the ancient institution of that name than does the modern microscope to the simple lens which was known to Roger Bacon. In Paris at the beginning of the previous century they had scarcely discontinued the practice of putting from four to six patients in one bed, as they used to do in the Hotel Dieu, where it not infrequently happened that the convalescent and the dying lay side by side under one cover. The modern hospital is a complexity, evolved out of many particular features, and provides now for every want and every need that can be foreseen, for the isolation of the infected, the sterilization of all apparel, the protection of every patient from the possibility of harm from any other patient, while hospital construction calls now for the highest degree of architectural and structural skill.

(To be Concluded.)

Original Articles.

TYPHOID FEVER.

With Especial Reference to its Incubation Period and Reincubation Cycles.*

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Let us begin with the axiom that our knowledge of typhoid is still imperfect and obscure; then there is excuse for further discussion of this disease here to-day.

Courmont¹ (Paris, 1901) and Castellani,² in 1904 successfully demonstrated the presence of the typhoid bacillus in the blood early in the disease. Dr. Pecquis² modified these methods, and obtained only ² negative results in forty cases examined within the first twenty days of the disease. Cole³ and others in this country have gone a step further, and have demonstrated that the bacillus is to be obtained from the veins upon the first, second, third, fourth and fifth days; that the bacillus tends to disappear from the blood current at the end of the third week, or in severe cases remains as late as the sixth week. They have shown that the bacillus entirely disappears, to reappear in the blood during a relapse; that during a recrudescence from regimen or constipation there is no reappearance of the bacillus. The bacillus obtained by puncture from a vein is grown successfully in bouillon; but the later in the disease it is obtained the slower is the growth in the culture due to the increase of the antitoxin in the blood sample obtained. Moreover, this demonstration has no relation whatever to Widal's agglutination; it is obtained earlier in the disease, and in a greater percentage of cases, and also in cases where the Widal test is negative.

Again these observers believe that typhoid is a septicemia, a general infection of the body. Welch⁴ is of the opinion that the bacillus develops a special cytotoxin that is injurious to the host, while both the bacillus and the cell are living, and agrees with Mallory⁴ that the most characteristic lesion of typhoid, *i. e.*, the proliferation of lymphoid tissue of the intestine, the mesenteric glands and the spleen pulp—that this typhotoxin is developed in part compensatorily and in part defensively. Ewing^{5a} has gone a step further, and announced that the "typhoid state" is due to toxins from degenerated and necrotic tissue cells rather than from the bacteria themselves.

Bryant⁵ (England) in 1899, reports fifteen persons having typhoid without any intestinal lesion, where after death the bacillus was found in the mesenteric glands and spleen, eleven of whom in life had characteristic typhoid symptoms, and in some at least the Widal was positive.

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Flexner and Harris,⁶ in cases showing absence of intestinal lesions, but with acute splenitis, have obtained the typhoid bacillus in both right and left lungs and the liver, actively motile. Sartigan^{6a}, in 1899, supports Wyssokowitsch in urging that the organs in which the typhoid bacillus is commonly found are those that play an important rôle in the removal of bacteria introduced from the blood. It has been difficult to obtain the bacillus from the typhoid stool, and yet Piorkowski⁷ reported in 1899 the demonstration of typhoid in cases ranging from the third to the thirty-first day of the disease, even when the Widal failed of positive reaction. His methods may not be of interest here, save to say that he added a small amount of normal urine to a peptone gelatine, and after a few days sterilized, filtered and plated his medium and made loop cultures from the feces. The bacilli appeared in from fifteen to twenty hours in characteristic small oblong colonies.

Hiss,⁸ in 1901, says that the typhoid bacillus usually after the first week can be obtained from the blood, spleen, petechiæ, urine and feces, rarely from the mouth, throat and lungs. Post-mortem it is found in the lymphatic tissue of the intestine glands of the mesentery, liver, kidney, gall bladder, bone marrow, lungs, etc. He believes that the bacillus does not long survive in the blood. The relation of the bacillus to the lesion is a variable factor. He urges that the bacillus causes necrosis and hyperplasia, and that there is a close relation between the bacillus and the intestinal lesion, especially as regards inflammation and repair.

Curiously opposed to this is the report, in 1897, of Remlinger and Schneider,⁹ of Val-de Grace Laboratory, that they had found the typhoid bacillus in the intestines of persons not attacked by typhoid. This is further supported by Surgeon-Major Vincent,⁹ who says: "This bacillus is able to live in a latent condition in the digestive tract, and thence under favorable conditions to multiply itself and give rise to a spontaneous epidemic." This is certainly borne out by the fact that Welch¹⁰ has demonstrated genuine abscesses produced by the typhoid bacillus, some exclusively caused by this bacillus, and further shows that the bacillus is viable in the periosteum and in the osteomyelum for months and years. Von Dungern¹¹ reports the persistence of the typhoid bacillus in the gall bladder for fourteen and one-half years.

Briggs,¹² in 1904, possibly suggests this condition in his remark that the incubation period of typhoid is short, and that it is perhaps possible to abort the disease, and adds that the disease is protean, and that we must not ascribe too wonderful virtues to drugs.

Major-Surgeon Woodruff¹³ has remarked upon the military importance of mild typhoids, such as the mountain fever.

Brainin,^{13a} in 1901, finally, is authority for the statement that typhoid may last only sev-

eral hours. This was in connection with an epidemic of about three hundred persons. There was a mortality of ten per cent. In main, there were no symptoms characteristic of typhoid observed. The disease in the majority of cases ended by crisis in two to three weeks. The fatal cases ended in the second to third week by coma.

Desplat,¹⁴ as early as 1883, urged that in these mildest ("ambulant") cases the bacillus produced only a local inflammation in the intestines, and that in our sick typhoids the infection was a general one.

The incubation period of typhoid is variously stated. East¹⁵ reports in 1903 an English prisoner whose typhoid began one hundred and forty-one days after his return from the Boer War, presumably infected at Pretoria. The various transfers of this prisoner are very carefully worked out and any intermediate chance of infection disproven. I shall refer to this case later on.

Dufflocq and Voisin¹⁶ in 1903 report an attempt at suicide by a young girl of nineteen years by a pure culture of typhoid bacillus. A typical typhoid attack developed. The Widal was positive. Other type symptoms were present. The initial symptoms began three days after the culture was taken. But following Esquirol's claim that the instrument of the suicide is usually the one that the suicide used most proficiently, argues that this young lady was free in a biological laboratory and was probably infected at a considerably earlier date.

Equally insecure of proof, I believe, is the infection of thirty-three members of a German infantry regiment reported by Jauchen¹⁷. They had returned from autumn maneuvers exhausted and hot, and drank freely of milk at a typhoid infected village. Three were ill in two days thereafter, seven on the third day, six on the fourth, four on the fifth, four on the sixth, five on the seventh, and only seven in the second week. Again, here I believe that we have an example of "maneuver fever" (otherwise typhoid) of an earlier date of infection precipitated by curds and whey. Certainly the facts are not sufficient for proof.

The Plymouth, Pa., epidemic¹⁸ in 1885 began fifteen days after a sharp winter thaw.

Imlaystown, Pa.,¹⁹ near Camden, in 1886, was served with infected water on August 14. On August 27, a period of thirteen days, their epidemic began.

Pierson,²⁰ in reporting the Stamford, Conn., milk epidemic of 1895, asserts that the majority of cases outcropped a little under fourteen days. One long incubation was twenty-eight days.

Kraemer²¹ reports one hundred and forty-two cases of milk infection in a regiment following a fatiguing July march. All became ill about the end of two weeks and the beginning of the third week.

Newman²² tabulates some thirty cases thought to have been shellfish infections made by the

medical officer of Southwark, England, in 1902. Of these twenty-five have an incubation period ranging from "about seven days" to "about fifteen days." The average period lies between twelve and thirteen days.

Petruschky²³ narrates an unfortunate accident much to the point. "The sister of the ward accidentally drank a small quantity of urine which had been passed by a typhoid patient into a wine glass, and after an incubation period of twelve days she developed typhoid."

Smith²⁴ reports a small epidemic in Stafford, Conn., in 1894, in which the first four typhoids underwent a twelve day incubation. That of the others is not noted.

Professor Smith²⁴ reports the occurrence of typhoids in New Haven in 1894. These occurred in ten, fifteen, sixteen, seventeen and eighteen days respectively after infection. There was also one secondary case whose incubation was evidently not over fourteen days.

Soper,²⁵ 1903, ascribes the epidemic at Butler, Pa., to be due to the breaking down of their filters. The filters were out of commission from October 20 to October 31. The epidemic broke out about November 2. This also shows a lapse of thirteen days for the incubation period.

Shattuck²⁶ states the incubation period to be ten to twenty-one days, and believes all other incubations to be small in number or suspicions.

At East Barrington, New Hampshire²⁷, in 1896, a neighborhood gathering was infected by the ice cream made from milk infected by a sick dairy milker. Fourteen typhoid resulted, scattered through six towns. All these persons ate ice cream. None of these towns had other typhoids. All developed typhoid within the next ten to fourteen days after the party.

Of the volunteer regiments that went to Chickamauga Park during the Spanish-American War,³⁰ of 1898, ninety regiments became infected with typhoid. In a few of the regiments of which statistics are available the incubation period seems to vary from eight to sixteen days.

Severe typhoids are often least exposed. In Stamford, Conn.,²⁰ ten out of four hundred and six typhoids were caused by a single glass of milk. The milk was presumably infected by washing the cans at an infected well. One of these ten typhoids was especially malignant.

Beaumetz²⁸, in 1889, reports nine typhoids caused by a single drink from an infected water supply. Of the nine, six died.

The contrary may also be true. A large amount of infection may be taken into the digestive tract with little or no infection. Quine²⁹ is authority for the statement that certain German investigators "have engaged in the unpleasantness of drinking down fresh typhoid discharges and have demonstrated with absolute certainty that fresh discharges are innocuous." Rather have they not proven a tremendous acquired immunity to typhoid?

Acquired immunity is evidenced by the First

Volunteer Cavalry in the Spanish-American War³⁰. Typhoid appeared among them. One half went to Cuba, and apparently this part lost its typhoid on the way there. The other half remained behind and became badly infected. It is believed that the long sea voyage had much to do with this state of affairs.

We know that with care few physicians and relatively few nurses become infected from typhoid patients. In good conditions^{31 32} at the most this does not exceed one to two per cent. of cases. It is often nil. This also argues for immunization of those who are in constant relation with typhoid.

Still another factor not to be lost sight of is latency of infection. Griffith³⁴ is especially sure of this in the epidemic in Lincoln, England, in 1904. This is true of all epidemics. There are many late cases that cannot be explained by secondary infection. The typhoid of the military prisoner in Portland Prison, England, who developed the disease one hundred and forty-one days after exposure to the infection is a case in point. This constitutes a condition of fact that we have yet to explain upon scientific lines as yet unknown. There is the suggestion first that the blood serum in itself is inimical both to the life and the development of the typhoid bacillus. We know also that persons vary in the power of their cells to develop typhoid antitoxin as illustrated by agglutination tests. Some typhoid patients never respond to the Widal, while others respond very early in the disease and very positively.

Ziegler as long ago as 1900 or earlier showed that the degeneration vacuoles in the rod-ends of the bacillus, formerly supposed to be sporulation forms, is to be found only in old, worn-out and acid cultures. Practically the same conditions of worn-out bacilli may be developed in the internal economy of the body tissues.

In practice, enteroclysis³³ when consistently carried out defeats the toxin accumulation in the body as does no other single treatment of your typhoid. The bacillus coli communis is a close competitor in the intestinal condition of the typhoid patient. Both are uniformly present there, and each aggravates the other to renewed virulence of attack. The colon bacillus regularly attacks the sugars and rapidly produces gas. Thus the milk diet of typhoids that our English friends have forced upon us is bad, causing through the contained lactose a peculiar aggravation of the typhoid growth and virulence, and an increase of necrosis toxins in the intestinal tract.

Equally bad, I believe, is Osler's bath treatment that, despite his statement to the contrary, needs must use up the energies of the patient, and at least achieves for him no special strength for attack nor aids to any extent in the elimination of the toxins of the allied forces in the intestine—the typhoid and the colon bacilli.

In my experience with the Ithaca epidemic in

February, 1903, about one-quarter of the cases ran only short, mild temperatures of 99 to 99.4 for a day or two and then became subnormal.

1. Professor M. drank infected water. Had recurrent attacks, about two weeks apart, of malaise and dizziness and was totally unfit for work. On the thirty-fifth day he gave a partial Widal reaction with clumping and only slight loss of motility. He was at Atlantic City from the seventh to the fourteenth weeks, and very slowly regained his vigor. He finally returned to his work in the University and has been well since.

2. Mrs. H., twelve days before the first attack that simulated grippe, drank for the only time a glass of city water. She recovered with sub-normals of pulse and temperature, nausea, and dizziness. She had a recurrence just two weeks later, again in two weeks, and a fourth and fifth invasion just two weeks apart. Each attack was shorter and simpler than the preceding one. Widal was negative on the sixty-third day.

3. A. V. B.—Student—had three recurrences a fortnight apart. No temperature rises. Had a positive Widal on the fifth day in one hour—negative on the forty-ninth day.

4. D. B. A.—student—had a series of recurrent sub-normals at no very definite periodicity. Widal on the ninety-sixth day was positive in three hours.

In another quarter of the cases there was a primary invasion temperature for one to three days followed by sub-normals. Some of these succumbed to typhoid two weeks, some four weeks later, and in one case eight weeks after infection.

1. H. T. C. gave a partial Widal on the sixth day. He remained a fortnight at his University work when he had a sharp rise of temperature and then went home and had a severe typhoid.

2. A. S. L. Had two eruptions of slight fever a fortnight apart. During the second attack he went to his home, and there, five weeks later, had a severe typhoid. No Widal was made while in Ithaca.

3. J. L. S. Reported with a temperature and headache. Reported again two weeks later when a positive Widal was obtained. He subsequently had no typhoid and gave a negative Widal on the seventy-fourth day.

In about another quarter of the cases, temperatures began and continued for three to ten days. These patients slowly recovered, or recovered and later had a severe typhoid.

1. G. D. W. Had only a pharyngitis and tonsillitis. Was at Sayre Hospital three days. After a succeeding vacation of two weeks returned to his University work, and on the eighteenth day gave a very positive Widal in one-half hour.

2. H. S. R.—medical student—had a temperature for about a week. Was sent home. He returned on the twelfth day; had temperature again, and was again sent home and had a severe typhoid.

3. H. J. S. was sent home at the first out-cropping of symptoms. Returned to Ithaca in twelve days. On the fourteenth day the symptoms and temperature recurred. He was again sent home. He developed a severe typhoid and died in the German Hospital in Buffalo.

4. Dr. A. P. had grippe, then resumed practice, meanwhile caring for a sister who was invalided with rheumatism. The doctor gave a positive Widal as did her sister. The doctor died during operation for appendicitis, at which time both the Widal and an ante-mortem examination of her typhoid were done. The operation was done about a month after her first symptoms appeared.

About another quarter of these typhoids were typical of the disease.

1. H. E. B. Typical—complicated with erysipelas in

the first week; gave negative Widal's throughout. Recovered from both in five weeks.

2. D. E. H. Most septic case cared for. Sick ten weeks. Gave a partial Widal on the twenty-second day. Both earlier and later Widal's were negative.

3. Miss M. L. Widal on the fifth day, negative on the twenty-eighth and eighty-first. Typical typhoid.

4. W. W. Had mild typhoid and a secondary syphilis. Widal positive. Recovery in eighteen days.

5. E. S. F. Typical typhoid, recovering in twenty days almost by crisis. Negative Widal at eight days, positive at twenty-nine and at ninety days.

These were patients that lived in clean houses, and who had not drunk the infected water for weeks, in one case for over a month. All were anxious and careful to avoid all routes of infection. The evidence points to an early infection, and subsequent re-incubation periods of two weeks each within the body. I also believe that in one case at least medication "aborted" one period of eruption of symptoms. A third and a fourth period in the same patient followed with the old return of symptoms at the regular interval of a fortnight.

Three typhoids of this past fall have shown mild eruption of invasion symptoms two weeks before their regular typhoid attack. In all three persons severally and individually there was history of typhoid infection chances about four weeks before their typhoid, and absolutely no chance of infection two weeks before their typhoid.

I believe the usual primary incubation period to be pretty uniformly twelve days, and I leave you with this last in mind because I believe that it will help you as it has me to a fuller understanding of typhoid, typhoid invasion, the isolation of typhoids, and the protection of the uninfected.

REFERENCES.

1. *Lancet*, 1902, ii.
2. *Lancet*, 1905, i.
3. *Bulletin of the Johns Hopkins Hospital*.
4. *Lancet*, 1903, ii.
- 4a. *Ewing on Immunity*.
5. *British Medical Journal*, April, 1899.
6. *Bulletin of the Johns Hopkins Hospital*, 1897.
- 6a. *Bender Laboratory Report*, 1899.
7. *Lancet*, 1900.
8. *Medical News*, May, 1901.
9. *Lancet*, 1902.
10. *Bulletin of the Johns Hopkins Hospital*, 1894.
11. Corfield, Goulstonian Lectures on Typhoid, *Lancet*, 1902.
12. *American Medicine*, October, 1904.
13. *American Medicine*, December, 1904.
- 13a. *Russian Medical Vestnik*, iii, No. 7.
14. *Bulletin Général de Thérapeutique*, June, 1883.
15. *Lancet*, 1903.
16. *Archives Générales de Médecine*, 1903, No. 35.
17. *Wiener Klinische Wochenschrift*, July, 1898.
18. *Philadelphia Medical Journal*, 1885.
19. *Philadelphia Medical Journal*, 1886.
20. *Medical Record*, 1895.
21. Corfield Lectures, *Lancet*, 1902.
22. *Practitioner* (London), January, 1904.
23. *Practitioner*, January, 1904.
24. Connecticut State Health Board Report, 1904.
25. *Engineering News*, December, 1903.
26. Reference Handbook of the Medical Sciences, Article: Typhoid.
27. *Boston Medical and Surgical Journal*, 1896.

28. *British Medical Journal*, July, 1889.

29. *Philadelphia Medical Times*, 1888.

30. Reed, Vaughan, and Shakespeare. Monograph on Typhoid Fever.

31. The Ithaca Epidemic of 1903. *American Medicine*.

32. The Water Bourne (England) Epidemic of 1902. *Lancet*.

33. Advantages of Enteroeclysis. B. Frank Stahl, *New York Medical Journal*, 1903.

34. *Medical Press and Circular*, London, 1905.

35. Conn (H. W.) Typhoid Fever of Wesleyan University. In 17th Annual Report Connecticut State Health Board.

TOXIC ARTHRITIS.*

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THE term rheumatism is a fine illustration of the indefiniteness of our nomenclature. In the beginning, applied to conditions characterized by catarrhal discharges, as its derivation implies, for some reason or notion or sentiment it is still employed to denominate pathological conditions which have no such manifestations. It is an absurdity, therefore, and has no rightful place in a scientific classification. Why modern teachers and writers continue to employ the term is difficult to explain. It is a stumbling block to one who attempts to define or classify conditions. It is a cover for serious error and ignorance. As far as real significance is concerned, one would be as justified in using any haphazard term, as to use the one under consideration, to denominate the conditions to which it is applied.

It has been aptly said that "while it may be well to have some such convenient term as 'rheumatic' to employ in talking to the laity, it would be well were all of the affections now termed 'rheumatic' renamed in accordance with a less ill-defined etiological adjective."[†] The term is used, nevertheless, to describe a constitutional, systemic disease, marked by rise in temperature, by inflammation of the connective tissue structures, especially muscles and joints, due to some infection and toxæmia; pain and recurrence and involvement of many organs being among its characteristics.

The acute form, with active symptoms, systemic and local, is the most clearly defined; the sub-acute, with symptoms less intense and local manifestations not so pronounced, fairly so. But there is a third variety denominated chronic rheumatism. This term is applied to conditions marked by stiffness and pain in muscles and joints, tenderness on pressure, frequently recurring on exposure to cold and dampness without much active systemic disturbance. This constant recurrence leading to thickening of capsule and tendons finally, in some cases, leaves the joint enlarged, the cartilages are at times invaded and ankylosis may result. It is described separately

* Read before the Medical Society of the State of New York at its One Hundredth Annual Meeting, Jan. 30, 1906.
[†] *Progressive Medicine*, March, 1900, p. 141.

in works on medicine, and the impression is abroad that it belongs to a genus different from the two former. We find such statements as the following, "that it rarely follows acute rheumatism; that it may follow sub-acute; and that it may occur without reference to either;" all of which supports the idea that it differs from both in nature and origin. It is safe to state that they are all manifestations, though differing in degree, of the same class of pathological condition. The subject of the chronic form will give account invariably of mild (sub-acute) attacks of systemic disturbance, with pain and stiffness in various parts, which he has passed by as disorders of digestion or mild inflammations, until their repetition has begun to leave permanent marks on his locomotor apparatus. He, like the victims of the other two varieties, will describe a fertile soil. He will recount the same active causes of attacks. Digestive and hepatic disturbances will be prominent in his complaints.

It would simplify matters greatly, and would lead to better results for patient and attendant to bring the three varieties under one head. They have in common as a basis, a toxæmia, probably of exogenous source,* although some observers still hold to the old idea that they are expressions of a disordered metabolism.† The condition may, in fact, result from a combination of both. Until there is more positive proof of the specific origin of the disorder, we must content ourselves with general terms to describe it. The generic term "toxic" will satisfy the demands of both theories. Their local manifestations are of an inflammatory nature, which can be expressed by the termination "itis," appended to the name of the part prominently affected. They may be divided into acute, sub-acute and chronic. This denomination would immediately separate the arthritis, or other inflammation, due to sepsis, traumatism, gonorrhœa, syphilis or tuberculosis as the adjective then used would indicate the nature of the infection.

It may be objected that toxic arthritis would be an indefinite term. We grant that. It would at least suggest the source of the disturbance, which the meaningless term rheumatic does not. And it might replace that term very definitely if the sources of the other varieties of arthritis were indicated by their names, reserving toxic alone for the condition now called rheumatic.

Again, it may be objected that it would be confounded with the condition denominated gout. This could be avoided by applying to the latter the term uricacidæmia, acute, sub-acute or chronic, as the case might be.

The importance of this matter to the clinician is to be able to safely name and classify lesions, that treatment may be properly applied and prognosis made with some accuracy.

The statement, so frequently reiterated, that the diagnosis of "rheumatism" is not usually dif-

ficult, is not supported by observation in the hospital wards, where opportunity is offered for more extended and careful examination than in private practice. The subjects of this and allied disorders change their medical attendants frequently, and state as positive a diagnosis that has been made tentatively. Through no fault of the general practitioner, therefore, has the diagnosis of rheumatism come to be looked upon with much doubt. In many cases it is absolutely impossible for him to arrive at a correct diagnosis, simply because he is not afforded the time and opportunity to make a proper investigation. If he would discard the awkward term rheumatism, and inform his patient that he was suffering from an inflamed part, a joint, muscle or nerve, as the case may be; and that the basis of such inflammation required careful investigation, he would be on surer ground. He could then proceed to examine into the cause of the trouble. He might, at the same time, be able to make clear that in the inflammatory process there is a formation of new tissues around capillaries and arterioles which contracts and interferes with blood supply, causing permanent tissue changes which will continue and may advance after the primary cause has been removed. The patient would then be able to see that, while future damage might be avoided under proper conditions, the organic changes which had already taken place in the chronic form were a different matter and beyond repair when they had proceeded to a certain point. The denomination chronic rheumatic arthritis would then be as rarely applied to a single joint affection as it ought to be. Chronic arthritis is quite sufficient to say about such a joint until the process of exclusion has been thoroughly carried out. If some toxæmia of unknown source is finally arrived at, as the basis of the condition, the term toxic will significantly classify it. It is hazardous to rest a diagnosis on the condition presented by joint, muscle or nerve. The articular affections of locomotor ataxia and other spinal diseases, of the various well-defined toxæmias, of those classified as rheumatoid, do not in many instances present sufficiently pronounced features to individualize them. The sure diagnosis and prognosis must rest on a rigid examination of the whole system and the history of the case; and upon them must be based treatment if it is to be rational and effective.

It is rather interesting to consider that it is impossible to define the condition, under consideration, in a logical manner. All are agreed as to its genus, that it is an inflammation; that it is due to a variety of toxæmia belonging to a species affecting the motor apparatus essentially—several parts simultaneously or in succession—joints and other fibrous tissues; that its property is that, *per se*, it is self-limited, expends its energy upon one stage, though its consequences may continue; and that it is liable to frequent recurrence. Its accidents are numerous, due to

* *Am. J. Med. Sci.*, 1904, p. 603; *Progressive Medicine*, March, 1905.

† *Medical Record*, 1904, 1., p. 41

location in organs of special function, with attending phenomena. But when we attempt to name the differentia, that characteristic which is its essence, which will separate it from every other condition, we fail and we are forced into the process of exclusion.

We hear frequently that we are to rely on the symptom complex—the syndrome—to diagnose certain conditions which are lacking in pathognomonic characteristics. This statement is made concerning the conditions denominated rheumatic. It is euphonious, and that is the only criticism it deserves. The symptom complex of so-called rheumatism is that of states caused by various toxic agents, and it is only by excluding these that we are enabled to arrive at a diagnosis. We can discover, name and classify many of those agents. We are unable to do this in the present state of our knowledge, in respect to the condition in question. We can simply say that it is a toxic condition due to some infection, for it bears all of the characteristics. To say that "the acute development, as a primary affection, of polyarthritis with fever, is a combination of symptoms on which a diagnosis can usually be based with considerable reliance" is to beg the question. The determination that it is a primary affection is an abuse of the term.

REFERENCES.

Bull. Johns Hopkins Hosp., xv, p. 251.
British Med. Journal, Jan. 31 and Sept., 1903; Sept. 21, 1901, p. 779.
Berlin klin. Wochenscht., July 17, 1899, p. 638.
Lancet, Sept. 22, 1900.
Deutsch. Med. Wochenscht., Feb. 7, 1901; Sept. 21, 1905.
Zeitschrift f. klin. Medicin., lxxvi, p. 311.

COMMENTS ON THE RESULTS OF THE
SANATORIUM TREATMENT OF
PULMONARY TUBERCULOSIS.*

BY JOHN H. PRYOR, M.D.,
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THE annual report of the New York State Hospital for Incipient Pulmonary Tuberculosis recently transmitted to the Legislature affords the first opportunity to review a complete year's work along a new path of progress. Careful scrutiny of the clinical statistics reveals some striking facts of great interest to the medical profession of this State. There is abundant evidence that this institution, created to establish and develop a new method of rational relief for the consumptive, has fulfilled its purpose with signal success. The results obtained are unparalleled and the intended object lesson will be of inestimable value from an educational and benevolent standpoint. It seems eminently fair and proper at this time to claim for this institution the pre-eminence which it deserves among the sanatoria for consumptives and to call attention to the wisdom of the novel system of

administration and control embodied in law. This achievement is remarkable when it is realized that such a project could be made successful in New York State under present, unfavorable conditions. When the results to be cited can be obtained in spite of vicious centralization of authority under a boss of charities who has been given too much power and usurped more; when a plethora of red tape and a variegated assortment of systems and cheap parsimony and humbug economy fail to fetter scientific effort and aspiration, and the humbug of civil service as administered in this State fails to cripple or render impossible the fulfillment of a determined purpose, there must be some inherent, powerful reasons to account for the triumph over obstacles which, at times, seemed insurmountable. The fear of the timid that political interference and influence would endanger the aims of the institution has not been realized. Its work has been made difficult by the stupidity of bureaucrats and the incompetence and dominating influence of clerks, but the saving power can be found in the wise provisions of the organic law and the persistent fighting for a worthy cause. The limiting of the admissions to early cases of tuberculosis and the methods devised for examination have proved most salutary. The annual report contains the following comparative table of results:

MEDICAL REPORT FOR THE YEAR ENDING DECEMBER 31, 1905.

Number of patients treated during the year.	293
Number of patients in hospital, December 31, 1905	103
Number to be reported upon	190

Of these 190 patients 25 remained less than two months in hospital, and are not included in the comparative table of results. These 25 cases are reported upon in detail in the appended table, concluding this report. By referring to this table it will be seen in the majority of instances, patients who were discharged from the hospital previous to a stay of two months were favorable cases and improving at time of their discharge.

COMPARATIVE TABLE OF RESULTS.

Of 165 Patients Remaining in Hospital from 2 months to 13 months. Average length of stay 6.2 months.

Per Cent.		Incipient	Moderately Advanced	Advanced	Tot'l
44	Apparently Recovered	63-72%	9-14%	0%	72
38	Arrested	21-24%	40-61%	3-23%	64
13	Improved	2- 3%	11-17%	8-62%	21
5	Unimproved	1- 1%	5- 8%	2-15%	8
0	Died	0	0	0	0
100	Total	87-53%	65-39%	13- 8%	165

* Read before the Medical Society of the State of New York at its One Hundredth Annual Meeting, Jan. 31, 1906.

The medical report contains certain salient facts which invite careful attention. The classification of cases is made in accordance with the definitions adopted by the National Association for the Study of Tuberculosis. Formerly no standard existed, and the factor of personal equation and the chance for divergent opinions has been largely eliminated. Under the recent strict definition of incipientcy the number of cases previously included in that class will be decidedly diminished, and comparison assumes greater accuracy and value. It will be observed that 53 per cent. of the patients admitted are designated as incipient cases. This percentage shows an increase, and is the highest attained as shown by collected reports and statistics. But the increase continues, and the remarkable statement appears that on December 31, 1905, 70 per cent. of the inmates could be properly included in the group of early or incipient cases. Evidently the law is an efficient safeguard and more reliable than the forced yielding which may accompany philanthropy and donation. The chief reasons for the improvement in the character of cases are probably to be found in the hearty cooperation and more careful work of the examiners in different cities, and the recognition by the profession and the public of the vital importance of an early diagnosis and prompt treatment. Success in securing promising cases at the proper time will ultimately stimulate an effort to increase the number of curable cases in similar institutions. The vast number of applications for admission has not increased proportionately with time because the requirements are much better understood, and preliminary examinations now conducted in the cities sift out the advanced cases and prevent useless and hopeless waiting for a decision. Complaints that patients with advanced disease are refused an opportunity to regain health grow less clamorous, as it is realized that they constitute the sad evidence of years of neglect, apathy, and false economy. Relief has long been supplied at the wrong time and at the wrong place, and the mistake is frightfully expensive. All efforts to comply with the strict interpretation of the law and admit only incipient cases have apparently been unsuccessful, and will be, to a certain extent, so long as a decision and a difference of opinion are allowed human beings. There is a danger in striving alone for statistics, and it is questionable if some of the German authorities are not resorting to dubious refinements in diagnosis. On the other hand, if we allow for the usual excuses, the fact that a large number of the early cases do not seek relief defies full explanation. It is safe to assume that fifty thousand people in this State are suffering from pulmonary tuberculosis, and there must be thousands of the afflicted still in a curable stage. Some of the reasons why the disease is not detected early have been discussed in a

* Some Facts Concerning the Early Diagnosis of Pulmonary Tuberculosis. *Medical Record*, Nov. 25, 1905.

previous article.* Mention may be made at this time of one attempted explanation which experience does not entirely justify. The statement that the poor do not consult the physician may be just as misleading when applied to the well-to-do, judging by the class of patients seen at health resorts. To be frank, the search for the disease is not made early and thoroughly. The results of so-called home treatment are apt to be exaggerated and very few afflicted physicians try the method.

It is most gratifying to learn that the appropriation for maintenance and equipment will probably be increased this year. The organic law explicitly states that the institution shall accommodate not less than two hundred inmates. Although the trustees urged a sufficient appropriation to fulfill this requirement last year, economical officials succeeded in limiting the maintenance fund and the population to one hundred. Undoubtedly there is danger in increasing the number of inmates too rapidly under prevailing conditions. This has been made lamentably apparent from a scientific standpoint at the Massachusetts Hospital where the percentage of curable cases has undergone a decided diminution. That excellent pioneer institution has suffered from a too rapid and ill-advised growth. The present buildings of the New York State Hospital should be filled with patients without any meddling with the law or any change in the methods of management. The transcendent importance, from any standpoint of early detection and prompt relief, is made strikingly apparent by the difference in the results obtained under similar conditions at the New York State Hospital. Of the incipient cases, 72 per cent. apparently recovered; in 24 per cent. the disease was arrested; 3 per cent. improved, and only 1 patient failed to improve; 96 per cent. apparently recovered or arrested. When compared with the results of treatment of the moderately advanced, which in the past have been frequently regarded as early and favorable, the picture is radically different and not as radiant as sometimes painted. Of this class 14 per cent. apparently recovered; the disease was arrested in 61 per cent.; 17 per cent. improved; 8 per cent. were unimproved. Of the advanced cases which were still regarded by physicians as incipient, none apparently recovered. Disease arrested, 23 per cent.; improved, 62 per cent.; unimproved, 15 per cent. Thus the percentage of apparent recoveries in the incipient stage were more than five times greater than those in the moderately advanced stage, and 72 times greater than those in an advanced stage. The report shows 44 per cent. of apparent recoveries in all cases, and 72 per cent. of apparent recoveries in the incipient stage. In view of this revelation, is it not timely to emphasize the fact that a new era has been inaugurated in the intelligent care of the consumptive?

Much has been written to show that tuber-

culosis in an advanced type is occasionally curable and this contention is not disputed, but the suffering and hardship and the deprivation of home surroundings have been immeasurably greater than any lasting benefit obtained. A recovery or an arrest is sometimes falsely assumed before sufficient time for observation and verification have elapsed. Greater experience will show the necessity for a longer stay in sanatoria. No patient should be recorded as recovered until two or three years after health has been restored, and ultimate results should be accepted with reserve until five years have passed. It is amazing how easily the tendency to relapse in tuberculosis is forgotten, and how frequently a lull in activity or a period of quiescence is miscalled an arrest. The increasing skepticism with which the family physician scrutinizes the so-called arrested case has much foundation in experience, and a reaction is sure to follow exaggerated claims. The term arrest in relation to tuberculosis is a loose one, and the generally accepted meaning leaves too large an opportunity for individual opinion. The time usually allotted for a decision is too short, and the lasting effects will grow more and more disappointing. Already the subsequent histories published are very gloomy. The advocates of sanatorium treatment and the specialist in one disease will have less to defend in the future if the expectation and true meaning of arrest and improvement are more clearly defined. There can be no doubt that an arrest is more lasting and more apt to be followed by apparent recovery if the case is incipient. The care of a large number of patients who betray the evidence of invasion or beginning disease reveals occasional fallacies quite generally accepted.

Sanatorium treatment has become largely an iron-clad routine practice and consists principally of the open-air life, rest and forced feeding. Its indiscriminate and rigid employment has been largely due to the fact that the vast majority of patients were more or less of the advanced type. Sometimes the patient recovers from neurasthenia and indigestion instead of tuberculosis. The time devoted to almost absolute rest in the early stages may be too prolonged, and stuffing during a continuous period of repose without study of the individual case and the relation of dietetics may prove most irrational. While the route to recovery may lie through the stomach, digestive disturbances and their consequences are too common. Frequently, the patient will gain faster on three meals a day than he will on six. Large gains in weight and the importance of increasing fat have been ascribed altogether too large a rôle in the prognosis. The great gains usually follow decided loss in weight, and statistics designed to show much average accumulation of flesh simply reveal a high percentage of somewhat advanced cases under treatment. The loss of flesh is usually slight when the extent of the disease is slight. Tuberculosis may or may not be arrested

in its course while the individual is converted into an immobile aggregation of fatty cells. With active exercise or work the surplus melts away. Many so-called recoveries and arrests are apparent only so long as the individual confines any activity to involuntary functions; a rigorous work or exercise test has been employed before any patient was discharged as apparently recovered. At this time the observation of Moxon seems pertinent—"it is quite as important to know what kind of a patient the disease has got as to know what sort of a disease the patient has got." In Germany, the term "able to work" has been invented to describe a condition which denotes the character of the arrest or the degree of improvement. It means simply that a relatively short stay in a sanatorium or a hospital will enable the patient to resume work for a very indefinite time dependent largely upon the stage of the disease and the character of the occupation.

Let us be frank and admit that it is difficult enough to maintain recovery under favorable conditions, and the greatest problem confronting those interested in sanatoria for the poor is to be found in the appealing necessity for suitable employment and surroundings for the patient who must resume the struggle for existence. While provision for the proper care of consumptives is unfortunately limited, is it not reasonable to select the promising victims? If greater accommodation for that class is furnished in the course of time, arrangements should certainly be made to entirely separate the sexes.

The monotony of the form of treatment as practiced to-day should be relieved of some hardship, and more amusement and recreation provided. If the expense is not allowed by economical officials governing public institutions, the money should be raised by subscription. The net cost of maintenance paid by the State for the past year was \$20,777.47. The cities and counties pay the balance. It would be interesting to know if the State has realized more fully on any other small investment!

Finally, the expectation of permanent results hinges so largely upon the sanatorium treatment of the poor incipient case that attention is briefly invited to an anomalous condition becoming more noticeable each day. The poor person who receives sanatorium treatment frequently enjoys a much better chance for his life than the well-to-do patient who is unable to obtain proper supervision, discipline, frequent advice and close attention to details.

The New York State Hospital for Incipient Tuberculosis has won the right to expect the cordial support of the medical profession of this State. The experimental stage has been passed, and when the authorities at Albany appreciate its just demands, the full benefits for which it was created will certainly be attained. New York City has led the way in prevention, and New York State now leads in method of management and results.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By JAMES J. WALSH, M.D., PH.D.,
New York.

CHAPTER I.

THE LEGISLATIVE CREATION OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

AS a result of meetings held by certain members of the medical profession, in Saratoga County, toward the end of the eighteenth and again at the beginning of the nineteenth century, it was resolved to make an attempt to secure the legal regulation of the practice of medicine, by the establishment of a corporate State medical body, composed of representatives from the different counties of the State, which should have the power of granting or refusing license to practice medicine. Considerable opposition was manifested at the beginning, and it was difficult for the members of the medical profession to agree upon a scheme satisfactory to all. As a consequence, nearly ten years elapsed before the required act of the Legislature was obtained. At first it was thought that the act for the regulation of the practice of medicine would be asked only for the counties in the northeastern part of the State. Fortunately, however, the committee in charge deemed it advisable to ask for the passage of a law for the whole State.

This law was passed April 4, 1806. Something of the history of the efforts required to bring about that community of interest that would secure the passage of the law, the difficulties that were encountered, and the change of base from the demand of a law for particular counties to that of one for the whole State, will be stated in a later chapter, in the words of Dr. John Stearns, who was himself one of the chief actors in these proceedings, and who subsequently wrote an account of them in order to correct many false impressions that had begun to be current.

A copy of the act incorporating the medical societies in New York State and its counties has not been easy to obtain. It does not seem to have been published previously in any of the formal publications of the New York State Medical Society. No copy of it could be found in the library of the New York Academy of Medicine. Inquiry at the Astor and Lenox Libraries developed the fact that in their very full collection of the laws of the State of New York, the original volume of laws for the year 1806 was not contained. Further search, however, showed that the laws for that year had subsequently been reprinted, and it is in this reprint that the full text of the act of incorporation was obtained. It seems likely that previous efforts to obtain this fundamental law

were not successful, or it surely would have been incorporated either in the original set of transactions, or in the reprint of the transactions made in 1830, or in the subsequent reprints of the early proceedings of the society, made just after the celebration of its fiftieth anniversary, and published in the Transactions for 1859.*

The act was entitled: "An Act to Incorporate Medical Societies for the Purpose of Regulating the Practice of Physic and Surgery in this State," and passed April 4, 1806, in the twenty-ninth session of the Legislature. It runs as follows:

Whereas, well regulated Medical Societies have been found to contribute to the diffusion of true science and particularly the knowledge of the healing art, Therefore

I. Be it enacted by the people of the State of New York, represented in the Senate and Assembly, that it shall and may be lawful for the physicians and surgeons in the several counties of this State now authorized by law to practice in their several professions, to meet together on the first Tuesday of July next at the place where the last term of the Court of Common Pleas next previous to such meeting was held in their respective counties; and the several physicians and surgeons so convened as aforesaid or any part of them, being not less than five in number, shall proceed to the choice of a President, Vice-President, Secretary and Treasurer, who shall hold their offices for one year and until others are chosen in their places; and whenever the said societies shall be so organized as aforesaid, they are hereby declared to be bodies corporate and politic in fact and in name, by the names of the Medical Society of the county where such societies shall respectively be formed, and by that name shall be in law capable of suing and being sued, pleading and being impleaded, answering and being answered unto, defending and being defended in all courts and places in all matters and causes whatsoever, and shall and may have a common seal, and may alter and renew the same at their pleasure.

II. And be it further enacted that there shall be a general medical society to be composed of one member from each of the county societies in the State, elected by ballot at their annual meeting, who shall meet together in the City of Albany on the first Tuesday of February next, and being so met, not less than fifteen in number, shall proceed by ballot to the choice of a President, Vice-President, Secretary and Treasurer, who shall hold their offices for one year and until others shall be chosen in their places; and the said society being so organized as aforesaid, shall be and they are hereby declared to be a body corporate and politic in fact and in name, by the name of the Medical Society of the State of New York, and by that name shall be in law capable of suing and being sued, pleading and being impleaded, answering and being answered unto, defending and being defended in all courts and places, and in all matters and causes whatsoever, and shall and may have and use a common seal, and may change and alter the same at their pleasure.

III. And be it further enacted that the Medical Society of the State of New York and also the medical societies of the respective counties shall and may agree upon and determine the times and places of their next meeting and the time so agreed upon shall forever thereafter be the anniversary day of holding their respective meeting; and it is hereby made the duty of the Secretary of each of the county medical societies to lodge in the office of the clerk of their respective counties a copy

* Mr. Cole, the President of the Statute Law Book Co. of Washington, D. C., and the authority in this country on the Bibliography of United States Laws, as well as those of the separate States, tells me that the only reasons for this scarcity of the original edition of the laws of early years is the smallness of the edition originally printed and the general lack of interest in collecting and presenting them until many of them had been lost or destroyed.

of all the proceedings had at their first meeting within twenty days after such meeting, and it shall also be the duty of the Secretary of the Medical Society of the State of New York to lodge in the office of the Secretary of State a copy of their proceedings had at their first general meeting, and the said clerks and Secretary are hereby required to file the same in their respective offices, for which they shall each receive the sum of twelve and one-half cents.

IV. And be it further enacted that the medical societies established as aforesaid are hereby respectively empowered to examine all students who shall or may present themselves for that purpose, and to give a diploma under the hand of the President and seal of such society before whom such student shall be examined, which diploma shall be sufficient to empower the person so obtaining the same to practice physic or surgery or both, as shall be set forth in the said diploma, in any part of this State; and the person receiving such diploma shall, upon the receipt of the same, pay to the President of said society the sum of two dollars, for the use of the said society.

V. And be it further enacted that if any student who shall have presented himself for examination before any of the medical societies of the several counties of this State shall think himself aggrieved by the decision of such society, it shall be lawful for such student to present himself for examination to the Medical Society of the State of New York, and if in the opinion of such Society, the student so applying is well qualified for the practice of physic or surgery or both, as the case may be, the President of said Society shall, under his hand and the seal of such Society, give to the said applicant a diploma agreeable to such decision; such applicant paying therefor to the said President the sum of two dollars.

VI. And be it further enacted that it shall and may be lawful for the several medical societies so established as aforesaid, at their annual meetings to appoint not less than three nor more than five censors, whose duty it shall be carefully and impartially to examine all students who shall present themselves for that purpose and report thereupon in writing to the President of said Society.

VII. And be it further enacted that from and after the first day of September next no person shall commence the practice of physic or surgery within any of the counties of this State until he shall have passed an examination and received a diploma from one of the medical societies to be established as aforesaid; and if any person shall so practice without having obtained a diploma for that purpose he shall forever thereafter be disqualified from collecting any debt or debts incurred by such practice in any court in this State.

VIII. And be it further enacted that it shall and may be lawful for the medical societies of the respective counties in this State, which shall be established by virtue of this act, and also the Medical Society of the State of New York, to purchase and hold any estate, real and personal for the use of said respective societies,

PROVIDED such estate as well real as personal which the county societies are hereby respectively authorized to hold, shall not exceed the sum of one thousand dollars; and that the estate as well real as personal which the Medical Society of the State of New York is hereby authorized to hold, shall not exceed five thousand dollars.

IX. And be it further enacted that it shall be lawful for the respective societies to be established by virtue of this act, to make such by-laws, rules and regulations relative to the affairs, concerns and properties of said societies; relative to the admission and expulsion of members; relative to such donations and contributions as they or a majority of the members at their annual meeting shall think fit and proper,

PROVIDED, that such by-laws, rules, and regulations made by the Society of the State of New York be not contrary to nor inconsistent with the constitution and laws of this State, or of the United States,

and that the by-laws, rules and regulations of the respective county societies shall not be repugnant to the by-laws, rules and regulations of the Medical Society of the State of New York, nor contrary to or inconsistent with the constitution and laws of this State or of the United States.

X. And be it further enacted that the treasurer of each society established as aforesaid, shall receive and be accountable for all monies that shall come into his hands by virtue of any of the by-laws of such society and also for all monies that shall come into the hands of the President thereof, for the admission of members or licensing students, which monies the said President is hereby required to pay over to the said treasurer, who shall account therefore to the society at their annual meetings; and no monies shall be drawn from the treasury unless in such sums and for such purposes as shall be agreed upon by a majority of the society at their annual meeting and by a warrant for that purpose, signed by the President.

XI. And be it further enacted that it shall be the duty of the Secretary of each of the medical societies to be established by virtue of this act to provide a book in which he shall make an entry of all the resolutions and proceedings which may be had from time to time and also the name of each and every member of said society and the time of his admission, and also the annual reports relative to the state of the treasury and all such other things as a majority of the society shall think proper; to which book any member of the society may at any time have recourse, and the same, together with all books, papers and reports which may be in the hands of the Secretary and be the property of the society, shall be delivered to his successor in office.

XII. And be it further enacted that it shall be lawful for each of the medical societies to be established by virtue of this act, to be caused to be raised and collected from each of the members of such society a sum not to exceed three dollars in any one year, for the purpose of procuring a medical library and apparatus, and for the encouragement of useful discoveries in chemistry, botany and such other improvements as the majority of the society shall think proper.

XIII. And be it further enacted that nothing in this act contained shall be construed to prevent any person coming from any other State or county from practicing physic or surgery within this State, such person being duly authorized to practice by the laws of such State or county, having a diploma from a regular medical society; nor to compel any student who may have commenced his studies previous to the first day of January, one thousand eight hundred and five, to be examined by such society and licensed in the manner aforesaid, if such student shall choose to study four years and be licensed in the manner now prescribed by law;

PROVIDED, however, that none of the societies established as aforesaid shall proceed to the examination of any student in order to license him for the practice until such student shall have produced satisfactory testimony that he has regularly studied physic or surgery or both as the case may be, with one or more reputable practitioner or practitioners for the term of three years.

XIV. And be it further enacted that it shall be in the power of the Legislature to alter, modify or repeal this act whenever they shall deem it necessary or expedient.

XV. And be it further enacted that the act entitled "An Act to Regulate the Practice of Physic and Surgery in this State" be and the same is hereby repealed from and after the first day of September next.

XVI. And be it further enacted that if there should not be a sufficient number of physicians and surgeons in any of the counties of this State to form themselves into a Medical Society, by virtue of this act, it shall be lawful for such physicians and surgeons to associate with the physicians and surgeons of an adjoining county for the purposes hereby contemplated.

XVII. And be it further enacted that if the physicians and surgeons of any county or counties of this State should not meet and organize themselves at such time

and place as required by this act, it shall be lawful for them to meet at such other time as a majority of them shall think proper, and their proceedings shall be as valid as if such meeting had been had at the time as provided for by this act.

XVIII. And be it further enacted that this act shall be declared to be a public act.

Considering the circumstances preliminary to the passage of the act, and the fact that at first the creation of only certain county societies or a district society was to be asked for from the Legislature, it is not surprising that the county societies should have been given a place co-ordinate with that of the State society in the matter of licensing physicians for the practice of medicine. On the other hand, the State society was given a position of commanding importance, and of definite supremacy, inasmuch as it could review the refusal of a county society to allow a properly qualified medical student to practice, and furnish him with a license in spite of the negative action of the local society. It was evidently intended, however, that, though the two organizations, the State and the county society drew their right to existence from the same act of the Legislature, they should be independent and above all, that the State society should not be determined in its action by that of the county societies. It seems worth while noting this because some seventy-five years later, there was question of the relationship between the county societies and the State society, and the independence of the State organization was somewhat impugned, though without sufficient reason.

CHAPTER II.

REGULATION OF THE PRACTICE OF MEDICINE IN THE PROVINCE OF NEW YORK.

This act of 1806 was by no means the first attempt to regulate the practice of medicine in the State of New York, nor in the colony of New York before the Revolution. It is rather interesting to trace the gradual progress of the various attempts to give practitioners of medicine and surgery a dignified place before the people, and at the same time, while not infringing the liberty of the individual too much, keep quacks and charlatans from occupying too prominent a place in the life of the colony, and especially the city. The first mention of any legal regulation of the practice of medicine came in the shape of an answer to the petition of the barber-surgeons at New Amsterdam that they should have a monopoly of shaving and tending to the wounds of the inhabitants. It is couched in terms that would seem to indicate that there was some basic law in the colony to which the members of the surgical profession wished to have an amendment or a codicil.

The following is from the Dutch Records, February 2, 1652:

"On the petition of the chirurgions of New Amsterdam, that none but they alone be allowed to shave; the director and council understand that shaving doth not appertain exclusively to chirurgery, but is an appendix

thereunto; that no man can be prevented operating on himself, nor to do another the friendly act, provided it be through courtesy, and not for gain, which is hereby forbidden. It was then further ordered that ship-barbers shall not be allowed to dress any wounds nor minister any potions on shore, without the previous knowledge and special consent of the petitioners, or at least of Dr. La Montague."

This, says the editor of the *New York City Medical Register*, is the earliest order on record regulating the practice of medicine in the State. —*Medical Register, City of New York*, 1865, p. 108.

Some five years later there is a city ordinance which attempts to place upon surgeons a burden against which the profession has always and very properly and successfully protested. It is Dr. Toner particularly who calls attention to the false spirit of the legislation, and we quote the passage from him:

"As showing the spirit of legislation of the times in relation to medical men, the following is worthy of note. The act aimed to impose a sort of detective-duty upon the surgeon, which could not be submitted to by the profession, and no doubt was a dead letter.

In December, 1657, a city ordinance was passed by the schout, burgomaster and schepens, giving notice "to all chirurgions of the city, that when they are called to dress a wound, they shall ask the patient who wounded him and that information thereof be given to the schout."

The first serious attempt at the formal regulation of the practice of medicine of which we have a definite account came shortly after the English took possession of New York City and assumed the government of the colony of New York and certain neighboring territory. It was in 1664 that Col. Nicolls, the personal representative of the Duke of York, appeared in Manhattan Bay with an English fleet, and forced the Dutch to surrender Manhattan Island. A new government was at once set up, and two delegates were summoned from each town in the colony, to draw up a Code of Laws, the Duke's Laws, as they were called, which the colony in and around New York had to accept perforce. Dr. Toner calls attention to the fact that these laws applied to a number of other places besides Manhattan Island. We quote accordingly the passage from him, and also the special paragraph of the laws, referring to the practice of medicine:

"In these Duke of York's laws enacted about 1665 for the government of the Province of New York, when Nantucket, Martha's Vineyard, Normansland, and the Elizabeth Islands were all considered as lying within the Duke's patent, a stringent law relating to chirurgions, midwives and physicians was passed, which, as it may be found to possess some historical interest and is not generally available to readers, is given in full:

'Chirurgions, Midwives, Physicians: That no person or persons whatever employed about the bodys of men, women or children, for the preservation of life or health as chirurgions, midwives, physicians, or others, presume to put forth or exercise any act contrary to the known approved rule of art in each mystery or occupation, or exercise any force, violence, or cruelty upon or towards the body of any, whether young or old, without the advice and consent of such as are skilful in the same art (if such may be had), or at least of some of the wisest and gravest then present, and consent of the patient or patients if they be *mentis*

compotes, much less contrary to such advice and consent, upon such severe punishment as the nature of the fact may deserve; which law, nevertheless, is not intended to discourage any from all lawful use of their skill, but rather to encourage and direct them in the right use thereof, and to inhibit and restrain the presumptuous arrogance of such as, through confidence of their own skill or any other sinister respects, dare boldly attempt to exercise any violence upon or towards the body of young or old, one or other, to the prejudice or hazard of the life or limb of man, woman or child."

This is practically a copy of a law passed in Massachusetts in 1649.

Toner also calls attention to the fact that a number of the ordinances passed by the city council of Manhattan Island, referred in various ways to the practice of medicine, and he gives a list of the various acts with a short digest of their contents. This furnishes an excellent idea of the trend of opinion with regard to the proper practice of medicine, and also serves to show that members of the medical profession were gradually securing their rights as professional men, and that the efforts of the community to protect itself against contagious diseases of various kinds, and also against the allurements of quackery were gradually crystalizing into proper shape.

The following laws were enacted in New York prior to the Revolutionary War. The Dutch records show that February 2, 1652, an order was promulgated, regulating the duties of surgeons. (See *Medical Register, City of New York*, 1865): An act allowing physicians to travel on the Lord's Day, enacted 1695, Stat. N. Y., ed. 1691-1751, p. 23; An act exempting physicians and surgeons from performing the duties of constable or tax-collector, enacted 1715, Stat. N. Y., ed. 1691-1751, p. 117; Physicians, doctors of physic, practitioners of physic, and surgeons exempt from performing military duty, except in case of an invasion, section 23, act 1755, Stat. N. Y., ed. 1752-63, p. 53; An act to prevent infectious distempers being brought into this colony, and to hinder the spreading thereof, enacted 1755, Stat. N. Y., ed. 1742-63, p. 157; An act to explain the foregoing act, enacted 1755, Stat. N. Y., ed. 1752-63, p. 57; An act to continue the same, enacted 1756, Stat. N. Y., ed. 1752-63, fol. 100; An act to appropriate the money raised by divers lotteries for erecting a college and pest-house, enacted 1756, Stat. N. Y., ed. 1752-63, p. 111; An act to prevent the bringing in and spreading of infectious distempers in this colony, enacted 1758, Stat. N. Y., ed. 1752-63, p. 137; An act to regulate the practice of physic and surgery in the city of New York, enacted 1760, Stat. N. Y., ed. 1752-63, p. 188; An act to revive an act to prevent the bringing in and spreading of infectious distempers in this colony, with an addition thereto, regulating the practice of inoculation for the small-pox, enacted 1763, Stat. N. Y., ed. 1752-63, p. 432; An act continuing the foregoing act, enacted 1767, Stat. N. Y., p. 498; An act for the better support of the hospital to be erected in the city of New York, for poor and

indigent persons, enacted March 24, 1772, Stat. N. Y., ed. 1763-73, p. 696; An act for regulating the practice of inoculation for the small-pox in the City of Albany, enacted 1773, Stat. N. Y., ed. 1763-73, p. 720; An act to repeal an act to prevent infectious diseases in the Counties of Westchester, Dutchess and Orange, so far as it relates to the borough and town of Phillipsborough, enacted 1773, Stat. N. Y., ed. 1763-73, p. 791.

The most noteworthy medical act for the regulation of medical practice was that passed in 1760. In his "Historical Sketch of the State of Medicine in the American Colonies from Their First Settlement of the Period of the Revolution," Dr. John B. Beck reviews carefully the necessities for regulation and the gradual evolution that brought about legislative enactments. Dr. Beck's paper was originally his annual presidential address, delivered before the Medical Society of the State of New York at its regular meeting, February 1, 1842. It was not published, however, until the volume of transactions for the years 1850 and 1852, which are all bound together under the title "Volume 8." It seems not unlikely that during the intervening nearly ten years, Dr. Beck made many additions to the original address, which in this volume occupies almost sixty pages.

Dr. Beck's address has been a mine of information for subsequent historians, and as he was himself a man of wide reading, of broad and liberal judgment, as well as of extensive experience, in medical practice and his relationship to his professional brethren, his opinions deserve to be quoted as originally set down. He does not hesitate to say that, though New York was not the first to attempt the legal regulation of the practice of medicine, the province of New York must be given undoubted priority in securing this much-to-be-desired result effectively. He says:

"The State of New York, I believe, is entitled to the honor of adopting the first effectual measures for regulating the practice of medicine. This was not, however, until so late a period as 1760, when the General Assembly of the Province ordained that, 'no person whatsoever should practice as a physician or surgeon, in the city of New York, before he shall have been examined in physic or surgery, and approved of and admitted by one of his majesty's council, the judges of the supreme court, the king's attorney general, and the mayor of the city of New York, for the time being, or by any three or more of them, taking to their assistance for such examinations such proper person or persons as they in their discretion shall think fit.' If the person so examined was approved, a certificate was given, allowing him to practice physic or surgery, or both throughout the province. In case of non-compliance, the penalty was a fine of five pounds."

This act that he mentions has seemed to us so important that we prefer to quote it entirely rather than to give the gist of it, for it is an historical document of primary importance, and represents for New Yorkers, particularly, the spirit of the inhabitants of the province, and the efforts of physicians to prevent quackery better than any possible statement of medical conditions would be able to furnish.

AN ACT TO REGULATE THE PRACTICE OF
PHYSICK AND SURGERY IN THE CITY OF
NEW-YORK, PASSED THE 10TH OF JUNE,
1760.

Whereas, many ignorant and unskilful Persons in Physick and Surgery in order to gain a subsistence, do take upon themselves to administer Physick, and practice Surgery in the City of New York, to the endangering of the Lives and Limbs of their Patients; and many poor and ignorant Persons inhabiting the said City, who have been persuaded to become their Patients, have been great sufferers thereby: For preventing such Abuses for the Future:

I. BE IT ENACTED by his Honor the Lieutenant-Governor, the Council, and the General Assembly, and it is hereby ENACTED by the Authority of the same, That, from and after the publication of this Act, no Person whatsoever shall practice as a Physician or Surgeon in the said City of New-York, before he shall first have been examined in Physick or Surgery, and approved of and admitted by one of his Majesty's Council, the Judges of the Supreme Court, the King's Attorney-General, and the Mayor of the City of New-York, for the time being, or by any three or more of them, taking to their assistance for such examination, such proper Person or Persons as they in their discretion shall see fit. And if any candidate after due examination of his Learning, and skill in Physick and Surgery as aforesaid, shall be approved and admitted to practice as a Physician and Surgeon or both, the said Examiners, or any three or more of them, shall give, under their hands and Seals to the person so admitted as aforesaid, a Testimonial of his Examination and Admission, and in the form following, to wit:

To all to whom these Presents shall come, or may concern:

KNOW YE That we, whose names are hereunto subscribed, in pursuance of an Act of the Lieutenant-Governor, and Council and General Assembly, made and published at New-York, the Day of in the year of our Lord, one thousand seven hundred and, entitled, An Act, To Regulate the Practice of Physick and Surgery in the City of New-York, have duly examined, Physician (or) Surgeon, (or) Physician and Surgeon (as the case may be), and having approved of his skill, have admitted him as a Physician (or) Surgeon, (or) Physician and Surgeon, to practice in the said Faculty or Faculties throughout this Province of New-York.

In testimony whereof, we have subscribed our names and affixed our Seals to this Instrument, at NEW-YORK, this day of Anno Domini, One thousand.....

II. AND BE IT FURTHER ENACTED, by the authority aforesaid, That if any Person shall practice in the City of New-York, as a Physician or Surgeon, or both as Physician and Surgeon, without such testimonial as aforesaid, he shall for every such offence forfeit the sum of Five Pounds; one-half thereof to the use of the Person or Persons who shall sue for the same, and the other Moiety to the Church Wardens and Vestrymen of the said City for the use of the Poor thereof; the said Forfeiture to be recovered without costs, before the Mayor, Recorder, or any one of the Aldermen of the said City, who are hereby empowered in a summary way, to hear, try and determine any suit brought for such Forfeiture, and to give Judgment and to award Execution thereupon.

PROVIDED, That this act shall not extend to any person or persons administering Physick, or Practicing Surgery within the said City before the publication hereof; or to any Person having his Majesty's Commission, and employed in his Service as a Physician or Surgeon.

It is Dr. Beck himself who calls attention to the fact that considerably over a century before the passage of this act by the General Assembly of the Province of New York, the Colony of

Massachusetts had attempted the regulation of medicine and the correction of medical abuses. This first medical act in this country was passed in 1649, considerably over a hundred years after the original foundation of the colony, but it would seem that no special need for the regulation of the practice of medicine might have been anticipated until there had been a considerable growth in population. It is rather interesting to find that this first medical act contains as a preamble what the legislators at the time considered the justifying principle of such legislation. This principle as embodied in the act, is the same as that which allowed the State to punish and even to take life if necessary. This curious juxtaposition of the beneficent medical profession and the punitive law-making power seems not to have offended the logic or aroused the sense of humor of our good Puritan forefathers!

CHAPTER III.

EARLY LAWS FOR THE REGULATION OF
MEDICINE IN NEW YORK STATE.

Soon after the establishment of the State Government, the Legislature began to pass laws with regard to medical matters. The first of these was an act to prevent the bringing of infectious and contagious diseases or, as they were called then, "infectious distempers," into New York City. This act was passed in 1784, and made Bedloe's Island a quarantine station. Yellow fever was considered the principal one of the infectious distempers to be feared, and special precautions were maintained with regard to vessels from southern ports during the warm season. This might seem an unnecessary precaution to the modern medical mind unaccustomed to think of yellow fever as ever a northern disease. As a matter of fact several severe epidemics of the disease occurred as far north as Boston; New York suffered repeatedly from it down almost to the middle of the nineteenth century; and, in the beginning of the nineteenth century Philadelphia suffered so severely for several years in succession from this disease, that it was thought at one time, and even seriously discussed, that the city might have to be abandoned.

It is interesting to note that New York City's influence was sufficient even at that time to have the first medical law passed in its favor. It was not until twelve years later, in 1796, that the effect of these quarantine regulations were extended to other cities, though the smaller sailing vessels of those times not infrequently went up the Hudson. Quarantine was established at Hudson and Albany in 1796. By this law a physician was appointed to inspect all vessels that entered the harbor, and for this inspection the fee was 28 shillings, about seven dollars, but probably worth in buying power at least three times that much in the present time. Any vessel that failed to report for quarantine after having

come from an infected port was liable to a fine of 200 pounds sterling. This would be equal in value to over \$2,500 at the present time. The revenue that accumulated from such fines was to be used to maintain a lighthouse at Sandy Hook.

In 1794 an act was passed making quarantine regulations much more stringent than before, and providing that a lazaretto should be secured and maintained at the expense of the owners of vessels bringing in cases suffering from infectious distempers, until all the ailing persons were fully convalescent.

In 1796 a bill was passed appropriating Governor's Island, from time to time as it might be needed, for quarantine purposes, and arranging for the erection of temporary buildings or the setting up of tents. This was to be done according to the wording of the law, in spite of any protest on the part of the Regents of the University of New York, who seemed to have had some claim to Governor's Island.

None of these acts have any reference to the regulation of the practice of medicine, but a law passed March 27, 1792, regulated the practice of medicine in the city and county of New York. According to Dr. McNaughton, in his annual address as president in 1837, this act required that the student of medicine should study with some authorized practitioner for two years, if he were a graduate of some college, and for three years if he were not. After this he should be examined by three medical practitioners other than those with whom he had studied, in the presence of the Governor and certain other public officers. If this examination proved favorable then he received a license to practice medicine. The penalty for practicing without a license was a fine of seven pounds sterling, a more considerable sum than it might seem if the comparative value of money be considered. Besides, the unlicensed practitioner was incapable of maintaining a suit in any court for services rendered. Doctors in medicine; that is, those who had graduated in regular medical schools, were allowed to practice without a license. A law, passed in 1791, had given permission for a college of physicians and surgeons to be established by the Regents of the University, and the latter part of the law of 1792 evidently was intended to recognize this institution.

In 1797 a very important law regulating the practice of medicine and embracing the whole State in this division, was passed. This it seems worth while quoting entire.

AN ACT TO REGULATE THE PRACTICE OF
PHYSIC AND SURGERY IN THIS STATE,
PASSED THE 23D OF MARCH, 1797.

Be it Enacted by the people of the State of New York, represented in the Senate and Assembly, That from and after the first day of October next, no person whosoever now practicing physic or surgery or administering medicine or performing surgical operations, shall continue to do so within this State, unless he shall have produced satisfactory evidence to the chancellor,

one of the judges of the supreme court, a Master in chancery, or one of the judges of the courts of common pleas within this State, that he has practiced physic or surgery, or both, as the case may be, for the term of two years next preceding the day aforesaid, or in the manner aforesaid, shall have produced satisfactory evidence that he has studied physic or surgery, or both, as the case may be, with one or more reputable physicians or surgeons for the term of two years, and shall have obtained from the magistrate or officer before whom such evidence shall be adduced, a certificate under his hand and seal, that such satisfactory evidence has been produced to him, and the person in whose favor any such certificate shall be given, shall file the same in the office of the clerk of the county wherein he resides, and take a certified copy thereof subscribed by the clerk. And to each and every person who shall continue so to practice as aforesaid, after the said first day of October next, and shall not have obtained such certificate and have filed the same in the manner aforesaid, and shall thereafter practice physic or surgery, administer medicine or perform surgical operations, shall for every such offense forfeit the sum of twenty-five dollars, to be recovered by action of debt and with costs of suit in any court having cognizance thereof, and one-half thereof to the use of the person who shall prosecute for the same, and the other half to the use of the county in which conviction shall be had, to be by order of the court paid to the treasurer thereof.

And be it further enacted, That from and after the first day of October next, no person whomsoever (other than such as may practice physic or surgery in conformity to the aforesaid section of this act) shall practice physic or surgery, administer medicine, or perform surgical operations within this State (except under the immediate direction of the physician or surgeon with whom he serves an apprenticeship, or studies to qualify himself to become a physician or surgeon), unless he shall produce to the chancellor, one of the judges of the supreme court, a Master in chancery, or one of the judges of the courts of common pleas, within this State, a certificate subscribed by one or more physicians or surgeons with whom he has served an apprenticeship, for the purpose of being taught the art of physic and surgery, or with whom he had studied for this purpose, specifying and declaring that the person in whose favor such certificate is given, hath regularly studied physic or surgery, or both, as the case may be, with the subscriber or subscribers of such certificate for the term of four years, and that he is sufficiently qualified to practice physic or surgery, or both, as the case may be, to which certificate, if the subscriber or subscribers be resident within this State, he or they shall make oath before either of the magistrates of or officers herein before mentioned, and the magistrate or officer by whom such oath shall be administered shall then endorse on such certificate a permit that the person therein named, is in conformity to law, permitted to practice physic or surgery, or both, as the case may be, within this State, and shall subscribe such permit with his name and affix his seal thereto; and the person in whose favor such permit shall be granted, shall file the same in the office of the clerk of the county wherein he resides, and shall take a certified copy thereof. And each and every person who shall practice physic or surgery, without such permit, and without having filed the same in the manner aforesaid, shall for every such offense forfeit and pay the sum of twenty-five dollars, to be recovered and applied in like manner as is directed with respect to the forfeiture mentioned in the first section of this Act. Provided Always, that if the person in whose favor such certificate shall be given shall produce satisfactory evidence that he has been graduated in any college or university in this State or elsewhere, then he shall be entitled to such permit as aforesaid, although he shall not have studied physic or surgery, or both, as the case may be, any longer than three years. Provided, Also, that if any such certificate shall be given and attested to by any one or more physicians or surgeons not resident within this State, the same shall be

attested to before and certified under the hand and seal of a judge of the supreme court or superior court of the state in which such certifying physicians or surgeons shall reside and be produced to the chancellor or one of the judges of the supreme court of this State; and if it shall appear to the chancellor or judge that in his estimation the certificate and signature of the judge before whom such attestation is made is genuine, he shall then and not otherwise endorse thereon such permit as aforesaid. Provided, Further, that if any physician or surgeon with whom the person applying for such permit has studied physic or surgery, or both, shall be dead or not resident within this State, such permit may nevertheless be granted upon satisfactory evidence being adduced of such death or non-residence, together with satisfactory proof that he has studied physic or surgery, or both, as the case may be, for the term of four years, in which proof shall be satisfied with the name or names of the physicians or surgeons with whom he has studied.

And Whereas, upon sudden emergency, it may be necessary to apply for aid from persons not qualified to practice physic or surgery in conformity to this Act,

Be it further enacted, that in every such case it shall and may be lawful for any persons authorized by this Act to practice physic or surgery, to administer medicine or perform surgical operations, but shall not ask, demand or recover any compensation therefor.

And be it further enacted that nothing in this Act contained shall be construed to affect any person who may have obtained or shall hereafter obtain the degrees of batchellor or doctor of medicine, or any other degree or license conferring the right to practice physic or surgery in any academy, college or university within this State or elsewhere, having authority to confer such degree, Provided, that the person having obtained or who shall obtain such degree shall file a copy thereof in the office of the secretary of this State, or in the office of the clerk of the county wherein he resides. But until such copy shall be so filed, the person in whose favor such diploma shall have been given, shall not practice physic or surgery within this State without being liable to the forfeiture and payment of twenty-five dollars, to be recovered and applied as other forfeitures by this Act are directed to be recovered and applied.

And be it further enacted that nothing in this Act shall be construed so as to prevent any physician or surgeon, residents in any other State, from practicing within this State, upon any particular occasion upon the special request of a physician or surgeon entitled by this Act to practice physic or surgery within this State.

And be it further enacted, that if any person shall counterfeit any certificate or permit intended by this Act, and shall be thereof convicted in the Supreme Court or any circuit court or court of general sessions of the peace, the court shall in their discretion punish the offender by fine and imprisonment, and the persons so convicted for practicing physic or surgery, shall never thereafter be permitted to practice physic or surgery within this State. Provided, always, that such fine shall not exceed one hundred dollars.

And be it further enacted, that the Act entitled, "An Act to Regulate the Practice of Physic and Surgery in the City and County of New York," shall be and hereby is repealed from and after the said first day of October next.

This is the act of 1792 already referred to.*

* An amendment to this was adopted subsequently as follows:
LAWS OF NEW YORK, TWENTY SEVENTH SESSION,
Page 100, Chap. LVIII.

AN ACT TO AMEND AN ACT, ENTITLED, "AN ACT TO REGULATE THE PRACTICE OF PHYSIC AND SURGERY IN THIS STATE."

Be it Enacted by the People of the State of New York, represented in the Senate and Assembly, That all persons who have practiced physic or surgery, or both, for the term of two years before the first day of March, 1797, and all persons who have studied physic or surgery, or both, and shall obtain such proof of such practice or study as is required, and file the same in the office of the clerk of the county in which he or they may reside, on or before the first day of January next, shall have as full power to practice physic or surgery, or both, as if he had filed the same before the first day of October, 1797; anything in the said act to the contrary thereof notwithstanding.

We have already noted, in the first chapter, the difficulty that was encountered in passing the law establishing the State Medical Society and the County Medical Societies, in April, 1806, and how nearly it failed of passage. It seems interesting to recall, then, that earlier in this same session, on February 28, 1806, a bill was passed granting to a certain John M. Crous, the sum of \$1,000 for a cure for hydrophobia, which he was said to possess. About this same time in England or a little bit earlier, the British Parliament had appropriated a much larger sum than this to the famous charlatan, Dr. St. John Long, for his well-known liniment, which was considered to be an infallible cure for rheumatism of all kinds. It is not so surprising, then, that the Legislature in New York should have yielded to a like temptation under proper lobbying influences, it is to be presumed. Most of the legislators, however, were the descendants of the old Dutch burghers, and had a proper sense of economy about them. They were not quite so easy to fool as they seemed. They fastened a good string to their appropriation of \$1,000, by requiring Mr. John Crous to file a bond before the Supreme Court of the State for \$2,000, in order to make ample provision for the return of the \$1,000 if, after the end of four years, it should prove that his remedy was deceptive and did not really produce the cures that so many witnesses were ready to attribute to it. The prescription which was supposed to be curative was to be printed in the newspapers of the State for three weeks in order to call public attention to it.*

* Of the further history of Crous and his remedy unfortunately there are no data at hand. Just what his prescription was I have been unable to discover, nor even the ultimate result as to whether he were called upon by reason of his bond to return the \$1,000. It is of medical interest to note that even at this early day hydrophobia was so often seen and so much feared at the beginning of the 19th century that a bill like this was passed in the hope of preventing a fatal issue at least.

(To be continued.)

THE FIFTEENTH INTERNATIONAL MEDICAL CONGRESS, which convenes at Lisbon, April 19, and continues until April 26, will be attended by a large number of American physicians. Dr. Nicholas Senn will deliver one of the general addresses. Further information may be obtained by communicating with Dr. Ramon Guiteras, 75 West Fifty-fifth Street, New York. The meetings will be held in the halls of the Medical School of Lisbon, and will be under the patronage of the King and Queen of Portugal.

DIPHTHERIA ANTITOXIN IN THE TREATMENT OF FACIAL ERYSIPELAS. TOMASELLI has treated three cases of erysipelas with diphtheria antitoxin, all of which were cured. The disease had practically subsided within twenty-four hours, after the injection of 1,000 units.—*Zentralbl. für gesam. Therap.* p. 636, 1905.

THE CRUSADE AGAINST OBJECTIONABLE NOISES is being promoted in many cities. Unnecessary assaults upon the nervous systems of city dwellers are receiving the attention of the city councils, and ordinances will result which will make the towns more tolerable as places of residence.

DISINFECTION OF HOUSES AFTER CONSUMPTION will be undertaken by the Board of Health of Toronto.

THE GERMAN CONGRESS OF INTERNAL MEDICINE will be held at Munich, April 24 to 27.

THE GERMAN CONGRESS FOR EXPERIMENTAL PSYCHOLOGY will be held at Würzburg, April 18 to 21.

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Editorial

THE NEW YORK STATE JOURNAL OF MEDICINE.

WITH this number, the NEW YORK STATE JOURNAL OF MEDICINE enters the field of medical journalism under new conditions and with new aims. While it is the organ of the Medical Society of the State of New York, still the whole profession of medicine is bound so closely by mutual interests, that a service rendered to a part is rendered to the whole, and any service which this journal performs for the medical profession of the State of New York is not a service unless it redounds to the advantage of the whole profession.

This journal will be devoted to what we regard as the best interests of medicine. It will present original articles which are the products of original investigation and thought. It will cull and digest, for the benefit of its readers, the important things from the current medical literature of the world. Transactions of societies and other indices of medical progress also will be presented.

Its editorial columns will be devoted, not to controversy, but to the fostering of the high ideals which we know to be so dear to the heart of our profession.

It is to the glory of medicine that its doctors are united in a single aim, the alleviation of physical suffering; and it is to the honor of this profession that there exists among its members, in every nation, a splendid sympathy and disposition to mutual helpfulness. Every medical community freely brings its knowledge and the products of its experience, and adds them to the common store, dedicated to the service of humanity.

Out of this has grown medical journalism, purveying the best of medical thought, and transmitting it from one community to another. It brings us the wisdom of all lands; and it makes us the denizens of all nations.

This journal is dedicated to these ends; and the hope is indulged in that it may be an exponent of the best things in the art and science of medicine, and a fair medium of communication between earnest workers in this great field.

TO THE MEMBERS OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

This is to call your attention to the fact that this journal is your journal; it is owned and published by you. It will be an index of your progress. The character of the work done by the medical profession of New York State will be reflected in its pages.

It will serve not only to bring the members of the State Society into closer touch with the work of one another, but also it will bring to you the work of the great world of medicine outside of our State and country and, finally, it will serve to carry the records of your work into every land, and place them within the reach of all the world.

The object of this is mutual helpfulness, and we shall attain the best results by striving to give more and better than we receive.

THE ONE HUNDREDTH ANNUAL MEETING OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK

The centennial meeting, held at Albany the last days of January and the first of February, marks an epoch in the history of medicine in New York State. Two important events were celebrated. One of these was that, for a hundred years, the representative medical organization of the State had labored for the advancement of scientific medicine, and had exerted its powerful influence for the protection of the health of the people of the State through educational means, through the Legislature, and through every other channel by which such influence could be exerted. The marvelous record of a hundred years of sanitary improvement may be read in the history of this Society. While many other agencies have been at work for these ends, no single organization has accomplished so much; and the law, which a hundred years ago created the Medical

Society of the State of New York, will be recognized by history as an enactment of supreme beneficence.

The other event celebrated on this occasion was the unification of the regular profession of this State into a great and harmonious brotherhood, and its coming into closer affiliation with the whole profession of the United States.

While these events are of much importance to the profession of medicine, which recognizes their consequence, they are of still greater importance to the general community, which, unfortunately, is but slightly conscious of their significance. One of the obligations which is entailed upon this Society, by virtue of its connection with the people through their legislative and executive bodies, is the popularization of an understanding of medical science. The people should know the meaning of this branch of biology, which lies so close to the humanities and which has so practical a bearing upon their health and happiness. Because of a lack of this knowledge, vicious medical legislation is possible, quackery preys upon the poor and the rich, measures for safeguarding the health of the people are not always accepted as a welcome boon but have to be fought for, and those who are enlightened upon all other branches of knowledge too often become the easy dupes of the charlatan who is protected by the laws of the State. A better familiarity on the part of the public with the work and aims of the medical profession, as expressed through its great societies, is the remedy. If medicine is to safeguard and save the people, the people must know and have faith in their saviour. Too long has the public thought of the work of the medical profession as a matter of pills and potions. The science of the nature and causes of diseases, preventive medicine, sanitation, hygiene, and all the therapeutic measures which nature has to offer, are the agents through which medicine serves the State; and the state should know it. The aloofness of medicine is difficult for the public to understand.

This meeting at Albany was marked by a splendid spirit of unity and hopefulness. Men seemed to realize the greater possibilities which were developing in this Society. Its power to help the medical profession of the State, to further medical progress, to make better conditions in medical practice, to foster high standards, and to conserve the interests of the public, were all realized as never before.

The Medical Society of the State of New York has completed a hundred years, devoted to the highest interests of medical science,—years associated with advanced thought, original research, faithful service, and many honorable and honored names. The obligations resting upon this Society we believe will be fulfilled; and there is none so far-seeing that he dares to predict the greatness of its beneficence during the century upon which it now enters.

GASTRIC ULCER AND THE THYROID GLAND.

While the diagnosis and treatment of this disease have made steady progress, the etiology remains more or less enveloped in obscurity, and every bit of information which may help in the elucidation of this subject is welcome. In a recent communication presented by Dr. Charles J. Macalister* some suggestive thoughts are expressed concerning this disease. The author states that ulcer of the stomach has always been looked upon as a distinct disease, and not as a local manifestation of a more general condition, such, for example, as the ulcerations of Pylers' patches in typhoid. His studies of a large number of cases have led him to regard these ulcers as local manifestations of constitutional disease. Many examinations have shown how prone the vessels, lying in the ulcer, are to break down. In other organs, ulceration leaves vessels exposed and often completely unsupported, yet in ulcer of the stomach their walls soon give way. Another striking peculiarity of the stomach ulcer is the absence of the inflammatory reaction. It appears as though a portion of the stomach simply dissolves away. This appearance caused Virchow in 1853 to offer the theory of embolic plugging of a small vessel as the cause of the necrosis.

A feature of importance in these cases is the previous history, which has been neglected because of the conception of this as a local disease. Anemia and amenorrhœa have a bearing on the case; and also the rarity of the disease in the male. Dr. Macalister has observed a well marked enlargement of the thyroid gland in girls for some time before menstruation commences, and for a considerable period, instead of the robust circulation which characterizes early girlhood, the child may every now and then have blue or purple hands and fingers, and some facial lividity, and coldness of the feet. This may be

* *Liverpool Medico-Chirurgical Journal*, Jan. 1906.

noticed time after time if looked for; but when menstruation is established the symptom vanishes and robustness of the circulation returns. The enlargement of the thyroid is connected with this symptom and with the menstrual function. In a series of cases of gastric ulcer, in which these symptoms were inquired into, a close relation between the thyroid gland and this disease was manifested.

Much importance is attached to a study of the early phenomena of ill-health in cases of gastric ulcer. Commonly, we find a girl, previously healthy, perhaps rosy, robust, and energetic, begin to fail in her general health. Menstruation becomes irregular, and often there is amenorrhœa, absolute or relative, for many months. She frequently complains that, whereas previously she always felt warm and comfortable, now she suffers from sensations of coldness; she has cold hands and feet, and not infrequently the fingers become numb and purple. Later she becomes chlorotic and dyspeptic, and, at last, after suffering pain after food, she has an attack of hematemesis, which not infrequently corresponds in time with what would be a menstrual period.

External examination of the thyroid in these cases does not give positive information; sometimes they look large and full, as though filled with blood, and at other times the neck is thin and the gland can hardly be made out; but in either case it is interesting to observe that the administration of thyroid extract causes menstruation to be re-established where it has been in abeyance for many months, and with its re-establishment there is frequently disappearance of the Raynaud-like symptoms, and improvement in the general health. The author observes that amenorrhœa is so frequently an antecedent to gastric ulcer that he regards the two as symptoms or a part of the same disease.

This seems almost like a reversion to the old humoral pathology, when we say that we know little about menstruation and its eliminative function. We do know that volatile matters are eliminated at that time; and it is to be borne in mind that amenorrhœa may mean a relative toxæmia, and that the retained toxins may be related to the disease in question. Macalister believes that we have to deal with a chemical pathology as distinct from a mechanical or infective one, and that gastric ulcer is a local manifestation of constitutional disease.

The vascular spasm which gives rise to the feeling of coldness, to cold feet, and the numbness and occasional cramps in the fingers and other parts (very suggestive of thyroid toxæmia) are also the result of this same condition. As peripheral asphyxiæ are characteristic as early symptoms of the disease, so is a local asphyxia in the stomach, with consequent non-inflammatory dissolution or necrosis of the affected area. present as a later manifestation.

THE OSTEOPATHIC BILL.

A BILL which failed to pass the Legislature of this State last year has been presented again, and is known as Senator Hinman's Osteopathic Bill, No. 293. Osteopathy is defined as "That science or system of healing which treats diseases of the human body by manual therapeutics for the stimulation of the 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."

This bill provides for a State board of osteopathic examiners, and gives certain persons, without a general medical education, the privilege of practising medicine. It goes farther: it gives this privilege without examination to persons now practising this form of massage in this State. The bill provides 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 graduate in good standing of a regularly conducted school of osteopathy within the United States, requiring a course of two years or longer, with actual attendance of at least twenty months, and who shall be recommended to the Regents by the State board of osteopathic examiners, shall, upon application and payment of twenty-five dollars, without examination, be granted a license to practice osteopathy."

The character and wretchedly low standards of these so-called "schools of osteopathy" were exposed at the hearing of this bill last year. The only saving feature is that the bill requires that an "osteopath" shall not practice the operations of surgery or administer medicines. The large number of operations of surgery which are performed now without the use of the knife, how-

ever, would be placed in the hands of the "osteopath."

It is well known that the administration of medicines is but a minor part of the science of medicine. Medicine is occupied with discovering the causes and the means of prevention of diseases. Hygiene, sanitation, legal medicine, and public health are subjects of its study. It is the science which connects biology with the practical saving of life and the relief of physical suffering. It has made small-pox a rare disease; it has deprived diphtheria of its power to destroy; it has stopped the spread of contagions; it has reduced the mortality in more than half of the diseases of the human family; and it now points out to the State how typhoid fever may be eliminated. This bill proposes to lower the standard of medical practice to such a degree that the State shall recognize and license to practice medicine persons who are not educated or professedly interested in these most important departments of medicine. It proposes to allow the so-called osteopath to diagnose, treat and have under his consideration cases of contagious disease, when his science is simply a system of massage. It proposes to allow him to diagnose, treat and sign the death certificate in criminal cases of poisoning, when he disclaims a knowledge of the physiology of drugs.

The practices of value in "osteopathy" have long been known to medicine. It is one of many measures used in the branch of medicine called therapeutics. This branch includes massage, electricity, passive motions, dietetics, medication, hydrotherapy, rest, exercise, heat, cold, poultices, counter irritation, etc. These so-called "displacements of tissues" with which the "osteopath" concerns himself have little or no basis in the pathology of disease. Diseased tissues have been studied earnestly for many hundreds of years, but the peculiar conditions which the "osteopath" can feel through the skin have not been revealed by knife or microscope.

"Osteopathy" was "discovered" by a Dr. A. T. Still, still living, and who in his biography reveals its origin. He says:

"Who discovered osteopathy? Twenty-four years ago, the 22d day of next June, at ten o'clock, I saw a small light in the horizon of truth. It was put in my hand, as I understood it, by the God of nature. That light bore on its face the inscription: This is my medical library, surgery and obstetrics. This is my book with all directions, instructions, doses, sizes, and quan-

ties to be used in all cases of sickness and birth, the beginning of man: in childhood, youth and declining days. I am something of what people call 'inspired.'"

This remarkable piece of rhetoric lies at the foundation of "osteopathy;" and we, as citizens of this State, have seen certain of our legislators, whom we delegated to safeguard our interests, our educational standards and our health, declare for it.

Such systems as this come and go. History is full of them. And among their followers have always been those whose very standing have helped to give them impetus. When this thing has passed into history with the rest, and medicine has retained whatever there is of good in it, the names of its dupes will be forgotten.

That many chronic inflammations, pains and neurasthenic illnesses have been relieved by this system of massage is as true as that many serious and acute conditions have been aggravated by it. Any "system" will prosper if it does not do too much harm, for the natural tendency of diseases is to recovery. Therapeutics is but one of the departments of medicine, and to exalt one of the many therapeutic measures to the position of the whole science and art of medicine can be designated only as absurd. The motives behind this bill attack the stability of our educational system, and the interests of the people of the State demand its defeat.

Announcements.

THE LIBRARY OF THE MEDICAL SOCIETY OF THE COUNTY OF KINGS.

THE Medical Society of the County of Kings announces to the members of the Medical Society of the State of New York that it has placed its Library at their service. Members desiring books from this Library may secure them by making application in writing. A blank for this purpose is furnished. A copy of this blank, which may be cut out and forwarded, will be found on advertising page xxvii of this journal.

Books will be loaned for a period of two weeks. The borrower is held responsible for the safe return of books, which are to be forwarded and returned at the borrower's expense. These loans are made subject to the rules of the Library,

which are similar to those governing the Library of the Surgeon-General's Office at Washington.

In opening its Library to the profession of the State, the Medical Society of the County of Kings desires to make this Library as serviceable as possible; and its librarians will gladly give to readers and investigators every help in their power.

Books desired, but which are not in the Library, will be obtained if possible.

Requests for books should be addressed to the Library of the Medical Society of the County of Kings, 1313 Bedford Avenue, Brooklyn, New York.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

This journal begins in this number the publication of an History of the Medical Society of the State of New York, by Dr. James J. Walsh. This will be continued in each number through the year. It offers a vast amount of information bearing upon the history of medicine in this country. Dr. Walsh has rendered a great service to the whole profession in this labor which he has undertaken.

The history is divided into five parts: I. Legislation and Medical Societies in New York State. II. History of the First Half of the Nineteenth Century. III. The Semi-Centennial and Physicians of the Middle of the Century. IV. History of the Second Half of the Century. V. Lives of Officers of the Society.

The centennial addresses, which were delivered at Albany on the occasion of the one hundredth anniversary of the State Society, together with this history, upon its completion, will be collected into a single volume, and will constitute a most complete and valuable memorial of medical history.

Observations.

THAT, in some respects, "they order this matter better in France," is illustrated by the *Voyages d'Etudes Médicales*, which are to be set on foot in the coming spring. These excursions are organized for medical men who desire to look into the medical ways of France and some of her famous institutions. The first expedition leaves England on April 18, and returns on the twenty-ninth of the same month, visiting Calais, Lille, Paris, Angers, Nantes, St. Malo, Monte St. Michel, Caen, Rouen, and Le Havre; and introduces the traveler to the Institut Pasteur at Lille and at Paris, the clinique of Monprofit at Angers, the institute and hospital

at Nantes, the medical school at Rennes, and the schools and hospitals of interest at the other cities.

The only approach to such expeditions which we have are the meetings and congresses of our medical societies; but these, instead of collecting travelers from one place and carrying them to many places, collect them from many places and carry them to one. In many ways, however, these *Voyages d'Etudes Médicales* of ours possess the advantages of the French excursion. We attend the meetings of our State societies at the capital of the State, the American Medical Association in all the great cities of the country, the Congress of American Physicians and Surgeons, and the meetings of the many national special societies. All of these give our medical men the benefits of travel and opportunities to observe the methods of others, of which benefits they avail themselves to an extent which is probably not equaled in any other country. This fraternization in medicine is both a result and a cause of medical progress.



The philosophy of medicine and of medical fraternization has many recorders in this country, who, aside from their scientific work, have written down for us the things which have cemented our profession and helped to create its *esprit de corps*. Jacobi, the dean of our medical philosophers; Senn, the traveler and narrator; Osler, the well-beloved man of equanimity, sojourning for the time at Oxford; Roswell Park, the historian; Carl Beck, who has done more than any other to make Germany acquainted with the American medical profession; Keen, of Philadelphia, whose volume of addresses has just appeared; Weir Mitchell, the man of letters and culture—these are a few of the men who have written the philosophy of medicine. The strenuous work of the doctor and the irksomeness of general practice have been ameliorated by these medical philosophers, who have helped and entertained and brightened the path with their sidelights upon the practice of medicine.



The British medical societies have a happy custom of celebrating what they call "Jubilee Membership." When one has been a member of a society for fifty years, some further cognizance is taken of this fiftieth anniversary than simply sending him a bill for his annual dues as had been done on forty-nine previous occasions. Fifty years is a long time for a man to have served his profession and the public; and our British brethren observe this by pausing for a few moments in their scientific work while the president of the society presents a resolution congratulating the member upon the attainment of his "jubilee membership." This resolution embodies congratulations, a brief résumé of the member's professional services, and expressions of hope that he may be long spared to the society in the intellectual enjoyments of a ripe age. Such little

attentions as this make for kindness, and sweeten the atmosphere through which we all must walk.



The creation of public sentiment is necessary for the successful administration of a municipal health department. The official activity must be understood and approved by the people. Dr. Abbott, the chief of the Bureau of Health of Philadelphia, has studied these problems, and believes that unless the public comprehends the importance of the end toward which the health officers are striving, and appreciates the relation of all measures to that end, but little progress can be made. The campaign for the health of the people is a campaign of education. Let the people be enlightened upon all phases of the subject, and the work will progress smoothly. But if they are kept in ignorance, and the subject is surrounded with mystery, no laws, however arbitrary and stringent, will accomplish the desired result.



It is good for men with common aims and interests to unite for their mutual improvement. The worker in any field of science who has not society affiliation is handicapped by the want of it. Sympathy, co-operation and help are what every one needs, and to deprive himself of them is not independence but lack of wisdom. A medical community in which the members are united in a good society, in the success of which they take pride, is vastly more progressive than the community in which each one is pulling alone.

The doctor who needs the help and sympathy of his fellows requires a medical society; and the independent worker, whose originality and success make him independent, owes it to his fellows to affiliate himself with them; and each will find that there is something for him to give and something for him to receive.



It is revealed by a study of the report of the London County Council that about twenty per cent. of the children born in London are doomed to an early death; but this has long been regarded as an elimination of the weaklings and a survival of the strong. This report shows that this is not the case. The adverse conditions, which destroy one child in every five, maim the other four. While this results in the survival of the fittest, it does not necessarily result in the survival of the fit. The report shows that a large percentage of these survivors develop into weaklings and propagate unfit offspring.

Items.

THE ROCKEFELLER INSTITUTE FOR MEDICAL RESEARCH purposes to award for the year 1906-7 a limited number of scholarships and fellowships for work to be carried out in the laboratories of the Institute in New York City,

under the following conditions: The scholarships and fellowships will be granted to assist investigations in experimental pathology, bacteriology, medical zoölogy, physiology and pharmacology, and physiological and pathological chemistry. They are open to men and women who are properly qualified to undertake research in any of the above mentioned subjects, and are granted for one year. The value of these scholarships and fellowships ranges from six hundred to one thousand dollars. It is expected that holders of the scholarships and fellowships will devote their entire time to research. Applications, accompanied by proper credentials, should be in the hands of the secretary of the Rockefeller Institute, L. Emmet Holt, M.D., 14 West 55th St., New York City, not later than April 1, 1906. The announcement of the appointments will be made about May 15. The term of service begins preferably on October 1, but by special arrangement may be begun at another time.

LINCOLN HOSPITAL, NEW YORK CITY, announces that Dr. L. F. Bishop is giving a series of clinical lectures in the medical wards on Wednesday afternoons at two o'clock. This course is free to the medical profession, and is devoted especially to disorders of the heart and circulation and the commoner diseases met in general practice.

NEW YORK ASSOCIATION FOR PROMOTING THE INTERESTS OF THE BLIND will hold its first public meeting in New York on March 29. Mr. Samuel Clemens will preside, and Mr. Joseph H. Choate and Miss Helen Keller will speak.

A MINISTER OF PUBLIC HEALTH IN AUSTRIA.—The formation of a Ministry of Public Health is under favorable consideration by the Austrian Government. The Government has recognized the advantages of having a central health authority in the control of matters of public health and sanitation.

SMALL-POX IN MANCHESTER.—Ten cases of small-pox have developed in Manchester, and three persons have been summoned before a magistrate for "failing to take proper steps to prevent the spread of the disease." Upon two of these were imposed a fine and the payment of the costs of the proceeding.

A BILL FORBIDDING THE MARRIAGE OF INSANE, epileptic, imbecile and feeble-minded persons has been introduced in the Legislature; and another bill makes it a felony for any person of sound mind to marry such persons or aid in their marriage. These bills can not be classed with the paternalism which fosters weakness by protecting it.

THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY will hold its twelfth annual meeting at Kansas City, Mo., June 11, 12 and 13, 1906. The Council calls attention to the prizes which have been offered by the following members of the Society:

J. E. Sheppard, M.D.—Topic: "The Best

Classification of Non-Suppurative Affections of the Middle Ear," the same to be based so far as possible on pathological research; prize, \$100. D. Braden Kyle, M.D.—Topic: "Atrophic Rhinitis;" prize, \$100. Charles W. Richardson, M.D.—Topic: "What Operative Treatment Offers the Best Results for the Cure of Chronic Suppurative Frontal Sinusitis;" prize, \$100. Norval H. Pierce, M.D.—Topic: "Original Work on Rarification of the Labyrinthine Capsule;" prize, \$100. Edward B. Dench, M.D.—Topic: "Chronic Non-Suppurative Inflammation of the Middle Ear;" prize, \$100.

The above named prizes may be competed for by members of the Society only, and competitors are requested to present their papers to the Secretary before April 15, 1906. The successful paper for each prize will be read at the annual meeting. Competitors are requested not to sign papers, but to enclose name in a sealed envelope.

The Council further announces that the Society holds for the encouragement of research a fund of \$500, the whole or a portion of which may be awarded at the discretion of the Council, to any of the Society's members presenting an essay embodying original work on subjects pertaining to laryngology, rhinology or otology.—Wendell C. Phillips, M.D., Secretary, 40 West Forty-seventh Street, New York City.

THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The following counties have adopted new by-laws in conformity with the State by-laws: Allegany, Broome, Cattaraugus, Columbia, Cortland, Chautauqua, Genesee, Kings, Lewis, Monroe, New York, Oneida, Onondaga, Otsego, Queens-Nassau, Saratoga, Tioga, Tompkins.

The Saratoga and Wyoming County Medical Associations have held meetings and changed their names, in conformity with the agreement, to the Medical Societies of the Counties of Saratoga and Wyoming. The Tompkins County Medical Association has changed its name to the Tompkins County Medical Society.

Dr. George McNaughton has been appointed a member of the Committee on Referendum, to succeed the late Dr. George Ryerson Fowler. Dr. Edward B. Angell has been appointed a member of the Committee on Prize Essays.

Work has already been begun on the Medical Directory of New York, New Jersey and Connecticut for 1906, and any information for the new volume should be sent to the Secretary, Dr. Wisner R. Townsend, 64 Madison Avenue, New York.

It is the intention of this journal to help keep the county societies in touch with one another. We, therefore, request secretaries to send for publication:

- Programs of meetings;
- Death notices of deceased members;

Notes of honors conferred upon members;

And such other items concerning the progress of medicine in their counties as would be of general interest or importance to the members of the State Society.

Correspondence.

THE OSTEOPATHY BILL IN THE NEW YORK LEGISLATURE.

To the Editor of the New York State Journal of Medicine:

SIR.—The attention of the medical profession in this State is called to a bill introduced in the Legislature by Senator Hinman, entitled "An Act Regulating the Practice of Osteopathy in the State of New York."

This bill grants to certain persons permission to treat all diseases of the human body 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 recommended by the State Osteopathic Board, to be registered and to receive a license without an examination.

Section 6 of this bill 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 graduate in good standing of a regularly conducted school of Osteopathy within the United States requiring a course of two years or longer with actual attendance of at least twenty months, and who shall be recommended to the Regents by the State Board of Osteopathic Examiners, shall upon application and payment of twenty-five (\$25.00), *without examination*, be granted a license to practice Osteopathy, provided application for such license be made within six months after the passage of this act."

Osteopathy, as defined in the bill, means: "That science or system of healing which treats diseases of the human body by Manual Therapeutics for the stimulation of the 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."

Osteopathy means manual or hand therapeutics, and is a single agent used in the treatment of disease; as such, it has no greater claim to be separated from the general practice of medicine than electricity, or electropathy, bathing or hydropathy, massage or kinesiopathy, X-ray or radiopathy, and mental science or psychopathy, and is not entitled to a special examining board. The eye, ear, nose, throat, electro-therapeutic, psychopathic 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 an examining board in their specialty. If the so-called Osteopaths desire to establish a special branch of medicine, then they, too, should possess at least that average of the knowledge of preventive medicine, which is needed to properly control the spread of contagious and infectious diseases, and is included in the general science of medicine demanded by the present law which governs the granting of a license to practice medicine in this State; and they should not try to escape, under the said Section 6, the preliminary and final examinations for a license to treat the diseases of the human body by securing the enactment of the so-called Osteopathic Bill, which permits certain so-called practitioners in this State to receive a license to treat the diseases of the human body, without passing an examination, and without presenting evidence of the possession of any scientific knowledge of the etiology, diagnosis, and properly quarantining of contagious and infectious diseases, and the methods of securing immunity from

such diseases, which produce a terrible mortality throughout the world.

The public has so long suffered from poorly educated physicians that every State in the Union has enacted laws, raising the educational qualifications of the candidates to be examined for a license to practice medicine.

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 four years 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, and the tendency of modern times to raise rather than lower the educational standard of professional men, were factors in causing the Legislature to enact the laws which prevent any person, not presenting the intellectual and moral qualifications required by the law, from practicing medicine "or treating the diseases of the human body" in this State. The public is protected by discouraging commercialism in medicine and is benefited by fostering the science of medicine, and not the least of the duties of physicians is the guarding of individual and public health along the lines of sanitation and preventive medicine.

To summarize the objections to the Osteopathic Bill:

First. The bill permits certain so-called practitioners of a branch of medicine known as Osteopathy to receive a license to legally practice a branch of medicine without passing an examination, there being no evidence that they possess any knowledge of sanitation and the protection of the public from contagious and infectious diseases.

Second. Osteopathy, so-called, or Manual Therapeutics, is a single agent or method used in the treatment of disease, and is included in the general practice of medicine, and is now and has been used by the licensed physicians of this State, and it should not have a special examining board, and thereby lower the educational standing of the physicians in this State.

Third. 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. Any of the 11,923 licensed physicians have now the right to practice Osteopathy as a specialty, in this State.

Fourth. 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, and can protect the individual and the public from contagious and infectious diseases, to do which requires a full knowledge of the science of medicine as taught in the medical colleges of this State, which includes a study of the action of animal, vegetable and mineral poisons and the proper use of drugs, sera and other valuable therapeutic agents. From an educational standpoint, the enactment of the Osteopathic Bill would be a disgrace to the State of New York as a retrograde movement, there being no recognized Osteopathic college in this State.

And finally, it would be more reasonable for the Legislature to separate the special branches of criminal, corporation and real estate law from the general practice of law and 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 the Legislature 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 enthusiasts who are now asking for a special osteopathic examining board.

The members of the Senate and Assembly should be petitioned to defeat "Senator Hinman's Osteopathic Bill, No. 293," in the interest of individual and public health, and to safeguard the educational standards of the State.

E. ELIOT HARRIS, M.D.

Current Medical Literature.

PRACTICE OF MEDICINE.

COLD FRESH AIR TREATMENT OF PNEUMONIA. W. P. NORTHRUP cites a case of a boy 13 years old who finished a bicycle ride without incident, without exposure, or excessive fatigue. On the following day he came home from school, having felt badly during session. He ate a good lunch and seemed well. That afternoon there was an abrupt onset of the symptoms; malaise, persistent vomiting and severe headache; throat red; toxemia and nervous disturbance marked. Next day, there was no improvement, and no diagnosis. On the third day, there were 105° F. temp.; resp. pulse, ratio 1 to 3; pain in chest; nausea; delirium; restlessness; cough. Pneumonia marked. The case became very grave. The resp. reached 35 to 40; sometimes 50. Temp., 104—105; pulse, 120. He recovered, but not psychically. Delusions pursued him. His condition seemed post-typhoidal mentally, associated with exhaustion. He had delusions, illusions, dysesthesia, a grinning, vacant look, nocturnal enuresis, anemia.

The child's head was placed between two wide-open sashes in a bay window. The room was kept at about 40° F. Nurse wore heavy wraps night and day. No one caught cold. Boy wore no oilskin jacket; had no extra cover over his chest; his arms were out. He was allowed to do anything to further his comfort. Hot, dry skin, dry tongue, muttering delirium, limited lung capacity, call loudly for two aids—water and air. The heart, blood and kidneys need them. The child was sodden with the poison. He was overheated, prostrated, intoxicated and hot; constricting poultices and vitiated air were certainly contraindicated. This boy recovered entirely.—*Boston Med. and Surg. Journal*, Feb. 22, 1906.

ARTERIO-SCLEROSIS AS A GENERAL DISEASE. ALFRED STENGEL recognizes three stages of the disease. First, a preliminary one, difficult of recognition in its beginnings, and confusing to the clinician in his effort to distinguish what the etiological factors have contributed to the symptom complex, and what part has resulted from the arterial disease itself. Second, a middle period, during which the arterial disease is easy to recognize, but in which secondary organic changes have a variably important role. During this stage the diagnosis is established, and offers rarely any difficulty. Only when attention unduly is given to some local disturbance, such as albuminurea, palpitation or vertigo; or when the vascular disease is so uniformly distributed that it manifests itself only in a general failure of vitality, is the recognition of the disease likely to occasion confusion. Thirdly, a final stage of failing circulation, organic failure, and terminal infections. In this stage the contributory influence of the hardened blood vessels rarely escapes attention.—*American Medicine*, Feb. 10, 1906.

MICE AND PNEUMONIA. E. PALIER, of New York, says that during December, January, February and March there are more mice in the house than in summer, especially in those in which the plumbing is defective. The mice work themselves through under sinks and are found where there are many nooks and corners around sinks, and in houses where there is no open plumbing. Young mice seem to be more abundant during March, and they are especially susceptible to the diplococci, as the author terms the pneumococcus. These young mice, in looking for food, are easily inoculated with human sputum. The mice, through their feces, or through their decomposing bodies after death, spread the virulent pneumococcus, which may cause disease in man by inhalation or inoculation through some abrasion. In poorly ventilated rooms the pneumococci become more abundant, and the

chances for contracting pneumonia are great. The author dissected two dead young mice and found many pneumococci in blood smear preparations.—*Medical Record*, Jan. 27, 1906.

THE EARLY DIAGNOSIS OF GASTRIC CANCER. H. WEINSTEIN considers it advisable to regard suspiciously all patients over 40 with previous healthy digestive organs who present dyspeptic symptoms and persistent loss of appetite. All such cases, when coupled with loss of strength, require most careful analysis; and the physician must not consider his duty performed until he has either proved or disproved the existence of malignant disease. The family history, with regard to carcinoma, must be carefully inquired into. A history of more or less recent traumatism in the region of the stomach must be carefully considered, as trauma may give an impetus to the development of a neoplasm in predisposed individuals. The motor and secretory functions of the stomach must be examined. One should test for an absence of hydrochloric acid and the ferments which, with the presence of lactic acid and the Oppler-Boas bacillus, bespeak carcinoma. The presence of hydrochloric acid and the absence of lactic acid do not exclude malignancy, for in carcinomatous ulcer, we usually find hyperchlorhydria; the history of a pre-existing ulcer will lead one in the right direction. Occult hemorrhages occur in the stomach even in the early stages of the disease, and microscopically blood and pus may be seen in the stomach contents. If a blood examination shows also an absence of digestive leucocytosis, a diminution of the red blood corpuscles, and a reduction in the proportion of hemoglobin, the diagnosis of cancer is almost certain.—*New York Medical Journal*, Feb. 10, 1906.

THE DIETETIC TREATMENT OF CHRONIC DIARRHEA. MAX EINHORN divides chronic diarrhea into (1) diarrhea due to chronic intestinal obstruction; (2) nervous diarrhea; (3) chronic diarrhea, due to catarrh of the small intestine principally, sometimes also accompanied by catarrh of the colon. In chronic diarrhea the small intestine is usually involved. He subdivides this group into (1) primary catarrh; (2) catarrh depending on abnormalities of gastric secretion; (3) catarrh accompanying ulceration. In all, the diietetic desideratum is the selection of foods which are non-irritating and leave little residue. Cold foods must be avoided. In (1) liquid foods are essential: such as milk, raw eggs, broths and meat juices. In (2) a rather generous diet may be permitted, except that all laxatives should be avoided. The patient must be encouraged in his efforts to suppress the constant desire to defecate. In (3), in achylia gastrica, proteids must be inhibited. A vegetable diet is indicated here. Gruels, milk, koumyss; later bread and butter are permissible. A little meat may be added later. All solids should be finely divided. If the diarrhea is due to hyperchlorhydria, a richly albuminous diet is necessary. Alkalies should be given when the trouble is in the small intestine. Fruit should be excluded, also highly seasoned dishes and salads, as these all encourage peristalsis. The patient should take sufficient food, however. Egg albumen water may suffice for a few days. Then eggs, barley decoctions, oatmeal and rice porridges, bread, butter and meats. If diarrhea persists, tannic acid, or even an opiate may be necessary.—*New York Med. Jour.*, Feb. 10, 1906.

FACTS ABOUT EATING. JOHN W. ACHRON finds that where there are present sick headache, biliousness, hyperacidity, duodenal ulcer, spastic constipation, acne, pruritis, neuralgia, insomnia, chronic rheumatism, bronchitis, asthma, postnasal catarrh, eczema, cerebral hemorrhage, arterio-sclerosis, Riggs' disease, frequent urination, "that tired feeling," obesity in some of its forms, and many other ailments and conditions, there is or has been overeating of some sort. He also finds that there is a history of too much eating of one kind of food, meals taken too near together, "nibbling" between meals, the food taken not being properly invigorated, or

that it is being washed down by an excess of liquids, taken with it or after meals independent of the foods ingested. The question is not one of individuals so much as the control in habits of eating and of restriction of food to the actual, systemic, physiological requirements. If diseases are to be cured, or unorganized exudates absorbed, the restriction must be carried to the point where the system lives for a time on the waste locked in its tissues, and carried in the blood. This is "cleaning house," and the food, like the sail of a boat, must be trimmed flat enough to allow the body to weather the conditions present. Starches and sugars are the most likely to clog the system; and meats and other foods should be controlled.—*Am. Medicine*, Feb. 10, 1906.

SURGERY.

THE TREATMENT OF MEDIASTINAL CARCINOMA WITH THE ROENTGEN RAYS. G. E. PFAHLER. The author describes six cases of carcinoma of the mediastinum, secondary to carcinoma of the breast. His treatment in all these cases resulted in improvement. Three patients died later, for they were too far advanced. The other three are nearly well, their lives have been materially prolonged and they have been made more comfortable than they could have been by any other means. Pfahler thinks that sufficiently good results have been obtained to justify the recommendation of the use of the Roentgen rays early in every patient. He also thinks that the results have shown that the ray can affect deep-seated disease without destroying superficial tissue.—*American Medicine*, Feb. 10, 1906.

SURGICAL TREATMENT OF CARCINOMA OF THE STOMACH. B. G. A. MOYNIHAN bases his experience upon the records of fifty-nine operations performed for this condition, during the last few years. He reports gastro-enterostomy, thirty-five cases with five deaths; gastrectomy, ten cases, with three deaths; gastrostomy, five cases with no deaths; jejunostomy, three cases with no deaths; and six exploratory laparotomies with one death. Gastroenterostomy he considers indicated in cases of pyloric obstruction with an irremovable growth. This operation prolonged the patients' lives and enabled them to spend their last days in comfort. He believes that gastrectomy has a wider field of application than it has been applied to, and that it is justified, not only as a curative measure, but also as a palliative measure in cases which are farther advanced. Moynihan employed it in five cases in which the growth involved the cardiac end of the stomach. Jejunostomy was employed in the cases in which gastro-enterostomy could not be done because of the extent of the growth, and in which gastrectomy was contra-indicated by secondary deposits. It gave a prolongation of life in these cases. He insisted that exploratory laparotomy is not free from risk.

His cases showed carcinoma most frequently at the pyloric end of the stomach, and at the curvatures out of thirty-nine of his cases, in which attention was given to this point, a history pointing to gastric ulcer had been elicited in twenty-four. The location of the disease and this previous history of ulcer draw closer the relation of these two diseases. The high mortality in carcinoma of the stomach he believes will be much lessened when earlier operation is resorted to. The diagnosis is not easy; but if operation is deferred until it is positively made, the hope of a cure has become much diminished.—*The Lancet*, Feb. 17, 1906.

THE PRESENT STATUS OF THE SURGERY OF THE STOMACH. W. D. HAGGARD thinks that the typical indication for operative interference in the stomach is obstruction of the pylorus from an open or cicatrized ulcer causing dilatation of the stomach with stasis of food. The operation of gastroenteric anastomosis is ideal in this condition. It is used in perforation and hematemesis of chronic ulcer. It is also

advised in obscure and persistent dyspepsia, disabling perigastric adhesions, congenital stenosis of the pylorus, fistula between stomach or pylorus and adjoining organs or even with surface of the body, hour-glass stomach, volvulus, tetany due to obstruction and dilatation, spasm of pylorus, subphrenic abscess, perforating wounds of stomach, non-perforating trauma, cirrhosis, foreign bodies and cancer. He divides and describes partial gastrectomy into six steps after Mayo.—*Jour. Am. Med. Assoc.*, Jan 27, 1906.

THERAPEUTICS AND MATERIA MEDICA.

SODIUM AURATE; A NON-IRRITATING LOCAL ANTISEPTIC OF REMARKABLE POWER. F. H. VERHOEFF, of Boston, recognized the need of a local antiseptic combining effective germicidal power with lack of toxicity, experimented and found one which had these qualities. It is prepared by taking one gram of gold chloride and cautiously adding sufficient of a 5 per cent. aqueous solution of sod. hydrate to produce a faint alkaline reaction. When the solution becomes lighter in color and more turbid, add 100 c.c. of a 1 per cent. sol. of boric acid and shake the mixture. The turbidity disappears and the fluid becomes darker. Normal salt solution is added to make the total 200 c.c. Filter this and keep in a glass-stoppered bottle. By evaporating this to dryness the antiseptic in powder is formed, and from this one may also make an ointment. Its bactericidal properties are dependent on the gold present. It must be completely neutralized to render it useful as an antiseptic. It is of great value in gonorrhoeal ophthalmia. The bacteria killed are found colored with metallic gold.—*Jour. Am. Med. Assoc.*, Jan. 27, 1906.

ON THE DEVELOPMENT OF SCIENTIFIC HYDROTHERAPY. J. H. PRATT, of Boston, calls attention to the meagerness of the literature on this valuable topic, and condemns our colleges for not teaching this branch of medicine, and for the partial equipment found in some few hospitals. He reports six cases admirably treated with his method. Nephritis; coronary endarteritis; obesity; subacute rheumatism; insomnia, and one of severe neurasthenia. These cases all improved to a greater or less extent.—*Boston Medical and Surgical Journal*, Jan. 25, 1906.

TREATMENT OF CEREBRO SPINAL MENINGITIS. O. T. OSBORNE thinks the disease only very mildly communicable. It should, however, at all times, be a reportable disease, but not any more so than pneumonia; that it is no more communicable than pneumonia or typhoid; that a large majority of cases do not die; and that it is not contagious. The causative germs have been found in the nostrils and throats of perfectly healthy individuals, showing that under normal conditions the germ is tolerated, and that it is not rabidly infectious. An epidemic does not start from a focus and spread, but strikes at once many persons who could not possibly have come in contact. The treatment, he goes on to say, consists in diminishing the congestion, there being no specific antidote for the germ; to relieve cerebral or spinal pressure, and to combat all acute symptoms and complications as they arise.

Diphtheria antitoxin in this disease is theoretically unsound and practically a failure. Spinal puncture has not proven curative, but is indicated when there is cerebral pressure. All symptoms should be treated and the patient made comfortable. Osborne gives large doses of morphia for the pain and to intensify its action he thinks there is nothing better than ergot, of which he advises the aseptic fluid extract intramuscularly. Ice, ergot and morphine are, in his opinion, the ideal treatment. The general care of the patient should be the same as in typhoid. When the patient begins to get well, potassium or sodium iodid in from one to five-grain doses should be given. He cites fifteen cases. All recovered but one, and that died of nephritic complications.—*New York Medical Journal*, Feb. 17, 1906.

TREATMENT OF ACUTE RHEUMATISM BY INUNCTION.—R. BOURGET recommends inunctions with the following:

Acidi Salicylici	
Adipis Lanae Hydrosis	
Olei Terebinthinæ	10.00
Adipis	80.00

Misce. To be applied with friction to the skin about the afflicted joint.

After this application the joint is enveloped in woolen cloth and surrounded by waterproof tissue. He regards this preparation as superior to ethyl salicylat or amyl salicylat.—*Jour. de Medecine Interne*, Jan. 15, 1906.

TREATMENT OF PSORIASIS. DREUW recommends the following ointment in psoriasis:

Acid Salicyclic	10
Chrysarobin	20
Ol. rusci	25
Sapo, virid	25
Vaselin	25

Applications of this ointment are made for about five days, at the end of which time the patient begins to take hot baths daily. The baths are followed by rubbing in vaselin. This course may be repeated if necessary.—*Jour. Am. Med. Assoc.*, June 10, 1905.

OBSTETRICS.

SOME PROBLEMS IN THE DIAGNOSIS AND TREATMENT OF PUERPERAL INFECTION. BARTON COOKE HIRST, of Philadelphia, says that but little progress has been made in the prevention, recognition and cure of this affection, though in frequency and danger it stands first. The advent of the aseptic and antiseptic era has done little to retard morbidity and mortality in obstetrics, as it has in surgery.

The bacteriologic examination of infected women as a means of precise and accurate diagnosis; the influence the results of this examination should have upon prognosis and treatment; the treatment of infection after labor by instrumental exploration and evacuation of the uterus; the present status of antistreptococcc serum as a curative agent; and the lessons taught by practical experience in the operative treatment of puerperal sepsis by pelvic and abdominal surgery. These points are taken up and the author makes the plea that the course of every case of infection should be carefully observed for the appearance of certain conditions which can only be relieved by surgical treatment. He never operates unless he has fully determined the presence of intrapelvic and intra-abdominal inflammation and suppuration. High temperature, rapid pulse, high leucocyte count and the presence of pathogenic microorganisms in the uterus and blood are not of themselves indications for operative interference.—*American Medicine*, Jan. 27, 1906.

GENITO-URINARY DISEASES.

THE NON-OPERATIVE TREATMENT OF PROSTATIC HYPERTROPHY. W. S. REYNOLDS says that the benefit to be derived in properly selected cases by operative procedures in prostatic hypertrophy should be fully appreciated. The symptoms are due to many other causes besides enlarged prostate. These are amenable to treatment and should be removed prior to any operative intervention. After interstitial changes have occurred in the prostate, it is impossible absolutely to alter its enlargement. If the patient is seen early, much can be done in the way of prevention, especially when the glandular structures are principally involved. Massage, hot rectal irrigations, or silver nitrate injections are beneficial. Alcohol must be interdicted. Suprapubic aspiration can be employed. Careful catheterization should be indulged in, and bladder irrigations with boric acid or formaldehyde are of much value.—*Med. Record*, Feb. 17, 1906.

PEDIATRICS.

PSEUDO UREMIA OF CHILDHOOD. W. H. BIRCHMORE cites over twenty cases of illness in children and adults varying in age from three to nineteen, in

which, from the symptoms and the presence of large quantities of albumen in the urine, uremia would be easily diagnosed superficially; but these cases were all due to some digestive disorder and resembled muscarin poisoning. The patients complained of headache and then slowly sank into a lethargic condition from which they could barely be roused. In acute conditions, the temperature reached 103 and slightly over. Pulse was weak and down to 50, and the circulation was sluggish; the face had a dusky hue; respirations, 10 to 15. Hypodermics of 1-100th of atropine sulph. were given to stimulate respiration. Strophanthin was given to steady the heart. Reaction was observed at once. As soon as the patient was roused, an effervescent saline cathartic was given and amelioration of all symptoms followed within three hours. This saline should not be given at first on account of the danger to a weakened heart stopping in dilatation.—*Medical Record*, Jan. 27, 1906.

RHINOLOGY.

KILLIAN'S FRONTAL SINUS OPERATION.

E. E. FOSTER, of New Bedford, after a review of the several operations proposed for the treatment of chronic frontal sinusitis, describes Killian's method, and considers as indications for the operation the following conditions: (1) When other operations have failed. (2) When there are indications of necrosis, as a fistula or abscess. (3) When there are symptoms of intracranial complications. (4) When in a case of chronic purulent frontal sinusitis, pain and fever appear with foul smelling discharge. (5) When there is headache, particularly when associated with discomfort in the region of the eye, which is not relieved by intranasal treatment. (6) When in spite of oft repeated irrigations of the sinus, the discharge remains foul. (7) When the inflammation in the frontal sinus and anterior ethmoid cells produces recurring groups of polypi. (8) When a simple purulent discharge is not relieved by careful intranasal treatment, and the patient desires permanent relief by a radical procedure.—*Boston Medical and Surgical Journal*, Jan. 25, 1906.

PUBLIC HEALTH.

DR. ALEXANDER, in his valedictory address before the Gynecological Society of Liverpool, speaking of Infant Mortality, proposed drastic measures for the waste of infant life, and the continual breeding of those who, born healthy, are sure to become degenerates. He does not believe in lying-in hospitals for the woman to come and be delivered every so often and then kill their illegitimate offspring, by neglect and drunkenness. In one Liverpool workhouse, he shows that in 1904, out of 388 births, 158 were illegitimate; 106 of these were the mother's first child; 31, the second; 16, the third; 13, the fourth; 8, the fifth. And there are two other workhouses in Liverpool. Here 158 illegitimates were added to the nation, both mothers and children being fostered and cared for in a way that mothers of the middle class, independent and hard working people, cannot afford. The mortality rate is very low, although Dr. Alexander said it might be well if it were high. He followed up 304 such infants born in 1903 for a year. Eighty-eight died, 216 were left in one parish to pollute the population, and there are hundreds such parishes. He goes on to say that the authorities can say nothing to these women, but must prepare aseptic conditions and first-rate ward accommodations; and this at the expense of the ratepayers, the hard working men and women, who have to support them and their children, not only in the infancy of the latter, but as tramps and criminals into which they degenerate.

As the only remedy Dr. Alexander suggests prohibition of marriage to those who are unable to "build a nest for their young." He has no sympathy for the sentimentalism which encourages the propagation of "human rubbish." The nation, he says, should insist on mothers nursing their children; that is the birth-right of the child.—*Med. Record*, Feb. 17, 1906.

Transactions of Societies.

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

ONE HUNDRETH ANNUAL MEETING, JANUARY 30 AND 31, 1906.

SCIENTIFIC SESSION.

Discussions.

TYPHOID FEVER.

DR. LUZERNE COVILLE read a paper with the above title, for which see page 115.

DR. FRANCIS P. KINNICUTT, of New York, said that all would agree that a milk diet is not altogether the most to be desired. Some one has said that the ideal condition in alimentation would be found, which would give perfect nutrition and, at the same time, give no feces. One could give foods which leave very little residue and leave the bowels comparatively empty.

He had a criticism to make regarding the statement made about the cold-water treatment of typhoid. He did not know upon what the author based his views, whether upon laboratory experiments or clinical observation; but the final test must be in clinical observation; and he thought that all would agree that the cold-water treatment is certainly an admirable treatment. Since its introduction by Brandt and since it has been tried in the different countries, the reduction in the mortality rate has been at least 3 per cent. From 11 to 12 per cent., the cold-water treatment has brought the mortality rate down to about 6 or 7 per cent.; and this he considered to be a very good showing. Dr. Kinnicutt's experience in the hospitals in New York City was interesting. At the Presbyterian Hospital, and with many more cases of typhoid at the St. Luke's Hospital, the mortality rate after the bath treatment was reduced from 10 to 6 or 7 per cent., and this plan of treatment is now the routine one. When the patient's temperature per rectum is 102.5° F., a bath at 75° F. is given; and it is given as often as once in two hours if the temperature is at 102.5 or over. These baths have a tonic effect upon the nervous system; and, as a result, the patients feel better, have less fever, and are in better general condition. It is rare to have any disturbances of gastric digestion. He said that if a ward of twenty patients be taken, probably not one would have a bad attack, although little cerebral disturbances would appear. Under this plan of treatment they encounter just as many cases of intestinal perforation as before its introduction, but no more. They meet, too, with as many cases of hemorrhages but no more. The main point is that the mortality rate has been reduced from 10 or 11 per cent. to about 6 per cent.

DR. DELANCEY ROCHESTER, of Buffalo, complimented the reader of the paper in proving that the incubation period of typhoid fever is about twelve days. He said that in his experience, when he looked closely enough into his cases, he generally found some complication, and not a true recurrence of the disease itself. In the first place, the gall-bladder should be considered; secondly, the appendix; thirdly, the ear; and fourthly, the lungs. One generally finds one of these complications, which make it appear that there is a recurrence of typhoid fever. Recurrences of typhoid fever are questionable in his experience.

Dr. Rochester wished to emphasize what Dr. Kinnicutt had said about the Brandt treatment of typhoid fever, and also that the Brandt treatment is a tub and not a sponge treatment. The results of the bath treatment cannot be equalled by any other at present known treatment.

Enterodolysis means the introduction into the bowel of normal saline solution; and, he said, this is unwise. When normal saline solution is injected into the bowel, if it is retained and absorbed, it carries into the circu-

lation toxic material from the bowel. To wash out the bowel with boric acid and ichthyol, he considered to be good treatment; but to use the normal saline solution, he believed to be dangerous.

With regard to the feeding of typhoid patients, he said he could feed patients sufficiently on raw eggs mixed with water, and also with beef juice, without producing serious disturbances; and with these some flavoring, as orange juice, may be used with advantage.

DR. CHARLES L. STILES, of Owego, said that the period of incubation depends upon several factors: the virulence of the poison, the condition of the soil, the natural resistance of the patient, and the environment. Some seem to have acquired a natural immunity and, when this exists, then the period of incubation is lengthened, the mortality is lessened, and it appears as if the disease were held in abeyance for a long time. He advised that the typhoid should not be treated so much as the patient. Meet the indications as they arise, contribute to the comfort of the patient, and do not do too much, but have a reason for what is done, and do it well.

TOXIC ARTHRITIS.

DR. HENRY A. FAIRBAIRN, of Brooklyn, New York, read a paper with the above title, for which see page 118.

DR. WISNER R. TOWNSEND, of New York, thought the paper was a timely one, although he was not prepared to accept the term "toxic arthritis." The word "rheumatism" covers a multitude of sins and ignorances. If there is anything of value that should be offered to the profession it is a classification of the various forms of arthritis, and this is especially so in children. The gonococcus is a frequent cause, and the treatment and prognosis is different from the treatment and prognosis when syphilis is the cause. A great deal of work has been done of late years towards obtaining a correct nomenclature. There are recognized now two forms, or two subdivisions of arthritis: the hypertrophic and the atrophic. He thought the presentation of the paper was very timely, because it showed that the term rheumatism is a loose one, and in many cases implies ignorance. Before accepting a term of that nature we need more knowledge. Much is being done in Germany and in this country, especially by Goldthwait of Boston, throwing light upon this more or less obscure subject. The value of the X-ray is as yet *sub judice*; if its value were once established, then the treatment might become more scientific and successful.

DR. ALBERT VANDER VEER, of Albany, wished to endorse all that Dr. Townsend had stated. The etiology of joint diseases, he believed to be, to a certain extent, so imperfectly known that the classification of the real conditions is difficult. The term "rheumatic arthritis," he said, has covered a number of varieties of cases in which a close investigation has confirmed the belief that rheumatism has nothing to do with it. Cases often come to the surgeon, in children, as well as in adults, which have been treated for months, even years, for causes presumably rheumatic, when careful examination shows that there is nothing of the sort present. Many cases in children go to the point of actually preparing for the application of instruments, when an examination with the X-ray and careful inquiry into the diet and surroundings of these children, change the diagnosis; and then with proper remedies, and attention to diet and sanitation, they recover. He believed there are many symptoms that enter into this classification of rheumatism that should be considered merely as complications, as toxic arthritis. When there is an autointoxication from the intestinal tract, the intestinal tract must be cleared. The result of autointoxication from the alimentary canal shows itself largely in the joints, particularly in the knee joint. Such cases were seen often in the past, and the true condition was not recognized. The treatment by hyperæmia, now being endorsed, has helped to clear up, to a certain extent, the imperfect classification made in the past.

Dr. Vander Veer believed that this paper would give an opportunity for thought, would encourage investigation, and would be productive of much benefit in the

treatment of joint conditions, in which there is still a great deal to learn. He said it should be impressed upon the general practitioner, that, when he has made a diagnosis of some lesion about a joint, and treatment has been unavailing, the patient being left in the same condition for two, three or six months, the diagnosis should be revised.

DR. BEVERLEY OLIVER KINNEAR, of Clifton Springs, said there is one aspect of rheumatism that should be thought of, and that is, that, in acute rheumatism, the pathology of the disease shows inflammation of the joint; it is really a true inflammation. And so in the chronic form of the disease, one sees deposits in the joint, thickening of the capsule, etc., all indicating that one has to do with an inflammatory condition. He said he was inclined to believe that many cases of chronic rheumatism, so-called, are due to a condition of the bowels, like constipation, accompanied by an autointoxication, in which there is a tendency to deposit certain materials in the joints; and, in treating these cases, in order to make the circulation equable and encourage absorption, hot water and massage are indicated. This tended to make an active circulation and induced absorption. This factor of constipation, or retention of fecal matter in the bowels, as an origin of toxemia, he believes should be taken more into consideration. If anemia were present, tonic treatment should be added.

DR. A. JACOBI, of New York, said that he was more confused now than he was a short time ago; and when a diagnosis of rheumatism is made it seems that it is wrong. It seems to be a word very convenient to use, but it does not seem to mean anything. Attacks of polyarthritis are the result of infection, but not always the result of the action of the same infection, in some cases being the result of streptococcal infection, in others, the staphylococcal, in others, the gonococcal, etc. The results of the action of these various infective factors are called rheumatic arthritis, but it is not at all a scientific diagnosis. One subject had not been mentioned, which he considered to be of importance, *i. e.*, the frequency of tubercular inflammation. Once, he said, it was taught that so-called rheumatism involving only one joint was in all probability due to a gonococcal infection. It has now been learned that it is not the case at all: gonorrhœa may affect a dozen joints or one.

Tubercular inflammation of joints had not been mentioned. If so-called rheumatism were met with, involving one joint, particularly in children, and particularly the hip joint, in nineteen out of twenty cases it would be of tubercular origin, and should be treated as such. When there is an infection with the tubercular bacilli, local treatment by rest, etc., is not enough; internal treatment, as well is indicated, with such agents as guaiacol, arsenic, phosphorus, etc.

DR. JAMES J. WALSH, of New York, said that this was one of the subjects that had interested him for more than ten years, and the word "rheumatism" is now considered an opprobrium. The cases of chronic rheumatism are valuable to quacks and osteopaths. He believed it would be unfortunate if we use the term too generally; general terms in medicine have always done harm. All know that acute rheumatic arthritis is due to a micro-organism. Acute rheumatism never left any sequel or marks in any joint. When acute rheumatism leaves any mark, it is not due to the rheumatism, but to some secondary infection. Any case of acute rheumatism not recovering entirely is a case to be regarded with suspicion. There are probably five or six diseases denominated "acute rheumatic arthritis," which are due to five or six micro-organisms. There have been found four, possibly five, different diseases in the scarlet-fever-measles group during the past twenty-five years. A separation of joint diseases could be made in the same way. The use of the term "rheumatism" should be lessened. Chronic rheumatism, he said, does not bear such a relation to joints as it does to muscles, a point that he had frequently pointed out in the past. If these cases were analyzed and studied they would be found, in most of the cases, to have to do with quite different

things than rheumatism. They do not have to do with metabolism. When one is called to examine a case in which pain in the muscles is complained of, it is usually said that, "this is a case of chronic rheumatism," because it is an easy diagnosis to make. In a series of cases at the New York Polyclinic Hospital, Dr. Walsh said that he found fourteen out of twenty-three cases entered the hospital because of "chronic rheumatism." He referred to the wife of a physician who had lost twenty pounds in weight because it was believed she had rheumatism or gout; she had not. A great many of the cases, in which pains are complained of in one joint, are really not cases of rheumatism at all; but the pains are due to occupations of various kinds. He had frequently drawn attention to these cases in which the patient uses the muscles of one portion of the body more than another. The man, for instance, who uses the hammer, has pains in the shoulder because of the overuse of the nerves; this makes them less resistant, and a neuritis is set up; there also are likely to be present disturbances in the joint. These cases should be more carefully studied. Most of the cases of chronic rheumatism in the muscles are really forms of neuritis; in such cases local measures would be better treatment than general and constitutional. Dr. Walsh spoke of the giving of salicylic acid in these cases and the apparent good results, and said that it should be borne in mind that the salicylates are coal tar products and nothing else; in chronic rheumatism they only lessen the pain, how we do not know. The use of hot water and massage in these cases are more productive of good than any constitutional measures.

DR. ALGERNON T. BRISTOW, of Brooklyn, said that this paper is a plea for exact diagnosis and the abandonment of loose terminology. There are two terms in medicine which are vague in character—malaria and rheumatism. When a doctor does not know the nature of the disease with which he is brought in contact he calls it malaria; the word rheumatism is used in the same way. The paper is a plea for exact diagnosis, recognizing the condition for which treatment is to be applied.

OBSERVATIONS UPON THE RESULTS OF SANATORIUM TREATMENT OF PULMO- NARY TUBERCULOSIS.

DR. J. H. PRYOR read a paper with the above title, for which see page 120.

DR. WILLIAM M. BEMUS, of Jamestown, asked if Dr. Pryor did not find that patients coming from the higher altitudes received less benefit in his institution than those coming from the sea-level, or lower altitudes. Also, he desired to know what was meant by incipient cases. The line should be sharply drawn for the benefit of the county examiners. He believed it a wise thing for every county examiner to examine the sputum himself, and also to submit a specimen of it to the State Pathologist in order to get his views. It was seldom that he saw a case of incipient tuberculosis; such patients did not appear before him, especially among the laboring classes, until the disease had passed into an advanced stage.

DR. JAMES J. WALSH, of New York, said that, in conversation with two or three men who are most prominently identified with this work in this country, he found what they consider the most serious fault at the present time is the failure, by the general practitioner, to recognize incipient tuberculosis. Most of the general practitioners of medicine do not recognize tuberculosis early enough, seldom before the disease has entered an advanced stage. The teachings in old days had much more to do with the shape of cavities, where they were, and how to recognize the kinds of cavities, etc., than with the recognition of the early signs of tuberculosis. Another serious difficulty encountered is the negative diagnoses made too early. Among the first questions asked the patient should be, "Have you been associating with tuberculous people? If there are tuberculous patients in the family, of course the patient has been in association with them. That at once raises a suspicion; a suspicion once raised, remembering that tuberculosis is an infectious disease, even if there are no confirm-

atory symptoms, a negative diagnosis regarding tuberculosis should *not* be given. It is easy to say, "You have no tuberculosis," and to encourage the patients to hope they will recover. Symptoms do not mean physical signs. If a patient, with a pulse above 90, was working near a tuberculous person, such a patient should not be told that he has not tuberculosis until it is found out why the pulse is so high. In this manner one might get at the incipient cases. Watch the slightest rise of temperature. If the morning temperature is 97 and the afternoon temperature 99, there is something developing; and no negative diagnosis should be made until a reason is found for the difference. Dr. Walsh said that the first sign of tuberculosis is not a rale or a cough, but a patch, especially at the apex, over which there is a prolonged expiration with a little roughening. When such is present one should not give a negative diagnosis but should tell the patient, "You have tuberculosis." The sooner these cases of incipient tuberculosis are recognized, the fewer patients will be permitted to get into the advanced stages of the disease.

DR. CHAS. BERNSTEIN, of Rome, said that in the institution with which he was connected, with about 700 inmates, during the past two or three years, he often found a temperature ranging between 99 and 99.5. With no other sign but this slight rise in the temperature he often found that it meant incipient tuberculosis.

DR. J. H. PRYOR said, in answer to Dr. Bemus' question, that no observations had been made regarding the results of changes from lower to higher altitudes, or from higher to lower altitudes. Indeed, all incipient cases recovered or were arrested.

In answer to the question as to what is meant by incipient cases of tuberculosis, he offered the following definition, which had been agreed upon by the National Association for the Study and Prevention of Tuberculosis, for one year's trial:

"Slight initial lesion in the form of infiltration, limited to the apex or small part of one lobe. No tuberculous complications. Slight or no constitutional symptoms (particularly including gastric or intestinal disturbances or rapid loss of weight). Slight or no elevation of temperature or acceleration of pulse at any time during twenty-four hours, especially after rest. Expectoration usually small in amount or absent. Tubercle bacilli may be present or absent."

With regard to the diagnosis of incipient tuberculosis he hesitated entering upon this; but in brief he stated that there probably was no disease so frequently overlooked as tuberculosis in the early stages; and this was due, he believed, to faulty education. Text-books described cases of tuberculosis, but rarely did they describe the incipient cases; consequently physicians would have to diagnose what seemed to them a new disease. It was like the diagnoses a few years ago of inflammation of the bowels, instead of appendicitis. In making a diagnosis between the early cases of tuberculosis and the advanced cases, in one case the diagnosis would be made too late to do any good. In his opinion, he believed the whole question to-day ran to prevention; in other words, *diagnose and treat the early cases*. If that had been done years ago we should not now see this large army of consumptives marching to their graves.

Dr. Pryor said that it had been claimed that the decrease in tuberculous cases is due to special methods of prevention. He did not believe this to be true; but it is due to the improvement in sanitation. If one studies the mortuary tables during the last ten years he will find that the death rate in tuberculosis falls with the general death rate. Last year the increase in the general death rate was accompanied by an increased tuberculosis death rate. It has been claimed that there has been a decrease in the actual number of deaths; last year there occurred a decided increase, which has never been accounted for.

With regard to the methods of prevention, he said the ideal method consists in diagnosing the case early, then placing it in some institution, to prevent others from contracting the disease. With regard to any special

methods of treatment, he had nothing to say which was at all new; it is simply a question of rest for a period, when the patient has temperature or other acute evidences of the disease. Rest in the open air, a liberal diet, forced nutrition when possible, are practically all there is to the treatment. Results depend upon how early we get the cases under treatment.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, Feb. 20, 1906.

Program.

"The Treatment of Meningococcus Meningitis on the First Medical Division of Bellevue Hospital During the Early Summer of 1905," by Edward L. Dow, M.D., of New York.

Discussion by William Browning, M.D.; Joshua M. Van Cott, M.D., Elias H. Bartley, M.D.

MEDICAL SOCIETY OF THE COUNTY OF MONROE.

A special meeting was held Feb. 28 to perfect organization under the constitution and by-laws of the Medical Society of the State of New York.

The following officers were elected: *President*, R. Y. Cook; *Vice-President*, W. L. Conklin; *Secretary*, C. R. Witherspoon; *Treasurer*, W. V. Ewers; *Censors*, E. B. Angell, W. S. Ely, E. H. Howard, R. W. Moore, J. W. Whitbeck. The following committees were appointed: *Legislation*, W. J. Herriman, T. O. Tait, S. W. Hawk; *Public Health*, M. S. Collier, L. W. Ross, C. D. Young.

The following resolutions were adopted on the death of Ogden Backus, M.D.:

"The Medical Society of the County of Monroe has learned with deep regret of the death, on Feb. 10, 1906, of one of its members, Ogden Backus, M.D.

"Descended from a line of distinguished physicians, Dr. Backus inherited a taste for medical study, and, although he relinquished active practice a few years after entering upon his work, his cordial interest in medical and surgical progress and his amiable disposition endeared him to all members of the profession.

"A serious operation having become necessary, Dr. Backus, fully realizing his dangers, submitted to it with remarkable composure; afterward, although perfectly conscious that death was inevitable, the heroism with which he accepted the situation and his appreciation of everything done for him will long be remembered by all who were present during his last illness.

"Therefore, Be it Resolved, That the Medical Society of the County of Monroe express its deep regret at the loss of Dr. Backus and tender its sincere sympathy to his family and friends in their bereavement.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, Feb. 26.

Program.

"The Question of Economy in the Medical Supplies of Hospitals," by John Winters Brannan, M.D., President of Bellevue and Allied Hospitals.

"The Convalescent Branch Hospital and Its Relation to Hospital Reform," By S. S. Goldwater, M.D., Superintendent Mount Sinai Hospital.

"The Relation of the Visiting and House Staff to the Care of Hospital Patients," by W. Gilman Thompson, M.D.

"The Need of Uniformity in the Details of the Reports of Hospitals," by Prof. Frederick A. Cleveland, School of Commerce, New York University.

Discussion by E. Eliot Harris, M.D.; Hon. Robert W. Heberd, Commissioner of Public Charities; William H. Allen, Esq., Secretary Committee on Hospital Needs; C. Irving Fisher, M.D., Superintendent Presby-

terian Hospital; Arpad G. Gerster, M.D.; Walter B. James, M.D.; Francis P. Kinnicutt, M.D.

Announcement: The Centennial Anniversary of the incorporation of this Society will be celebrated on April 4, 1906, by a dinner. Prompt notification of intention to attend will materially aid the work of the Committee of arrangements.

RENSSELAER COUNTY MEDICAL SOCIETY.

REGULAR MEETING, FEBRUARY 13.

Program.

"Demonstration of a Case of Progressive Hemiplegia with Unilateral Paralysis Agitans," Dr. William Kirk.

"The Japanese Army Medical Corps at Home and Abroad," Dr. D. W. Houston.

New Books.

GALL-STONES AND THEIR SURGICAL TREATMENT. By B. G. A. MOYNIHAN, M.S. (Lond.), F.R.C.S., Leeds. *Second Edition.* Philadelphia, W. B. Saunders & Company, 1905.

Of the four surgeons who have done the greatest amount of work in the development of the surgery of the gall-bladder and its appendages, none has placed the profession of medicine under a greater obligation to him than has Moynihan through his systematic presentation of this important subject. The rapid exhaustion of the first edition of this work has made the second edition necessary. The author has added a chapter on Congenital Abnormalities of the Gall-Bladder, and generally amplified the subject.

The illustrations and the book-making are of a high order, and it is a pleasure to accord to such a work our best commendation.

DIFFERENTIAL DIAGNOSIS AND TREATMENT OF DISEASE. By AUGUSTUS CAILLÉ, M.D. New York, D. Appleton & Company, 1906.

The great value of this book lies in its practicality. It brings the refinements of diagnosis and treatment to the bedside for the general practitioner, in whose hands it places the scientific resources of the specialist as no work has ever done. Appreciating that the general practitioner must have the practical details of the complicated art of medicine, in order to be of the greatest service, the author has stripped the specialties of their theoretical features and presented the clinical application of the most approved knowledge. He has endeavored to re-establish the relations of internal medicine, surgery and the several specialties, which the modern trend of scientific work has separated.

This book fills a much needed place. It is well written, concise, and contains an encyclopedic amount of information. There are two hundred and twenty-eight illustrations and an unusually good index.

NERVOUS AND MENTAL DISEASES. By ARCHIBALD CHURCH, M.D., and FREDERICK PETERSON, M.D. *Fifth Edition.* Philadelphia, W. B. Saunders & Company, 1905.

This excellent work has found its way into very general use by the medical profession through its first four editions. It combines two books in one—a carefully prepared text book on Neurology, by Dr. Church, and an admirable work on Psychiatry, by Dr. Peterson. These authors have succeeded well in condensing these two large subjects into one volume. The style is clear and terse, and the subjects under discussion are brought before the reader with clinical clearness. The text is elaborated with a large number of illustrations.

This fifth edition contains such changes and additions as brings it fully up to date and in harmony with the most recent advances in the study of mental and nervous diseases.

THE DISEASES OF INFANCY AND CHILDHOOD. By HENRY KOPLIK, M.D. *Second Edition*. New York, Lea Brothers & Co., 1906.

Dr. Koplik's splendid grasp of his specialty is well illustrated in this work. The first chapter is devoted to a general discussion of infancy and childhood, and touches in a practical manner upon the study and treatment of the child. The next chapter is upon infant feeding, and discusses the matter fully and practically. The great help which these two chapters offer to the practitioner of medicine surpasses that of any similar work with which we are familiar. Then come chapters on diseases of the new born; specific infectious diseases; diseases of the digestive, respiratory and circulatory systems; constitutional diseases; diseases of the lymph nodes, ductless glands, and the blood; diseases of the bones, of the ear, of the kidney and urogenital tract, of the nervous system, and of the skin. Each of these chapters is systematically treated and full of practical knowledge.

I. MODERN MATERIA MEDICA AND THERAPEUTICS. By A. A. STEVENS, A.M., M.D. *Fourth Edition*. Philadelphia, W. B. Saunders & Company, 1905.

II. DOSE BOOK AND MANUAL OF PRESCRIPTION WRITING. By E. Q. THORNTON, M.D., Ph.G. *Third Edition*. Philadelphia, W. B. Saunders & Company, 1905.

III. ESSENTIALS OF MATERIA MEDICA, THERAPEUTICS AND PRESCRIPTION WRITING. By HENRY MORRIS, M.D. *Seventh Edition*. Philadelphia, W. S. Saunders & Company, 1905.

I. Of these three books, the first is a work of some seven hundred pages, and for more than ten years has been well received by the medical profession. It takes up the subject of materia medica and describes the various classes of remedial agents and their general action and uses. The drugs are described in classes. Their uses are illustrated by showing them combined in prescriptions. A second section of the work is devoted to applied therapeutics. In this section, diseases are taken up and the therapeutic measures for their relief are described. A considerable portion of the book is given to remedial measures other than drugs. This book should appeal strongly to the student and practitioner.

II. Dr. Thornton's little book is of value not only to the student and beginning practitioner, as he intends it should be, but also to the practitioner of experience, for we believe that no one would fail to find much valuable information in its pages. A diligent reading of this book would enable many a physician to write a prescription for a combination which habits of indolence have prompted him to call for under some single, proprietary name.

III. The third of these books is one of the question-compendiums which the house of Saunders has made popular. The objections once offered against these little books are no longer valid; they have taken their proper place in literature, and are prized for what they are worth. This one by Dr. Morris, in every respect, maintains the good reputation of these publications. Its revision has been made by Dr. Bastedo.

All three of these books have been revised and adapted to the last revision of the United States Pharmacopœia.

MINOR AND OPERATIVE SURGERY, INCLUDING BANDAGING. By HENRY R. WHARTON, M.D. *Sixth Edition*. Philadelphia, Lea Brothers & Company, 1905.

This book of Dr. Wharton's is too well known to require an introduction to the medical world. It presents the fundamental principles of minor and operative surgery, and refers the reader to the more elaborate works for theories and details. It is eminently practical and fully deserving of all the success to which it has attained.

PRACTICAL DIETETICS, WITH REFERENCE TO DIET IN DISEASE. By ALIDA FRANCES PATEE. *Third Edition*. New York, A. F. Pattee, 1905.

This book is written from the standpoint of the nurse, in her practical relation with the patient. It discusses food values, the different kinds of foods, and the feeding of the sick, all in a practical way. The book should be of much value to the nurse, physician and housewife.

A COMPEND OF MEDICAL CHEMISTRY. By HENRY LEFFMANN, A.M., M.D. *Fifth Edition*. Philadelphia, P. Blakiston's Son & Company, 1905.

This little book, as can be said of most of the compends, contains a large amount of information in a condensed form. It includes inorganic and organic chemistry, and a chapter on urinalysis. It is one of the best of this kind of books, and will help to mitigate the opprobrium visited upon its class.

THE ELLWOODS. By CHARLES STUART WELLES, M.D. London, Simpkin, Marshall, Hamilton, Kent & Company.

THE LUTE AND LAY. By CHARLES STUART WELLES, M.D. London, George Bell & Sons.

Deaths.

OGDEN BACKUS, M.D., of Rochester, N. Y., died at the City Hospital, Rochester, Feb. 10, 1906; aged 50 years.

LORENZO S. BARTHOLOMEW, M.D., of Reading Center, N. Y., died at the Buffalo Hospital, Jan. 31, 1906; aged 49 years.

THEOPHILUS CARTER, M.D., died in Mount Vernon, N. Y. Jan. 23, 1906.

LORA D. DENNETT, M.D., a member of the Medical Society of the County of New York, died at his home, at Saco, Maine, Jan. 30, 1906; aged 55 years.

ROLFE ELDRIDGE, M.D., died in New York, N. Y., Jan. 24, 1906.

JOHN SLADE ELY, M.D., assistant in Pathology in the College of Physicians and Surgeons, New York; Professor of Pathology at the Women's Medical College; Pathologist to Bellevue Hospital; Professor of Theory and Practice of Medicine at Yale University; died at his home in New Haven, Conn., Feb. 7, 1906; aged 45 years.

ADELBERT D. HEAD, M.D., died in Syracuse, N. Y., Jan. 22, 1906; aged 63 years.

RICHARD ARMSTRONG HEATH, M.D., died in New York, N. Y., Jan. 17, 1906; aged 43 years.

NEWELL E. LANDON, M.D., member of the Medical Society of the County of Wayne, and President of the Village of Newark, N. Y., died on Feb. 9, 1906; aged 52 years.

HENRY MALLOY, M.D., died in New York, N. Y., Feb. 10, 1906.

REUBEN F. PARKHILL, M.D., one of the coroners of Steuben County, died at his home, in Howard, N. Y., Jan. 26, 1906; aged 73 years.

SEWYN A. RUSSELL, M.D., died at his home, in Poughkeepsie, N. Y. Jan. 10, 1906.

GEORGE ARCHIE STOCKWELL, M.D., at one time editor of the *Medical Age*, the *Detroit Medical Journal*, and *Forest and Stream*, died at Houston, Texas, Jan. 29, 1906; aged 59 years.

WILLIAM EDWARD SWAN, M.D., a member of the Medical Society of the County of New York, died at his home, Feb. 3, 1906; aged 39 years.

THOMAS G. WRIGHT, M.D., a member of the Rensselaer County Medical Society, died on Feb. 10, 1906.

HOWARD HALSEY YOUNG, M.D., died at his home, at Riverhead, N. Y., Jan. 17, 1906; aged 44 years.

VINCENT ZOLNOWSKI, M.D., died at his home, in New York, N. Y., Jan. 31, 1906.

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Original Articles.

RESECTIONS OF THE BLADDER IN REBELLIOUS CYSTITIS.

By HOWARD A. KELLY, M.D.

BALTIMORE, MD.

CERTAIN aggravated forms of cystitis in women have long been among the most intractable and rebellious affections we are called upon to treat; and remain among the few surgical ailments which have not, as yet, been notably benefited by the quickening anti-septic regime.

With no little pleasure and satisfaction, therefore, do I present a series of some of the worst forms of cystitis which have been cured by appropriate surgery.

I have had nearly five hundred cases of cystitis of milder grade, which have either been relieved entirely without surgery, or else by less aggressive measures. To these I shall make no further reference; but as I discuss the severer forms and demonstrate the methods of bringing relief to them, I trust you will apply the *à fortiori* argument and understand if cases so bad can be cured, how much more amenable to treatment must the milder types be.

Given an aggravated cystitis of long standing, the preliminary steps in the treatment should, I believe, proceed somewhat on these lines: First, see what can be done with simple remedies before proceeding to the more aggressive methods. It would be well to give a faithful trial to irrigations, or to irrigations associated with systematic distentions. If the disease is of a patchy nature, topical applications often help to clear it up. Sometimes a curettage of the diseased area, if it is not near the ureteral orifices, will help. Prolonged drainage through the base of the bladder, as used long since by Willard Parker and by T. A. Emmet, is a procedure of priceless value. The effectiveness of the vaginal drain is enhanced if we follow G. L. Hunner's suggestion and keep the patient in a tub of warm water as long as she can comfortably stand it each day. But after we have done all of these things, the urologist will still find lingering in his hands a group of cases, probably from 3 to 5 per cent. of the entire number, in which the disease comes to

an absolute standstill, and, if it is let alone, sooner or later relapses to its former ill condition, undoing the labor of weeks and months. What shall we do here?

Let me now address myself to the management of this residual group of intractable cases; what shall be done here?

First determine the infecting organism or organisms, note how numerous are the colonies which grow out within a given time from say three platinum loops distributed on agar. The value of this step is two-fold: first, if tubercle bacilli are found, the surgeon will be ready at an early date to assume an aggressive attitude towards the disease; and, second, in taking subsequent cultures, he has a standard of comparison in the numbers of colonies observed; by which to estimate improvement.

The second step is to note exactly the extent of the disease in the urinary tract as a whole, in kidneys, ureters and bladder. Many of these bad cystitides, associated as they are with distressing vesical tenesmus, and sometimes hemorrhage, and with an intensely inflamed vesical mucosa, serve only to divert the attention from the true *fons et origo mali*, hidden above the pelvis in the form of a silent, diseased kidney. In all such cases the infection in the upper urinary tract must be eliminated before one can hope to restore the bladder. I would except instances of advanced tuberculosis on one side, associated with a mild colon bacillus pyelitis of the opposite side. I have under such circumstances succeeded in giving entire relief to the vesical condition, even when it has been of the most aggravating and distressing nature, by extirpating the diseased kidney, and then treating the bladder, leaving the pyelitis to be treated last of all. It is fortunate, indeed, that this can be done, as we are thus enabled to dispense with the dangerous topical treatments of a diseased renal pelvis, carried on across a badly infected bladder.

The third dictum is that, it is important to determine and make carefully written notes describing the exact condition of the bladder. This cannot be done in a thorough manner in these cases without an anesthetic. If this feature is omitted, the urologist will often err, imagining he has to do with that bugbear called "a contracted bladder," and a universal cystitis. Under the anesthetic in the knee-chest position, "contracted

bladders" almost invariably expand to the capacity of from 50 to 100 c.c., while the disease appears limited to certain localities, with here and there relatively sound areas between them. This investigation often serves to give hope where at first sight there seemed to be no ground for it.

The fourth dictum is that, in beginning a course of treatment we should clear up the disease as far as possible, according to the milder measures, thus rendering the active surgical intervention when undertaken far less aggressive.

The fifth dictum is that, having cleared up the disease to a particular area which is rebellious to further treatment, it should then be excised *in toto* by a resection of the bladder walls; and of this I shall speak particularly.

When the cystitis is localized in the form of an ulcerated patch, and is surrounded by thick, œdematous folds of the bladder, and it is manifest that there is but little to be expected from the milder methods of treatment, one may then at once proceed to do a vesical resection as in the following instance.

A patient, 32 years of age, came into my care in March in 1899, suffering from an old cystitis. I found through my open-air cystoscope an ulcer the size of a finger tip on the posterior vesical wall near the vertex, surrounded by a series of radiating œdematous folds. The uterus was retroflexed and adherent. The urine contained some red blood cells, pus cells, squamous epithelium, and many non motile short broad bacteria; the reaction was always acid. I recommended surgery at once, and upon opening the abdomen above the symphysis, and exposing the greatly thickened bladder, excised a piece $3 \times 2\frac{1}{2}$ cm., including the ulcer and the adjacent inflammatory tissues. The bladder wall itself was about 2 cm. thick. The vesical wound was closed by two rows of catgut sutures—13 in the first and 10 in the upper layer—leaving a linear median line of union about 6 cm. long. The uterus was released and suspended. An uninterrupted recovery followed this operation; and I have but recently seen the patient, who has remained perfectly well ever since.

The next operation, in March, 1900, was upon a case of most aggressive character, in which I made an unsuccessful effort to extirpate a tubercular left kidney and ureter, and to excise at the same time about one-third of the bladder, removing the entire tuberculous area. In this case an incision was made in the left side and the renal vessels ligated, the tuberculous kidney freed with its ureter as far as the pelvic brim. The kidney and ureter were then pushed down under the peritoneum onto the pelvic brim. I made a median abdominal incision 13 cm. distant from the opening in the side, and drew the kidney and ureter out transperitoneally, and freed it with its ureter as far forward as the broad ligament. The left round ligament was then doubly ligated and divided between. The anterior branch of the

internal iliac artery was ligated in order to lessen the hemorrhage from the bladder in making extensive resection. The kidney and ureter were then drawn down under the undivided ovarian vessels, and the ureter freed as far as its vesical attachment. The utero-vesical peritoneum was divided a little over half way across, and the bladder detached from the cervix and upper vagina. The bladder was then freed from its attachments to the symphysis, when it was opened in the middle line above and its interior examined. The tubercular affection of the bladder was found to extend from vertex to base, including the left ureteral orifice which was retracted into the left cornu of the bladder, that is to say, into the left outer vesical angle which lies in front of the broad ligament. This extensive area of the bladder was then excised, liberating kidney, ureter and bladder by a nephro-ureterocystectomy, all in one piece. The bladder wound was closed from vertex in front down to near urethra below by a series of interrupted silk sutures with catgut between, applied to the muscularis alone, extending over the whole posterior and inferior surfaces of the bladder. Catgut sutures were placed between the silk; there were about 24 in all from 4 to 5 mm. apart. A second layer of sutures was laid over the first, bringing muscularis and peritoneum together.

The ends of the divided left round ligament were then united, and the wound in front detaching the bladder from the uterus was closed with a continuous catgut suture, a continuous suture was also used to close the wound at the pelvic brim, through which the kidney had been drawn. The wound in the left loin was closed down to a small gauze drain. The patient's pulse on leaving the table was 132. The bladder was drained for some days with a self-retaining catheter. She did fairly well for two weeks when there was an over distention of the bladder, the sutures gave way, and a peritoneal infection, followed by death, ensued.

A skilful and extensive resection has been recently done successfully by my associate, Dr. G. L. Hunner:

A woman, about 50 years old, had complained of severe bladder symptoms for the past eleven years, and had had irrigations and internal treatments without benefit, only growing worse from year to year. She had lost weight and strength from constant suffering and loss of sleep, through constantly urinating day and night. At times there was considerable bleeding. The bladder was found very thick and tender, and cystoscopy showed a contracted lumen. The trigonum and basal portions were comparatively normal, but almost the entire upper hemisphere or vertex was replaced by a ragged ulcerated area with uneven edges, covered with necrotic shreds and purulent material. Examination of urine for tubercular bacilli was negative.

In January, 1905, the ulcerated area was curetted; the microscopic examination showed simple

granulation tissue. In July, 1905, the ulcerated area was treated several times with a ten per cent. silver nitrate solution without benefit. August 14th an extensive resection, involving the upper two-thirds of the bladder, was made, well cut into the sound tissues. The peritoneum was slightly opened during the operation, while loosening lower portion from the bladder. The edges of the remaining bladder walls were brought together so as to leave an opening for drainage in the vertex, large enough to admit the index finger; through this a suprapubic iodoform gauze drain was inserted. Six weeks later the drainage tract was leaking at times, but the patient, previously unable to retain more than one ounce of urine, was now holding four and one-half ounces of urine without pain.

Microscopic examination of removed portion showed inflammatory thickening of a bladder wall four times the normal thickness. There were no tubercle bacilli.

Dr. Hunner also did a successful nephro-uretero-cystectomy in my service at the Johns Hopkins Hospital, January 18, 1902. The patient, 29 years of age, had tuberculosis of the right kidney and ureter with an ulcerative cystitis about the right ureteral orifice, and an entirely detached ulcer at the vesical vertex.

Two detached incisions were made to remove the kidney with its ureter: first a short lumbar incision, and then a separate lower abdominal incision, low down over the pelvic brim. With the ureter was resected the adjacent ulcerated vesical tissue. A separate incision was then made over the vertex of the bladder and an ulcer, 3 cm. in diameter, removed without opening the peritoneum. The patient was seen over a year later when she was in perfect health nursing a baby five months old, and the bladder was examined and found normal at all points.

One of the most satisfying patients I have ever treated was a woman, aged 25, who came under my care about four years ago in a wretched condition of health, suffering constantly from a severe cystitis with tenesmus, already of several years' duration. She had at the time a vesicovaginal fistula, made for drainage, and I found the bladder everywhere intensely inflamed, of a deep angry red color, with widespread ulcerations, and exquisitely sensitive. The history of this case is also characterized at various times by marked vesical hemorrhages. She remained in all several years under my care, during which time the hot bath was used, the fistula was closed, hundreds of irrigations and topical applications were made. The result of these treatments was that the bladder was at last able to hold a pint of urine, and had healed down from a universal cystitis to an ulcerated area in the posterior wall, which bled freely. I was unable to complete the cure by healing this residual area, simple as it seemed to be, although I applied nitrate silver solutions as strong as 40 per cent.

On March 19, 1901, I made a suprapubic in-

cision of the bladder and exposed an area between 2 cm. and 2½ cm. in diameter, covered with coarse and fine granulation tissue, elevated about 2 mm. above the surrounding surface and limited by a sharply defined margin. I was able to invert this portion of the bladder into the incision, and trim off all of the diseased area with the scissors. This operation was not followed by the recovery I hoped for, so that I was forced once more to open the bladder in order to resect its walls and remove all the disease and every suspicious area.

Finding it necessary to excise the diseased bladder walls and to open the peritoneum, I took the precaution of stitching the round ligament and the uterus to the peritoneum of the anterior abdominal wall in such a manner as to sequestrate the whole field of operation. After cutting through the vertex of the bladder, the ulcerated area was seen lying just below the incision to the left in the posterior wall. I excised a wedge-shaped piece of the bladder about 7 cm. long and from 3 to 4 cm. in diameter, removing from one-fourth to one-third of the entire bladder. The vesical wound was closed down to a small opening, left for a drainage catheter; a mushroom catheter was also passed in through the urethra.

Following these operations she has made a complete recovery and is at present engaged in nursing. I do not believe that anything but an operation could save such a bad case from years of dreadful suffering and ultimate death. The sequestration method used here was reported in the *Johns Hopkins Hospital Bulletin*, 1903, XIV, p. 96.

Let me cite yet one more case of this extreme character, for several years under my care and finally relieved: A woman, aged 36, came to me first at the Johns Hopkins Hospital, apparently in the last stages of a bilateral renal tuberculosis with extensive involvement of the bladder. She had long been bed-ridden, and had been given up to die by eminent consultants. She was brought into the hospital on a stretcher, a wan, pale, hectic sufferer, whose apparent prospects of living did not extend beyond a few weeks.

My first step was to drain the bladder thoroughly, so as to get rid of the pain and secure some sleep. I next rapidly incised a large left kidney under gas and drained it in the loin. Later she improved so much that I was able to remove the left kidney. It turned out that the right kidney had escaped infection. She did well, all but the bladder, in which there persisted an active tuberculosis for which I made a vertical incision into that viscus and removed half of it, taking out a piece 8 x 6 cm. x 1 cm. in thickness, extending from the front of the bladder over the vertex down onto the base. A deep dissection in the pelvic floor was made to get out the lower end of the left ureter. This could not be distinctly isolated, but a thickened string was found in which there were several foci of inspissated, caseous and calcareous material. In order to get at much of the diseased area it was necessary to

detach the bladder from the uterus. This large vesical wound was closed with a layer of catgut sutures laid 5 mm. apart, including the entire thickness of the vesical walls, except the mucosa. Over this a row of fine silk sutures was applied, bringing the muscularis and the loose connective tissue covering the bladder over the wound. Drainage was used. Following this most aggressive operation she has made a complete recovery.

In conclusion let me urge that many cases of advanced vesical inflammation, even of a tubercular character, which heretofore have been counted hopeless, are amenable to surgical treatment, which may go so far as to excise half or two-thirds of the bladder. When the kidney is involved, this organ must be attended to first if the disease is extensive, after the bladder if the infection is mild.

A large percentage of these cases, probably 80 or 90 per cent., are associated with tuberculosis of the upper urinary tract. This must be relieved first. If there is a large thickened tubercular ureter, it must come out, and the time of its removal is also a good time for the excision of any peri-orificial, peri-ureteral, tubercular cystitis. This can be done by the extra-peritoneal route above in either man or woman. In a woman the ureter, liberated above, can be pulled out through the vagina, and the vesical focus excised with it by making traction and eversion; but this plan is more likely to be followed by a vesico-vaginal fistula. If the bladder is resected above, a little opening readily made into the vagina, offers a good avenue for a drainage, and permits the complete closure of the abdominal wound.

I would call attention here to the difficulty in making a diagnosis in some tubercular cases. While in many instances the characteristic bacilli are found in extraordinary numbers, in others they may not even be found after repeated investigations extending over weeks, months and even years. Tuberculosis should always be suspected in obstinate cases of cystitis of an acid form.

When the kidney is affected, I think it is best to do the renal and ureteral operations alone at the first sitting; and then if the vesical disease is at all extensive, drain the bladder and excise the diseased area later. If, however, the patient is not too stout, and is in good condition, all the operations may be done at one sitting.

We must not lose sight of the fact that in many instances bladders, which have seemed to be badly affected at the time a nephrotomy or a nephrectomy was done, have recovered spontaneously after the operation.

Many of these vesical excisions may be done entirely extra-peritoneally. The peritoneum may adhere so tightly to the inflamed bladder that it is necessary to incise it freely.

Where the peritoneum is opened in the presence of a badly inflamed bladder, it will be best to sequestrate the anterior pelvic peritoneal region by the method described. This can be done

in the male by detaching the peritoneum from the anterior abdominal wall before opening it, and then making a transverse incision and suturing it back of and beneath and around the bladder.

I think the best method of suturing is to use a row of catgut sutures, including the entire thickness of the bladder walls, for the first row, and to reinforce this with a second row of fine silk sutures. I have experienced no trouble from tying catgut sutures in the bladder, and dropping them when it was easier to pass and tie the sutures in this way at the base.

EXOPHTHALMIC GOITRE:

Clinical Notes on Forty-three Cases (several including the use of the Rogers-Beebe Cytotoxic Serum).

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THE following notes are based upon a study of forty-three cases which have been observed during the past ten years in the Presbyterian and Bellevue Hospitals in the service of colleagues and myself, and in private. In summarizing them the object has been to emphasize the importance of certain symptoms, which, in the common descriptions of the disease, are either mentioned very casually or are ignored completely. The most noteworthy of these symptoms constitute a group which point conclusively to the toxic rather than to the purely neurotic character of the disease. The variations in intensity of the symptoms are well known, and improvement may occur in mild cases, either spontaneously, under simple hygienic treatment, or in connection with the use of medicinal remedies. In almost all serious cases, and in practically all fatal cases, however, there are definite febrile exacerbations, accompanied by acute dilatation of the heart, intensification of preexisting heart murmurs, or the development of new murmurs, intense tachycardia, great precordial distress, often gastric or other abdominal distress or pain, attacks of vomiting and diarrhea, active perspiration, sensation of suffocation, insomnia and great restlessness, an erythematous eruption, and œdema of the feet and legs.

That such attacks should be induced by any mere neurotic disturbance, surpasses comprehension, and their only rational explanation is to be found in the theory of a specific toxæmia due to hyperthyroidism. The patient's condition in many respects resembles that of acute, intense sepsis, such as so-called malignant endocarditis. A patient recently under my observation came recently into the hospital with all of the above-named symptoms. The legs presented an extensive but circumscribed œdema with erythema;

there were profuse sweating, great prostration, and a temperature of 104 degrees F. The goitre was moderate in size. The condition of the legs was so serious that I invited one of the surgeons of the hospital to examine them with a view of possible incision. This procedure, however, was postponed, and the subsequent course of the case proved that the first suspicion was correct, that all the symptoms were due to exophthalmic goitre, and that the patient neither had an acute septicæmia nor a malignant endocarditis.

This theory of exophthalmic goitre as a specific toxæmia has within the past few years been advocated by a number of clinicians, notably by Moebius and Greenfield, and has been confirmed by much experiment. If it needed any further proof of validity, such would be found in the brilliant results which follow, in some cases, the use of the Rogers-Beebe specific cytotoxic serum. These results which were first described by Dr. John Rogers at a meeting of the New York Academy of Medicine, held on January 18, 1906, bid fair to do away with the necessity for surgical intervention in the more serious cases of exophthalmic goitre. The cytotoxin, as described by Rogers, is derived by passing an extract of the diseased human thyroid gland through living rabbit's blood from which in turn is derived a serum, containing both a cytotoxin and an antitoxin. This serum, injected in doses of $\frac{1}{2}$ c.c. to 1 or 2 c.c., in cases of goitre, presenting the serious toxæmic picture above described, produces a most remarkable reaction. In some cases the patient is made temporarily worse by it, for a day or two, as one may be after the injection of tuberculin; but soon thereafter follows continued improvement in all the symptoms, which may amount to practical recovery. This work of Rogers and Beebe is still in an experimental stage as regards many details of dosage, and method of preparation of the serum; but they have produced a serum which, by the promptness and completeness of its effect in Graves' disease, leaves no further room for doubt as to the specifically toxic nature of the acute exacerbations and the cause of the heretofore frequent fatal termination. It has been my privilege to see nine of the cases treated with various grades of the serum. Four of these cases were in my personal hospital service, a fifth was a private patient, and the remainder were shown me by Dr. Rogers after marked improvement had taken place.

Two of the cases which he treated for me had reached a stage in the disease from which I have never before known of recovery. One of these patients is the one previously referred to in this article. She was so ill that her death was momentarily anticipated, and I hesitated to subject her to the treatment. However, we did so, and after two injections, given on successive days, she showed an improvement which I can only compare to the appearance of a patient who has just defervesced from an acute pneumonia. Her

temperature dropped within three days after the second injection from 104 to 99.5 degrees F., the respirations from 44 to 24, and the pulse from 140 to 88, and losing its distinctly gaseous character it became nearly normal. The extreme restlessness, anxiety, and precordial distress gave place to serenity; the œdema of the legs began to disappear, and in every respect there was decided improvement. A third and final injection of 2 c.c. was given three days after the second. No unfavorable reaction followed, except a slight local erythema, and the patient continued to gain in strength. Within three weeks the dilated heart had receded so that the transverse area of dullness measured three and one-half instead of five inches to the left of the mid-sternal line, the circumference of the neck was lessened by one and one-quarter inches, muscular tremor disappeared, and the patient in a few days more was able to be up. The improvement has continued until the present date, *i.e.*, for five months. This case proved to be particularly interesting for the experiment because of its acuteness, the first symptoms of goitre being noticed for only six weeks before the patient came under treatment; and also because of its severity and prompt reaction. The other patient to whom I would especially refer was seen last April. She was so ill that I spent three nights in her house, not expecting her to live until morning. She had an acutely dilated, greatly overacting heart, a temperature of 104 degrees F., a "gaseous," jerky pulse, insomnia, and distressing restlessness—both physical and mental—tremor, and exaggerated exophthalmia. For a few days after receiving 1 c.c. of the serum she became worse; but in four or five days all the symptoms began to disappear. Last summer the patient was well enough to play tennis, and she has remained in good health until now (*i.e.*, for thirteen months), with no return of her symptoms.

I have quoted this case because, in contrast to the former acute case, the patient had presented the varying symptoms of the disease for eight or ten years; and although she had tried every known method of treatment, has never felt so well since first affected by the disease as she has after the serum treatment.

It is quite true that patients having Graves' disease often exhibit marked improvement after merely resting in bed, or after receiving medicinal treatment, but sooner or later many of them pass beyond such control and die. It is in this most serious condition, resembling a high degree of acute autotoxæmia, that the Rogers cytotoxic serum injections have proved thus far most efficient; and in addition to their remarkable ameliorative effect, have greatly advanced the knowledge of the behavior of the disease, and have added to that of the general theory of immunity. This thoroughly scientific work, conducted by Dr. John Rogers and S. P. Beebe, Ph.D., through careful experimentation, is entitled to the highest praise.

One of the most interesting facts in regard to the new cytotoxic serum is that so few doses may suffice to produce the improvement. In one of the cases previously cited, three doses were given, in another only one. This is analogous to the remarkable effect often observed to follow a single dose of diphtheria antitoxin, or the reaction from a single dose of tuberculin in a tuberculous patient.

In several of the milder cases above referred to, Dr. Rogers gave a milder serum, derived from the normal human thyroid gland, instead of that from the diseased thyroid; but the results were insignificant and contrasted strongly, although the dosage was the same, with the cytotoxic serum.

The milder serum was, however, not wholly without effect, in one case producing a marked reaction with temperature elevation and malaise, followed by amelioration in the precordial distress and general nervous condition.

Admitting the toxæmic character of the exacerbations observed in Graves' disease, it becomes of interest to seek their origin. In a striking proportion of cases there is some acute infection present, such as tonsillitis, pharyngitis, or bronchitis. In sixteen cases of this series there was either an acute tonsillitis existing at the time the patient came into the hospital for treatment, or the tonsils were found much hypertrophied and there was a definite history of repeated attacks of tonsillar inflammation or pharyngitis. It would appear as if the diseased gland, long latent as to symptomatic activity, were stimulated to hypersecretion by some intercurrent infection. Several of the worst cases I have seen were accompanied at the onset of the exacerbation by an acute tonsillitis, and others had influenzal attacks or an acute bronchitis. In one fatal case, acute pericarditis developed; and in another the autopsy revealed a chronically thickened pericardium with evidence of recent inflammation. The sudden dilatation of the heart, which accompanies the toxæmic symptoms, is very striking. It is accompanied by great precordial distress; a violent, jerky, diffuse, apical thrust; violent throbbing in the neck; and a peculiar, distinctive, "gaseous" pulse. In some cases the patient complains bitterly of the subjective sensation of heaving pulsation, both in the great vessels of the neck and in the cardiac region; and in others there is much pain referred to the hypochondriac region on one or both sides. Several patients have described to me a sensation "as if the heart were bursting."

The circulatory distress is so great that the patient becomes extremely restless; and there may be almost incessant jactation, as well as insomnia. A variety of murmurs develop, which, for the chief part, appear to be due to the sudden, extreme dilatation. The most common murmur is one of mitral insufficiency, but an aortic systolic and a pulmonic systolic bruit also often are present at the base of the heart. There was a mitral

systolic murmur observed in twenty-six of the forty-three cases of the series; a pulmonic systolic bruit was present in thirteen cases; and an aortic systolic murmur in seven cases. The aortic and pulmonic murmurs were always accompanied by that of mitral systole. In two cases only was a presystolic or Flint mitral murmur heard. Only one or two of the patients gave any rheumatic or other history which would suggest the possibility of a previous endocarditis. Moreover, the murmurs in the non-fatal cases diminished greatly or entirely disappeared under treatment, as reduction in the size of the heart took place, hence it seems fair to assume that these murmurs are a result of the general toxæmia which suddenly weakens the heart muscle, or its nerve control. In several of the cases treated by the Rogers cytotoxic serum I have found this disappearance of murmurs a prompt result. The frequency of these murmurs and the frequency of dilatation of the heart are not sufficiently emphasized in the usual descriptions of the disease.

The erythema which is observed in some of the cases—in seven of the present series—appears usually upon the extremities, but it may be general and is often accompanied by intense pruritus. It is interesting to note that the cytotoxic serum not only produces a local erythema, like that of some of the familiar antitoxin sera, but may give rise to erythema on portions of the body remote from the site of inoculation.

Edema of the feet and legs is a symptom seldom referred to in descriptions of Graves' disease, but in the acute toxæmic exacerbations it is almost invariably present in the serious cases, and may become very prominent, as in one of the cases previously cited. It appears to be due to the condition of the heart and circulation or to the toxæmia rather than to anemia, for the latter is not often extreme. In cases treated with the cytotoxic serum, it disappears more promptly than would be the case were it due solely to anemia. It was observed in twenty-three cases of the entire series. The anemia is usually of a mild chlorotic type, the hemoglobin being 65 to 80 per cent. of the normal, while the red cells are often nearly normal in number and appearance.

The active sweating is another phenomenon best explained by the toxæmia. A high temperature is observed in many of the worst cases. It often reaches 104 degrees F. (seven times in the forty-three cases). In one fatal case it was 106 degrees F., just before death, and in another 107.5 degrees F. In the less serious cases there is a temperature of 100 to 102.5 degrees F.

I have not been able to find mention of the febrile stage in exophthalmic goitre in any of the text-book descriptions of the disease, yet some degree of elevation was present in all but four cases of the series, at the time when they were under observation. In several of the toxæmic cases the temperature has been prolonged for a month or more. It is irregular in type and often

becomes subnormal for part of the day. Exophthalmos was present in varying degree in twenty-eight of the forty-three cases, and is especially prone to characterize the fatal ones, but this is not invariable.

I would emphasize the following conclusions:

1. In addition to possessing the four cardinal symptoms of tachycardia, tremor, enlarged thyroid gland and exophthalmos, Graves' disease is subject to exacerbations which are of a distinctly toxæmic character, with active fever, acute cardiac dilatation with murmurs, and a variety of symptoms constituting a definite clinical syndrome.

2. In some instances the most serious toxæmic attacks have been completely checked by the cytotoxic serum of Dr. Rogers, prepared from the diseased human gland through animal inoculation.

3. In a large proportion of cases the agency which appears to initiate the acute toxæmic seizure, is some intercurrent mild infection, such as an attack of tonsillitis, pharyngitis, bronchitis, influenza, or similar acute ailment.

THE IMMEDIATE AND EARLY TREATMENT OF OCULAR INJURIES.*

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AS in all emergency and accident cases, the general or family practitioner is the one most likely to be consulted when injuries are inflicted on the eye, and it is often on his treatment and advice that the future preservation or loss of one of the most precious functions and organs of the human body depends. Besides the involvement of the most vital personal interests, there often hinges on him medico-legal and economic issues of great public importance. But too often, as the experience of most ophthalmologists shows, practitioners who are first consulted in these injuries approach them with more or less unconcern, and fail to give the attention and relief demanded by the surgical standards of to-day.

It is to assist in arousing greater interest in this subject, and in disseminating more widely the principles of practice which should be observed in these cases that I have prepared this paper. These observations may not be altogether new, but they appear to me to be of practical value and importance, and I wish to emphasize them. It is impossible within the limits I have assigned to myself to discuss every separate injury that may occur to each and every part of the eye and its appendages in relation to prospects, results and treatment. Indeed, for the physician this is not necessary. I shall limit myself to that part of the subject which bears upon the management of cases immediately after injury, and for a few days afterward or until the attendant, if a general practitioner, can obtain

the co-operation or service of a specialist or one more skilled than himself in ophthalmic surgery. On account of the circumstances of the complexity of the organ of vision, of the difficulties of diagnosis, of the importance of the results, and of the technicality of treatment, which surround so many of them, even those which at first seem trivial, there can be no doubt that these cases should be referred as early as possible to a specialist, and especially when there are penetrating wounds of the eyeball.

Injuries are inflicted on the eye and its surrounding parts in a multitude of ways. They take place in all kinds of sports and occupations, in all walks of life, at all ages, and are inflicted by a vast number of objects, instruments, forces and methods. The child at play or in a quarrel may tear the lid with a button-hook, or pierce the eyeball with the point of a scissors blade, table fork or other sharp pointed instrument. In sports or in broils, the eyes may be injured by swords, knives, or fire-arms, and by snowballs, baseballs and blows by the hands or fists, or kicks by the feet. Objects may strike and injure the eye in the woods, on the street, or in the house. Dynamite and powder explosions, the explosions of fire-crackers, the ignition of gases, and the bursting of bottles, often inflict severe and painful injuries to these parts. The eyes of the machinist, the boilermaker and other iron-workers, the metal-workers and stonecutters are especially exposed to injury by flying fragments of metal or stone. Strong acids, caustic alkalies, quicklime and other corrosive chemicals and molten metals frequently get into the eye with destructive results. To these projectiles and substances, so varied and numerous, which may strike the eye, there is to be added the infliction of wounds by running, falling or moving the head in such a way as to strike the eye against some pointed, edged, blunt or overheated object.

By whatever object or agency the eye may be struck, the resulting injuries may be divided into (1) contusions (bruises), (2) abrasions, (3) lacerations, (4) cuts, (5) penetrating wounds, (6) the lodgment of foreign bodies, and (7) burns (both from chemicals and overheated substances).

The results to be hoped for, or feared, depend, first, upon the extent and nature of the injury, whether there be simply contusion, incision, or laceration, without loss of substance and without the presence of a foreign body, or whether there be destruction and loss of tissue and the lodgment of a foreign body; and second, upon the part that is implicated, whether a comparatively unimportant part, like the conjunctiva, orbital cellular tissue or eyelid, or some vital structure of the eyeball.

To determine the nature and extent of an ocular injury is the first essential to the management of a case. This is not always an easy procedure. Indeed, it is oftentimes a most difficult one. One of the most helpful pieces of information is a

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careful and minute history of the circumstances of the injury, and the study of the case should always begin with this. By what was the injury inflicted? Was the object large, small, blunt or sharp-pointed, dull or edged, smooth or ragged, clean or soiled? Was the impinging object a solid substance, or was it liquid or gaseous? Was it of ordinary temperature, or was it overheated? Was it insoluble, or was it chemically active on the tissues with which it came in contact? What was the force and momentum of the projectile, and from what direction did it proceed as related to the eye? If a solid object, was it seen after striking the eye? These and other questions bearing on the production of the injury should find as detailed and definite answers as possible. This having been done, the injured parts should then be inspected and examined with the greatest care. To facilitate the procedure, the eye should be anesthetized, and then all debris and blood, if present, should be removed. In doing this, scrupulous asepsis, or, preferably, antisepsis should be observed. The antiseptic which I prefer is bichloride of mercury in solution of 1 to 5,000. The eye and surroundings having been cleansed, if necessary, the examination, as a rule, will show at once what parts are wounded. The diagnosis is often facilitated by the proper use of a magnifying glass (object lens), and an ophthalmoscope. Often-times, however, the latter is impracticable, even by an expert, by reason of the frequency of intraocular hemorrhage in eyeball injuries of all kinds. In certain cases in which it is suspected that iron, steel, or other foreign body has penetrated into the deeper structures, the X-ray apparatus, the siderioscope, and the electro-magnet are also of great assistance. They are, however, often inaccessible, and not all practitioners possess them and know how to use them.

In regard to the use of other instruments, I might add here that it should be done with delicacy and care, and that under no circumstances, in penetrating wounds of the eyeball, should probes or other instruments for purposes of exploration be carried into the interior of the eye. This is not true, however, of penetrating wounds of the eyelids or orbital cavities when the presence there of a foreign body is suspected.

An injury of the ocular appendages and orbital structures outside of the eyeball, its nature and extent, together with the presence of a foreign body, can be determined with comparative ease. The history of the case, simple inspection and exploration according to ordinary surgical methods commonly suffice. When the ocular conjunctiva, cornea and sclera are injured they can be easily inspected and examined, and the condition accurately determined. But in contusion and concussion of the eyeball, by reason of intraocular hemorrhage, cloudiness of the transparent media, or, even if the media be clear, by reason of invisible retinal and other lesions, it is often impossible to tell just what injury has been done

or how much it will affect vision. In penetrating wounds of the sclera or cornea, it may not be difficult to ascertain that a perforation has taken place, because, being, as a rule, in the anterior portion of the eyeball, the opening may be seen, or it may be found by the careful manipulation of a sterile probe (never to be passed into the eyeball). Other positive evidence is diminished eyeball tension, and the protrusion of iris, choroidal tissue, or vitreous humor into the wound. If the iris has become lacerated or perforated, or the lens has become wounded, it can, as a rule, be readily seen. It is often difficult or impossible, however, to tell how far beyond these structures the perforation has extended, and worst of all, it is sometimes difficult or even impossible to tell whether or not a foreign body has entered the eye, and, if it has, at what point it has become lodged. It is here that the knowledge and judgment of the physician are put to their severest test. All penetrating wounds of the eye are more or less serious, according to their situation and depth, even without the lodgment of a foreign body; but a penetrating wound with a foreign body lodged somewhere in its track means, with rare exceptions, a total loss of the affected eye, and very often that of the uninjured eye, unless the foreign body can be removed. The question as to the presence of a foreign body within the eye is, therefore, a most serious one, and it must be answered, if possible, at the earliest moment, and to this end every means known to ophthalmological science should be resorted to, if necessary. If the history of the case shows that the wound was inflicted by a large object, which was afterwards seen, and that it was known that some scale, spicule, or fragment had not been separated from it, then there is reasonable presumption that there is no foreign body present. On the other hand, if a small, unseen object strikes the eye at the time of the explosion of a percussion-cap, or of a dynamite cartridge, or of the discharge of a shotgun, or while hammering iron or steel, or cutting and trimming stone, and the cornea or sclera is found to be perforated, the probability that something has entered the eye is so strong that its certainty should be assumed, at least until every method of examination possible has been used with negative results. Such assumption would be abundantly justified when it is remembered that the resistance of the intraocular fluids is not sufficient to check the course, or to cause the rebound of a small object projected with such momentum as to cut through the firm corneal or scleral tissue, and the force that drives it through the latter is, as a rule, sufficient to carry it into the non-resisting structures of the former. That this is not always true, I will admit, for there are some happy exceptions. But the rule and not the exceptions should govern. In some cases, the vision may be but little affected, and in almost all cases, the patient will declare that there is nothing in the eyeball. But

in neither case should the physician be influenced to change his assumption or his course of investigation. In some cases, focal illumination with an "object lens" will enable him to see and locate a foreign body in the anterior chamber of the aqueous humor, in the iris or in the crystalline lens. In a few cases a foreign body in the vitreous humor or at some point in the fundus can be seen with the ophthalmoscope. A metallic object in the vitreous humor then gives a lustrous reflection. In other cases, perhaps in the majority, these instruments are of no use whatever, because of intraocular hemorrhages, opacities of the lens, or irregularities of corneal wounds. Then the X-ray apparatus, suitably adapted to the eye, and skiagraphy are often very helpful. If steel or iron has penetrated the eye, the electro-magnet is of great value. In such cases also the siderioscope of Hirschberg is sometimes very serviceable. But special knowledge and experience are required in the use of either the X-ray apparatus, the electro-magnet, or the siderioscope, and if the physician first called, even an oculist, has neither of these instruments, or a knowledge of its use, he should, when other means of diagnosis prove inconclusive, put his patient into the hands of one who has, or seek his assistance.

In injuries of the eyeball, there is the further consideration not to be lost sight of, that there is not only the injury itself to a very delicate and complex organ to deal with, but there is also the great danger of infection. The contents of the eyeball furnish a very fertile soil for germ development and growth, and these structures are therefore exceedingly vulnerable to the action of infective agents, which, when once started, always tends to extend and to destroy.

Injuries of various kinds may be inflicted on the various tissues of the eye, with the immediate results of contusion, hemorrhage, laceration and perforation, accompanied, perhaps, by prolapse of the internal membranes of the eye, or by the escape of intra-ocular fluids, or by the dislocation or extrusion of the crystalline lens; and without infection, inflammation seldom or never follows, and recovery takes place with rapidity, and often with the restoration of an amount of vision not looked for. But if infection gains access into the eye, such types of inflammation follow as are expressed in traumatic iritis, and cyclitis, suppurative keratitis, corneal ulceration with hypopyon, hyalitis, and panophthalmitis, all of which are more or less destructive to the function of vision and also of the eye itself.

Were the results of injuries of the eye, whatever they may be, always limited to the eye injured, even though it be entirely lost, there might be comparatively little cause for anxiety, and the crime of the neglect of early and expeditious procedures of diagnosis and the immediate application of the most approved methods of treatment might be palliated. But the results may

reach farther. The uninjured eye may also become secondarily involved in an inflammatory process, which, with very rare exceptions, becomes even more formidable and destructive than the primary injury from which it proceeds.

This inflammation, which is known as sympathetic ophthalmitis, merits a few words in regard to its origin and nature. Like other inflammations, it, too, is of infectious origin. The infection, however, originates in the injured eye, and is transmitted to the one uninjured. It is mainly in perforating wounds of the cornea or sclera at or near the ciliary region, both with and without the introduction of a foreign body into the eye, that the primary trouble is found. These are at once infected by the object inflicting them, or they become the channels for the easy passage of infective material from the surface of the eye or from the atmosphere. The infection thus introduced finds a congenial soil in the tissues of the iris, ciliary body and choroidea, and a traumatic uveitis is a result of this action. From this uveitis of the injured eye an infective agent, undoubtedly specific in its character, is further developed, and either by way of the optic chiasm (which is improbable), or through the general circulation of the blood (which is probable), is transmitted to the other eye, where it acts on the tissues of that organ and produces another uveitis quite similar in nature, distinguished as sympathetic. This uveitis is seen in two forms, serous and plastic. The serous form is similar to a serous iritis. It is of rare occurrence, its course is benign, and it is amenable to treatment. The plastic form is the one usually found. It is akin to an idiopathic plastic irido-cyclitis, it is rebellious in its course, and is irresponsive and unyielding to treatment. It invades the whole uveal tract, the iris suffering the least of any part of it. Its character is that of intense plastic inflammation, with extensive cellular infiltration into the uveal tissues and plastic exudation from their surface. When it has once begun, no matter how mild the symptoms may appear, no matter what treatment may be applied, its course, as a rule, is from bad to worse, until finally the infiltration becomes so organized that the uvea is merely a fibrous membrane (Fuchs, *Ophthalmic Review*, December, 1905, p. 360), and the sight of the eye is totally lost.

While there are various theories as to the pathogenesis of sympathetic uveitis, it is universally agreed that the starting point is, as I have already stated, an infectious inflammation in the injured eye, affecting particularly the region of the ciliary body. It is also agreed that the original infection is exogenous or of external origin, although some believe that there are cases in which the infection is endogenous or of internal origin. Just what the septic or microbic principle is has not yet been determined, but of its existence and causal relation to this disease late investigators have little doubt. Fuchs, of Vienna (*Ophthalmic Review*, December, 1905, p. 360),

who has recently studied the subject with great care, believes that the infective agent is one *sui generis*, although he adds that in the large majority of cases there is a mixed infection. According to him, the action of this infective agent, whatever may be its nature, is not to produce suppuration, but an inflammation of the uveal tissues, the iris, ciliary body, and choroidea, with cellular infiltration and, secondarily, a plastic exudation, in the same way as does tuberculosis and syphilis. Swanzy expresses the same opinion when he says the underlying cause of sympathetic ophthalmitis is "some specific and non-pyogenic micro-organism" (Text-book on Diseases of the Eye, 8 Ed., p. 268). M. Gama Pinto, of Lisbon, in his masterly article on sympathetic affections (Encyclopedie Française d'Ophthalmologie, Tome V, pp. 289 and 295), also says, "there exists a living microbic infection of the eye first affected, the gateway of entrance for the septic germ being accidental or operative traumatism . . . In an affection so characteristic and offering a type so uniform, it is not probable that the provoking agent is varied or inconstant. But exactly what it is, is yet to be discovered." That there is an infective agent *sui generis* which acts in a typical manner to cause a uveal inflammation in the eye that has been injured, and which endangers the other eye, is evidenced negatively by the fact that, while certain chemical, mineral and organic substances introduced into the eye possess the power of provoking in it an inflammation, sometimes intense, yet there is no sympathetic inflammation excited in the other eye (Encyclopedie Française d'Ophthalmologie, Tome V, p. 289). Furthermore, a marked purulent uveitis, or, in other words, a pyogenic micro-organism in one eye does not cause inflammation in the other eye (Swanzy, Text-Book on Diseases of the Eye, 8th Ed., p. 268).

Another consideration pointing to a specific infective agent is that it does not become operative in the second eye until after a varied period of activity or development, in which it acquires certain peculiar properties or evolves certain bacteriological products capable of being transmitted to that eye, and which excite the inflammation under discussion. The period required for this infective agent to reach what may be termed its maturity of development varies in different cases. Fuchs, in his recent investigations, found that the shortest interval which elapsed between the injury of the first and the sympathy of the second eye, was three weeks; the longest twenty years. The most common interval was four to six weeks. Pinto found the shortest interval to be three weeks. In one case it was two years. The average interval was four to five weeks. Swanzy places the shortest interval at fourteen days, of which only a very few cases have been reported, and the longest at twenty years. The interval of greatest frequency is six to twelve weeks. It has been found also that children are

particularly susceptible to this infection, and so are adults whose blood is "contaminated" by the numerous toxines which are known to originate in the digestive tract or other organs, and which diminish tissue resistance.

Thus it will be seen that here exists an infection which seems to have the specific property of causing a specific inflammation, first, in the injured eye, and then, by transmission, in the other, and like other specific infections, it requires a more or less definite period in which to "incubate" and acquire its virile and specific properties, the potency of which is preserved and may become operative for weeks, months, and even years, varying partly according to the age and constitutional condition of the patient.

It may not, therefore, be known exactly what the infective agent is that produces this disease. It may not have yet been positively determined what the channels are by which it is transmitted from the injured to the uninjured eye, but for all practical purposes it is sufficient to know that it exists, that it gains access to the interior of the eye through open wounds, and that its primary field of action is on the uveal tract of the wounded eye.

I have not time to discuss other sympathetic diseases which have their starting point in ocular injuries, but it should not be forgotten that there are others besides sympathetic uveitis, such as sympathetic irritation, sympathetic neuro-retinitis, and possibly, certain conditions that have been called pseudo-sympathetic. They are, however, amenable to treatment. As a rule, their results are not so fatal to vision, and, therefore, they have not the same import as the uveitis.

Now that I have mentioned some of the alarming processes and results that may occasionally take place remotely from the eye injured by punctured wounds, especially of the ciliary region, I will proceed to offer suggestions as to the management of ocular injuries immediately after these first take place, and for a few days afterward.

In wounds and other injuries of the appendages of the eye, it is only necessary to observe the ordinary rules of surgery. All septic and foreign material should be removed, and the edges of lacerations and cuts, especially at the margins of the lids, should be accurately brought together and held in place with fine sutures of silk or catgut for three or four days until union takes place. No part of the body when injured heals with greater alacrity than the eyelids and contiguous structures, and infection is not common. The immediate treatment of burns, either from chemicals or overheated substances, is, first to neutralize the chemicals, if not already removed, relieving pain with local anesthetics, and to keep the parts protected by aseptic oil or vaseline, and to methodically apply cold in some form for six or eight hours or even longer. After pain and distress have subsided, mild antiseptics should be used. Treatment looking to the prevention of

adhesions is also important when there is danger of their occurring.

In superficial wounds of the cornea, after removing, so far as possible, such particles and substances as may be present, the wound should be lightly, but thoroughly, touched with carbolic acid, applied on a small, tightly twisted, cotton swab. The eye should then be kept closed with a light bandage, and the patient confined to his house or a hospital till danger of infection is past. In the meantime, the eye should be frequently cleansed with saturated solution of boric acid, or some other mildly antiseptic solution. If infection begins, pure carbolic acid should again be applied to the affected spot, and repeated lightly every day, till the danger is over. In a few cases where the infected area is small, I have cauterized it with the point of a platinum probe, heated in a spirit-lamp blaze. In gun-powder explosions, it is usually futile to undertake to remove the whole of the powder stain. The powder being aseptic, the wounds from it seldom become infected. It is well, however, to take the precaution of guarding against future infection, and apply the carbolic acid the same as in other wounds, after removing as much of each powder grain as can be easily done. Should the infective process spread through the cornea, the case becomes dangerous and requires special skill.

Contusion injuries and so-called concussion of the eyeball require no operative treatment whatever, unless there be rupture of the ball with a rent in the conjunctiva. In the latter case the treatment should be similar to that of other perforations of the eyeball. Without rupture, it is usually best to keep the eye under the influence of atropia sulphate or some other mydriatic, in sufficient strength and frequency to maintain dilatation of the pupil; cold over the eye should be methodically continued until all danger from possible auto-infection has passed, and if the injury be severe, the patient should be put to bed, free catharsis produced, and the diet somewhat restricted. Barring inflammatory reaction, the eyes recover kindly from these injuries, leaving simply the results which they may have mechanically produced, either directly or by hemorrhages. If a cataract follows, it may be removed later either by spontaneous absorption, when the capsule of the lens has been ruptured, or by operation. Hemorrhages may become absorbed, but ruptures of the choroidea and other fundus lesions are incurable. The final state of vision corresponds to the damage done by the injury.

Should inflammation supervene from autoinfection, the case should then, if it has not been before, be turned over to a specialist.

When there is a perforating wound of the eyeball, the case at once assumes an interest and concern of the deepest kind. No matter how small the perforation, and how limited the immediate damage done to the parts involved, there are the future possibilities of the

dangers to which I have referred. No matter how simple the case may appear at the outset, it may soon prove to be very complicated by reason of the presence of a foreign body, or by the introduction of microbic agencies, or both. When a case of perforation of the eyeball occurs, whether it be a puncture, cut or rupture, whatever be its size, shape or location, the intraocular conditions are so uncertain, the dangers and responsibilities are so great, that I believe, as a rule, to which there should be very few exceptions, it should go, or be sent immediately to an ophthalmologist. But whether the treatment be undertaken by him or by the physician or general surgeon, the possible gravity of such a case cannot be ignored.

The great and formidable enemy to combat in these injuries, as may already have been inferred, is infection. Foreign bodies of a certain kind may have a chemical action on the tissues when introduced into the eye and produce inflammation. Certain toxins generated within the body from bacteriological or other processes may do the same. But the agent most to be feared and fought is exogenous infection. As has been shown, when there are no open wounds of any kind, intraocular inflammation very seldom occurs. Without intraocular inflammation of the injured eye, there is no sympathetic inflammation. Swanzy says that even in such severe injuries as ruptures of the eyeball from blows, these ruptures usually occurring in the ciliary region, they almost invariably run a course free from inflammation or even irritation of the injured eye, when the conjunctiva is not also ruptured, and they do not cause sympathetic inflammation. To exclude infection from the eye, or to destroy it outside the wound, is, therefore, the means of saving both the injured and the sound eye, and this should be the primary and untiring effort of the attendant.

Infective material may have already been carried into the eye at the moment of the injury by a foreign body, or by the object inflicting it, and this is always very probable. Total exclusion is then impossible. But further ingress may be prevented, other external infection may be removed, and the internal infection may be inhibited. If a foreign body has entered the eye, or if there be suspicion of it, nothing should be left undone to make the diagnosis certain by the means which I have mentioned. If one be found to be present, its location should be determined, if possible, and every reasonable effort made to remove it, in the meantime, not forgetting aseptis and antiseptis. When the foreign body is steel or iron the electromagnet often serves the double purpose of establishing its presence, even if it has not been previously done, and of attracting it to a position beneath the cornea or sclera where, by the same power, it may be drawn out of the eye, either through the original wound or through a suitably placed incision made for the purpose. The larger the fragment of iron, the greater is the

attraction. If the foreign body be some other kind of metal, the electro-magnet, of course, has no attractive power over it, whatever, and is, therefore, of no use. In such cases removal can be effected only by forceps, hooks, and other instruments specially adapted to the purpose, and often they cannot be removed at all, even by skilled ophthalmologists and under comparatively favorable circumstances. When removal is impossible, without greatly endangering the eye by operative procedures, it is better not to make the effort at all, or at least to desist after a reasonable attempt has been made. It is the small bodies that are the most difficult to remove, and it is these that are sometimes tolerated by the tissues of the eye, and remain there for years without doing serious harm. It is, therefore, better to be conservative and trust to the possibility of such a toleration than to ruin the eye by too much surgical interference. Most of these cases, however, are followed by severe inflammatory reaction, which only the specialist should undertake to treat.

In open ruptures of the eyeball, in perforating wounds in which there is not a foreign body, or from which a foreign body has been removed, the probabilities are that infection has, to a greater or less extent, been carried into the eye, or has in some way gained access thereto. Some cases, however, happily escape infection or the infection becomes inactive. In any case, it is safest to assume that infection is present. Further introduction of it should, however, be guarded against and its action should, if possible, be prevented, or at least inhibited.

In the effort to accomplish this, the surrounding field should first be thoroughly cleansed as in other injuries and made as sterile as possible, and then the most careful attention should be given to the corneal and scleral wound.

If iris, choroidal or other tissues be incarcerated in the wound or protruding through it, these should be grasped with suitable forceps and excised with delicate, sharp scissors. If there be presentation of vitreous humor through the wound, this, too, should be cut off. Having thus freed the wound, so that it is perfectly clean, and having again made it sterile by applying 1 to 5,000 bichloride of mercury solution, it should be closed as perfectly as possible. Sometimes the support of the lid with a bandage is sufficient. But if the wound is large, it should be drawn together by fine, sterile sutures passed through the conjunctiva, superficial layers of the cornea or sclera, as the condition may suggest.

In scleral wounds, and sometimes in corneal wounds, it may be possible to cover the opening by sliding the conjunctiva over it and fixing it in place by suitably adjusted sutures. When neither of these procedures is practicable, the opening of the wound should be lightly touched with pure carbolic acid. Having thus "dressed" the wound, the eye should afterward be frequently cleansed with a saturated solution of

boracic acid, or with a 1 to 5,000 solution of bichloride of mercury. The frequency of this cleansing should vary, according to the severity of the case, from one to four hours.

Such an effort to prevent the further introduction of infective material may be successful, and sufficient to insure the kindly healing of the wound, but it should not be depended upon entirely, for in spite of it, infection may have entered the eye already and may become active, and may extend and ruin it. To inhibit this action and growth, and sometimes to abort it, several methods have been tried and have their advocates. Prof. Haab, of Zurich, introduces discs and pencils of sterilized iodoform into the infected eye, either through the wound or an incision, and believes that many eyes are thus saved that would otherwise have been lost. He says (*Operative Ophthalmology*, 1905, p. 74): "Iodoform (thus introduced) acts slowly, and, therefore, does not injure the tissues with which it comes in contact, and if it can be confined within a narrow space along with pathogenic germs that have entered the eye, and the tissues are enabled to develop their normal power of resistance, the attempt to render microbes innocuous may be successful; for it is not necessary to kill the germs, if only they are prevented from multiplying. That is why intra-ocular disinfection with iodoform quite often yields very favorable results, if the method is adopted early and carried out properly. On the other hand, it is practically incapable of doing any harm." I have used Prof. Haab's pencils and discs with apparently great success.

Other methods of intra-ocular disinfection have been practiced, and among these I would mention injections beneath the capsule of Tenon, or beneath the conjunctiva, of solutions of bichloride of mercury, and of cyanide of mercury. Some continental ophthalmologists report quite extraordinary results from these, results which I have not been able to obtain. I believe that intra-ocular injections, such as have been tried and recommended by Abadie, of Paris, and others, should never be used. Serum therapy also is now being used to combat eye-infection, but its value remains to be determined.

There is one other method which I desire to vigorously commend, and that is the systematic and persistent application of cold to the eye, whether infection has become active or not. The inhibiting power of cold is very great, and I believe that in many cases its effect is abortive. Certainly, if infection is rendered dormant, the resistance of the tissues will often overcome it, and recovery will follow. Its use should be begun at once after the first dressing, and continued until the danger of infective processes is past, or until its effects have proved unavailing. I need not specify the details of its application, as these will suggest themselves to all practitioners. I may add, however, that the applications should be sterile and that the cold should

not be so intense as to produce great pain or discomfort.

Dionin is another remedy that promises to be very useful in certain cases, by reason of its analgesic and absorbent properties. Early in a case, it may also assist in closing the channels of ingress to germ organisms. It is used in strengths varying from a 10-per-cent. solution to the powder itself, introduced into the conjunctival sac once a day to three or four times a day, according to its effect. The first effect desired is a marked swelling of the conjunctiva.

The above suggestions in regard to treatment must be regarded as applicable especially to recent cases. An infected eye of later date is always in a grave condition, and belongs alone to the specialist.

There is a class of cases to which I have not yet referred, that demand immediate treatment, and which any intelligent practitioner is able to carry out. It is those cases in which the eye is so badly injured that it is beyond all possible hope of being saved. The eye may be cut, lacerated or crushed to such an extent that the contents have entirely escaped, the internal membranes destroyed or some portion of the ball has been torn away, and any effort to save it would be futile. In such a case, it should at once be excised. I desire, however, to raise the caution that certain injuries sometimes look hopeless, and yet, with sutures, a sepsis and conservative treatment, the eyeball may be saved without endangering the other eye, and sometimes also with useful sight. If I had time, I could report from my own experience several cases of this kind. When there is a question as to the prognosis, the practitioner may remember that any effort to save the injured eye is justifiable and even demanded for a period, at least, of two weeks, as during that time there is no danger of sympathetic inflammation of the other eye. During that time, it can be determined whether it is worth while to continue the effort to save the injured eye, or whether it should be sacrificed by operation to protect the other. Beyond that period, if there be no hope of restoring some vision, and if the injury do not heal kindly, there should be no trifling, no risks should be taken. The eye should be enucleated.

The question is pertinent, here, as to what should be done when an eye is not so extraordinarily injured as to be beyond palliating treatment, but in which an infection has taken place, especially involving its ciliary region, in such a way as to endanger the other eye. The answer to this should be given by the attending ophthalmologist to whom the case has been referred. But if he cannot be consulted, the practice that is safest and to be recommended is, that if, at the end of two weeks, the injured eye has not developed panophthalmitis, but is more or less actively inflamed and is especially painful to the touch in the ciliary region, and the vision is entirely lost, it should be enucleated without delay. If,

however, useful vision can be preserved, or restored, as in cases of traumatic cataract, enucleation should be resorted to with great hesitation, and only after the advice of more than one practitioner.

In panophthalmitis, enucleation is not necessary, and in fact should not be performed. It is very rare, indeed, that panophthalmitis produces sympathetic inflammation, and it is more frequently the case that the enucleation of such an eye does cause meningitis.

In conclusion, and in résumé, I wish to emphasize the following:

1. Injuries of the eyelids and other ocular appendages seldom affect vision, infection rarely follows, wounds heal rapidly, and they are to be treated simply in accordance with the ordinary rules of surgery. This treatment may be carried out by any intelligent practitioner.

2. Superficial injuries of the cornea are more important. Infection frequently takes place, and then there is danger of a suppurative process, which may extend throughout the cornea or even involve the whole eyeball. The early treatment, while somewhat technical, may be conducted by the physician, and consists in removing foreign bodies, and using applications to prevent infection.

3. Penetrating wounds of the eyeball should always be approached with more or less concern. If not already infected at the time of the injury, they easily become infected afterward. Moreover, a foreign body may have been driven into the eye, which not only carries infection with it, but which in itself becomes, with rare exceptions, a certain cause of destructive inflammation.

4. In every punctured wound of the eyeball inflicted by a small, unseen object, there should always be a suspicion of the introduction of a foreign body. The diagnosis is often most difficult, and requires special appliances and experience. The removal of a foreign body from the interior of the eye is almost imperative to its salvation. Here, too, special equipment and special skill are demanded.

5. Infection, by whatever means it may be introduced, is the agent which destroys the injured eye, both by suppurative processes and by non-suppurative uveitis.

6. In non-suppurative traumatic uveitis, the infection seems to be of a specific kind, and is transmissible to the uninjured eye, producing there a sympathetic uveitis, which is also destructive in its course.

7. Sympathetic inflammation does not develop until at least two weeks after the injury of the first eye. In the absence of a foreign body, or after its removal, the immediate treatment of a perforating wound consists in sterilizing the eye and its surroundings, freeing the wound of all incarcerated tissues, and closing it as perfectly as possible, or touching the opening with carbolic acid. Subsequently, sterilization should be kept up as effectually as the circumstances will permit.

8. Infection should be combatted by intra-ocular disinfectants and rendered dormant by the persistent and methodical application of cold over the eye.

9. An eye that is hopelessly lost at the time of the injury should at once be excised, the operation for which may be performed by any informed practitioner.

10. When an eye is affected with active traumatic uveitis, it should be enucleated within two weeks from the time of the injury, unless the eye has useful vision or many be given useful vision by some operative measures.

11. In wounds of the eyeball of all varieties, delays are dangerous, and if there is the slightest possibility of a foreign body being lodged within the eye, or if infective processes begin, the dangers to sight are so great that the services of a specialist should always be secured, if possible.

FACTORS WHICH FURTHER CONVALESCENCE FOLLOWING ABDOMINAL SECTION*

By **FREDERICK HOLME WIGGIN, M.D.**

NEW YORK.

THERE can be no doubt but that the dread of the bodily discomfort likely to follow operative measures by those suffering from intra-abdominal disorders is a more frequent cause for postponement of operation, until the most favorable time for treatment has elapsed, than fear of the direct outcome of the operative procedure itself. Hence it will be of value to consider what can be done to lessen these ills, and to promote the patient's comfort, and rapid restoration to health, following the performance of an abdominal section. In a general way it may be stated that the better the bodily condition of the patient at the time of operation, other things being equal, the less the disturbance following the procedure will be and the quicker the patient's restoration to health. Hence it is of the utmost importance, when the conditions allow of it, that the patient be placed under the surgeon's care and observation for a week or ten days prior to the performance of the operation. This affords time on the surgeon's part for close observation and familiarity with existing systemic defects and their correction, and also allows the patient to obtain much-needed rest. It is therefore of advantage to the patient, when possible, that the hospital where the operation is to be performed should be reached, or the trained nurse employed, if the patient is to remain at home, at least one week prior to the date fixed upon for the performance of the operation, which date, however, it is best should not be communicated to the patient. This allows the patient to become accustomed to the

attendants or the environment, which is of importance, as it tends to lessen the nervous tension.

During this week the sufferer should be encouraged to spend much of the time in bed, massage being employed in lieu of physical exercise, as it improves the circulation, promotes digestion and the general bodily welfare. As far as is compatible with a healthy mental condition friends and visitors should be excluded. A daily record of the patient's bodily temperature, pulse and respiration should be kept, and an examination of the heart and lungs, and a final analysis of the urine should be made at this time. As it is of great importance that the intestinal canal be in good order at the time of operation, careful attention should be paid to emptying the bowel, as well as to getting the various organs into good working order. This is best accomplished, in the writer's experience, by the giving of a single large dose of calomel, followed by one or more doses of castor oil and daily irrigations of the colon with several quarts of normal saline solution, at a temperature in the reservoir of 120 degrees F., which reservoir should not be raised more than eighteen inches above the patient's body in order that the fluid may be introduced into the canal slowly, being frequently intermitted, as the patient complains of a feeling of distention or of intestinal colic. Both of these sensations soon pass off with the cessation of the flow, unless the bowel is over-distended, and by perseverance in this way three or four quarts of saline solution can usually be introduced into the colon in the course of half an hour, with but slight discomfort to the patient, who should be encouraged to retain the fluid for another fifteen minutes before allowing it to escape. The patient's diet at this time should be of an easily digestible character. Hot baths of ten minutes' duration should be given daily to promote the secretions of the skin and kidneys. Much good will be accomplished at this time by moderate doses three times daily of Livingston's solution of ergot, which is as follows:

Chlorotone, 2 grains.
Water, 1 ounce.
Mix and dissolve ext. ergot (Squibb) 1 drachm.
Filter.

The best effects of ergot are obtained when used by hypodermic injection, which injection should be made deeply into the tissues of the left deltoid; at the time of injection either strychnia or spartein may be added to the ergot solution if heart stimulants are indicated. This use of ergot results in toning up the system by an equalization of the circulation, which allows of a better assimilation of food and of more refreshing sleep than would otherwise be likely to obtain. If the patient to be operated upon is a female, when possible, a day should be chosen following the cessation of the menses. It is best, when practicable to fix upon an early morning hour for the performance of the operation, as the patient,

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for obvious reasons, has less time in which to become exhausted from want of food, or nervous from dread of what is to come. It is of importance that once the patient has been made acquainted with the hour fixed upon, there should be no postponement, as the nervousness entailed by even half an hour's delay may be sufficient to cause the patient to nearly collapse, thus interfering materially with the successful completion of the operation, and the inauguration of a comfortable convalescence. The patient should be so clad for the operation as to reduce the bodily exposure to a minimum. Careful preparation for the operation and of the patient should be made, in order that the length of time the patient is under the influence of the anesthetic agent may be as short as possible. Gwathmey's vapor method of administering anesthetics has, in the writer's experience, proved very satisfactory.

As only a small quantity of the anesthetic is absorbed by the patient that there is rarely any nausea, vomiting, or gastritis following its use, even when the operation is prolonged. In the performance of the operation care should, of course, be taken to shorten the procedure as much as possible, and to allow of the escape from the body of as little blood as possible, as every ounce lost means delay in the convalescence. Before closing the abdominal wound it is of much advantage to the patient ordinarily to leave a reasonable quantity of normal salt solution in the peritoneal cavity, as it tends to prevent the formation of adhesions, promotes the readjustment of intestines and omentum to their proper positions, lessens the danger of septic infection, and lessens materially the shock following the operation, the patient usually leaving the operating table with a warm skin. In closing the wound the employment of retention sutures to relieve the strain, which would otherwise be placed on the sutures uniting the cut edges of the fascia, and the sealing of the surface wound with a 10 per cent. solution of celloidin, promote the patient's comfort and safety by allowing of freedom of motion in the bed, even during the early hours following operation, and the prevention of wound infection, often caused by displacement of dressings. If the anesthetic has been administered in the ordinary way, and the operation has lasted over an hour, it is best to wash out the patient's stomach with hot saline solution before he regains consciousness, and then to place in it from four to six ounces of a saturated solution of magnesia sulphate; if, on the other hand, the vapor method, already alluded to, has been employed, a hypodermic injection of 1-100 of a grain of eserine sulphate will suffice and, in either case, gas and usually fecal matter will escape from the bowel within five or six hours, thus preventing intestinal paresis and materially promoting the patient's comfort. Before the patient leaves the operating table an enema of 10 ounces of hot saline solution, to which has been added 3i of

whiskey and 10 or 15 grains of veronal, may be administered with advantage, as it is usually retained and enables the patient to obtain refreshing sleep, and to pass the first dreaded fifteen or twenty hours in comparative comfort. Before the patient is returned to the bed, the hot-water bags used to heat it should, invariably, be removed as, even when not unreasonably hot, they may blister and burn a partially unconscious patient having a poor circulation. The passing of the rectal tube every four hours, if the patient is awake, which enables the gas to pass readily from the bowel, and the introduction through it into the bowel of from ten to sixteen ounces of hot saline solution, add to the patient's comfort, and should be continued till the patient's stomach is in condition to allow him to partake freely of liquids by mouth, or the bowel refuses longer to retain the enemata. If gastritis manifests itself, a few large doses of bismuth and abstention from taking liquids into the stomach usually promptly overcome it. If the kidneys are but slowly regaining their functional activity, this may be hastened by a few hypodermic injections of ergot and spartein. No effort should be made to administer anything by mouth to the patient till after gas and fecal matter have escaped freely from the anus, and the patient has a strong desire for nourishment. Peptonized milk can then be given at regular intervals of these hours, in from four to eight-ounce doses. If the patient's tongue remains coated after the bowels have acted, and there is little or no desire for food, a dose of castor oil should be administered, and it will not be long before the patient will have an urgent desire for nourishment. As soon as the patient is in a condition to digest solid food and desires it, it should be given him. After allowing the patient a few days to recover from the nervous shock entailed by the operation, massage should be again administered daily till the patient is allowed to get up and can go about without great effort.

In the writer's experience, patients recover more promptly and satisfactorily when alcoholic stimulants are withheld than when they are given freely. Our efforts should be directed chiefly to getting the kidneys, bowels and other digestive organs into good working order, and then to giving the patient nourishing food in sufficient quantities, and at proper intervals. When this is done stimulants, alcoholic or otherwise, will be found to be superfluous and uncalled for. Patients are often made uncomfortable and their convalescence retarded by over-stimulation. By careful attention to the simple plan of management of patients upon whom abdominal section has become necessary for various causes, as herein outlined, the convalescent period may be converted into a time of rest and comfort, and much shortened, instead of being long drawn out, and a time of great danger, anxiety and discomfort to the patient and all concerned.

THE THERAPY OF CARCINOMA.

By SAMUEL LLOYD, M.D.,

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CANCER is at first merely a local disease; later it becomes constitutional. Cancer is capable of transmission from one individual to another of the same species.

If these two statements are correct, they give us the fundamental basis upon which we must build our methods of treatment.

The first proposition will, I believe, be accepted without argument by most, if not all, clinicians. We have constantly in our surgical work evidences of the complete cure of patients who in the early stages of malignant disease consult their medical advisers and submit to prompt and thorough eradication of the diseased area. Perhaps some of the happiest results we find among our histories are those small epitheliomata about the face and lips. If they are recognized early and removed they seldom recur. Within a few weeks I have seen a patient—now an old man—who had an epithelioma of the lip removed by the late Dr. James L. Little over thirty years ago. He has never shown the slightest sign of recurrence. How much more unsatisfactory the results become in these cases when they have included the deeper structures of the lip and invade the contiguous glands! No longer a local disease, it has become constitutional, and the possibility of its cure has passed from certainty to almost absolute impossibility.

The improvement in the statistics of cancer of the breast since Dr. Willy Meyer and Dr. Wm. S. Halsted advised the radical operation, now almost universally employed, is another indication of the value of the removal of the local manifestation of the disease. The best statistics up to the time of Halsted's paper never claimed more than 25 per cent. of cures after the three-year limit was passed. Recent statistics from Baltimore show that 161 cases have been in the clinic there upon which complete operations were performed between June, 1889, and August, 1899. In August, 1902, 60 patients were living and cured; 7 had lived over three years and died of other causes, and 2 had died from other causes within the three years, necropsy showing no signs of recurrence. This gives 69 cases, or 42.8 per cent., positively cured. An analysis of the 161 patients shows that 83, 51.5 per cent., survived the three-year limit. The operation performed consisted of complete excision of the breast, both pectoral muscles, and axillary contents in one piece, and complete excision of the supra-clavicular glands. During thirteen years, 305 patients with primary and 38 with secondary tumors were admitted to the clinic, and of these it is worth noting that 83, or 27.2 per cent., were inoperable owing to delay in seeking surgical assistance.

Rodman, of Philadelphia, says that out of 629 cases operated upon by American surgeons, 44.16 per cent. survived the three-year limit.

These 83, or 27.2 per cent., who come to the surgeon too late, because the disease is no longer local, give the laity the feeling that cancer is still incurable. When it is considered that this improvement of from 25 to 45 per cent. has come about within the past sixteen years, it is evident that much more will be attained when the general profession shake off their lethargy in regard to carcinoma and urge their patients to prompt and radical treatment so soon as they become conscious of the presence of the disease in any given case. It is a disgrace to any physician at the present time, and marks him as ignorant of the trend of events in the study of cancerous disease, if he allows a case of cancer to pass to the inoperable stage in his own practice without doing everything in his power to get the patient into the hands of an experienced surgeon.

Heidenhaim, of Berlin, as long ago as 1899, in a classical paper read before the German Surgical Congress showed the futility of attempting to excise a diseased breast without the underlying tissues, both fascia and muscles. Since then the demonstration of the different lymphatic courses has shown that the axillary glands are involved only in those cases where the disease is in the anterior half of the breast, while when it is confined to the posterior half the axillary glands are free and those in the fossa of Mohrenheim are enlarged. These latter can seldom be palpated until the pectoralis major is removed. Heidenhaim was convinced by his investigations that we were still ignorant of the extension of cancer in its own neighborhood, but he believed that the "path and the way in which the cancer spreads are quite different according to the kind of cancer, its anatomical structure, and the function of the diseased organ or tissue."

Cancer is communicable. This, perhaps, is a branch of the subject that will still be considered by many of my hearers as distinctly debatable. I am sorry that the time at my disposal is insufficient to enable me to bring together all the facts bearing on this question that are now to be found in literature. Suffice it to say that I am absolutely convinced of this fact myself, and have for years been watching the collection of data from various sources proving it.

First and most convincing is the increasing ratio of cancer to the population, as shown by the health statistics of different countries, our own included. Second, it has been shown that cancer is more common in thickly populated sections, where the people are crowded together, the air is vitiated, and cleanliness is less regarded than with the better housed and fed. Thus in Paris it is more common in the poor districts of Gobelins and the Observatory—137-145 deaths per 100,000—while the richer and cleaner districts of the Pantheon and the Elysée give but 75. This has been found to be true in other large cities. It is not, however, confined to city life for its spread, but in country regions it is often almost as frequent as in the cities. Here it seems often to

follow the watercourses, or to spread from some house that was the primary center of infection.

My personal experience in cases of this sort—communication from one individual to another—may be summed up as follows:

Man, an engineer, had a cancer of the tongue from which he died. The night engineer working in the same place came to me about one year later with cancer of the anterior pillar of the fauces. They had used the same drinking cup for several years.

Man died in Bellevue Hospital of cancer of the stomach. Within two years the wife was operated upon by me for a cancer of the breast.

I also operated upon a case of cancer of the stomach in a man whose father had died of cancer a few months previously.

Woman died of cancer of the breast. Two years later I operated upon the sister, who had nursed her, for cancer of the stomach. There were no previous cases of cancer in the family.

Physician's wife operated upon for cancer of the stomach. The doctor himself, within a month or six weeks after his wife's death, developed a cancer of the lower jaw and died the first of the present year.

These cases are reported here because they are personal experiences and have never before been published. Auto-infection with cancer is now a well-established fact, and surgeons generally are adopting every possible precaution to avoid injuring any of the cancerous tissue during the course of an operation, in order to avoid spreading any of the cancer cells in the operative field.

Gueillot believed that the epithelial origin of cancer would soon be admitted; while Orenius, Bard, Brault and others insist that the cancerous cellule is the agent of infection. We have not time, nor does it come within the limits of this paper, to discuss the question of parasitic, microbic or other method of propagation, although we cannot refrain from referring to Orth's views in regard to the origin of carcinoma: "Every cancer must be designated as an epithelioma. The epithelial cells form the essential element of the cancer—they are not only the most important, but indeed the only important, element." He also says:

"In order to produce pus, or tuberculosis, etc., it is sufficient for the pus cocci, or tubercle bacilli, to reach suitable media; to bring about a secondary cancer it is absolutely necessary that cancer cells from the primary or from a similarly created secondary tumor shall reach the particular spot, and there continue their growth. In the case of secondary cancers we have to do with a successful transplantation of cancer cells; in the case of pus foci, or tuberculosis, there occurs a transplantation of the parasites, which do not themselves form the new focus, but they impel the local tissue, without any cooperation of the tissue of the primary focus, to certain pathologic changes. Therefore, there is an important difference between these two classes of phenomena;

and one cannot conclude, that since in the case of pus foci, tuberculosis, etc., parasites play a rôle, this must also necessarily be the case in the carcinomatous new growths; one can say, however, that if in cancer parasites should happen to play a part, then these parasites must be of an entirely different kind from those above mentioned, because they must bear the closest relationship to the cancer cells which characterize the growth. I do not consider it impossible for an intracellular parasite to play a part here; but it is impossible for it to play an independent part. It cannot possibly in itself be the decisive factor in the new growth; it cannot determine the variety and character of the new growth, since the cells themselves, and only they, do this."

If these conclusions can be proven, why seek further for a cause for cancer? It is perfectly well known that we are constantly shedding our epithelial cells, and if we shed the normal cells so, too, we shed the abnormal. These dried scales, like the desquamation scales of scarlet fever, are blown hither and thither until they find a resting place in some crack or crevice of the body, to become a veritable cancer graft.

You will perhaps now appreciate why I have gone so far afield. If these views are correct then the obvious conclusion is that in order to control the spread of cancer it becomes essential to do something to prevent the dissemination of whatever element communicates the disease. It is probably impossible to completely segregate the victims of this disease. But the public should be educated to consider it as contagious. Physicians, nurses and friends, should insist upon the immediate incineration of all dressings removed from cancer cases. Whenever possible the patient should be persuaded to avoid direct contact with others, kissing, etc., and whenever a discharging wound or ulcer is present it should always be covered with an impervious dressing. This, in my opinion, is the important step in the prophylaxis of cancer.

In the second place, we must remember that cancer is engrafted upon points of ulceration, chronic irritation or develops in regions where abnormal epithelial tissue already exists. I must absolutely agree with the statement made by Mayo Robson in the *Lancet*, in 1904, "that the arrest or removal of known causes, as well as the abolition of discoverable precancerous conditions, whenever or however occurring, constitutes true preventive treatment."

All contact with cancerous ulcers, no matter where they may be situated, and the common use of beds, utensils, drinking vessels, linen, etc., with cancerous patients should be avoided. In addition to this all chronic inflammatory lesions should be treated and cured, and all moles, warts, and other abnormal collections of epithelial cells should be removed, either by the knife or some equally efficacious means.

So gall-stones, chronic ulcers of the stomach or intestines and other lesions tending to produce

prolonged irritations wherever they may be located, should be removed or relieved if possible.

Speaking along these lines, Rodman says (*Jour. Am. Med. Asso.*, Sept. 30, 1905, p. 973): "Subsequent experience has taught me to believe that a greater number of ulcers of the stomach than I even then supposed undergo malignant transformation."

"The topography of ulcer and cancer is the same, and there is no room to doubt that many of the latter have their inception in the former. This is one of the strongest possible reasons for the surgical treatment of all chronic or rebellious ulcers, preferably by excision of the ulcer, or, if multiple, of the ulcer-bearing area, pylorotomy. Gastroenterostomy, satisfactory as it is for a time, does not remove the lesion and, therefore, prevent malignant change. I have never doubted that it must, in such cases, either give way to or supplant more radical procedures."

These considerations practically cover the prophylaxis of cancer, so far as we know at the present time. It is true that some of our advocates of the use of the X-ray and of radium in the treatment of cancer have advocated that they should be used early in the appearance of the disease. Such advice can only be founded upon ignorance of the pathological effects of these methods of treatment upon the tissues affected. The X-ray produces a form of obliterative endarteritis—that is, it produces its effects by cutting off the blood supply to the involved area. If the results of this treatment were always positive, if they were prompt in their effects, and if they could be confined to the disease area alone, and if they caused an equal amount of change in the superficial and the deep tissues without danger to the life of the patient, we might feel that this position was correct. In my opinion, some change occurs in the radio-actinic ray in its passage through living tissue so that its controlling effect upon the living cell becomes less and less active with its penetration into the deeper structures of the human body, so long as the exposure to the light is confined within the limits of safety. Methods that require a considerable time to bring about a cure are also very dangerous in cancerous diseases. Often there is but a short time elapsing between the first appearance of the disease (local affection) and its spread throughout the general system (constitutional cancerous disease). The time spent upon the X-ray or radium treatment may be just enough to control the superficial area of disease, with the consequent relief from pain through the removal of irritation from the cutaneous nerves, and yet allow of the spread of the disease through the deeper portions of the growth, into the lymphatics, and along the muscular and aponeurotic interspaces, so that it passes from the local to the constitutional disease during the course of treatment.

The treatment of cancer by these means sometimes increases the rapidity of the growth of the malignant tissue. Not along ago I saw a marginal

epithelioma of the lower lip which under the application of the X-ray grew so rapidly that within a few weeks, instead of being a small nodule, it required the removal of the whole of the lower lip, the clearing out of all the glands, sub-mental and cervical, and the formation of an entire new chin and lip. After operation this case developed gangrene throughout the whole operative field that had been within the range of the action of the ray. A similar condition has also occurred in a case of cancer of the breast referred to me for operation after having been subjected to the X-ray for a considerable period of time, and the patient almost lost her life in consequence. Nor was the application of the X-ray successful in controlling the spread of the disease in this case, for within two years I was obliged to amputate the other breast. When I reported these cases before the Surgical Section of the New York Academy of Medicine, Dr. Foote, of the Vanderbilt Clinic, reported a similar experience.

That the constant use of the ray is not prophylactic is evidenced to my mind by the development of cancer in X-ray burns on the hands of those constantly using this method of treatment. The well-known case of Charles Dally, who worked in Edison's laboratory and whose right arm I amputated at the shoulder for an epithelioma developing in the cicatrix after severe X-ray burns of the hands while he was working with the ray, is a case in point. In addition to that, a similar case is reported in a prominent orthopedic surgeon of Rochester; one has come from San Francisco; and epithelioma has also developed in scars on the finger resulting from X-ray burns on the hand of a manufacturer of static machines—this last case having been reported to me verbally. I have also had a private communication from Dr. Allen Porter, of Boston, in which he says that an epithelioma has developed on the finger of a man in charge of the X-ray department of the Massachusetts General Hospital.

If under these conditions cancer has developed upon the hands of active workers with the X-ray, is it likely that it will permanently control cases of cancer already developed? Radium probably offers some advantage over the application of the X-ray, because it can be applied directly into the mass and its range of action may be directed not only to the superficial but to the deeper structures.

I still believe that certain superficial epithelial cancers can best be treated by some one of the caustics, especially those away from the mucocutaneous borders and involving only the superficial layer of the skin. No application of a paste or any other caustic should be made to any growth that has penetrated beyond this very superficial tissue. As soon as the deeper structures are involved it is essential to make a wider incision than is possible with any topical application which can be made. In some of these cases it may be possible to apply the actual cau-

tery and so get rid of all diseased tissue. The constant advertising of the removal of cancer without operation and with the use of pastes is a dangerous practice. It is absolutely wrong to apply any escharotic to any deeply seated malignant disease. The great objection to pastes is the difficulty of confining their action to the diseased area alone, but if it is considered best to employ a preparation of this kind Jennings' or Bougard's is probably the best. The former is composed of:

- Hydrochlorate of cocaine.... 2 parts.
- Caustic potash 12 parts.
- Vaseline 6 parts.

The latter formula is:

- Wheat flour 60 grammes.
- Starch 60 grammes.
- Arsenic 1 gramme.
- Cinabar 5 grammes.
- Sal ammoniac 5 grammes.
- Corrosive sublimate. 0.50 centigrammes.

Solution of chloride of zinc at 52° Fahrenheit 245 grammes.

This is somewhat troublesome to make, as the first six substances must be separately reduced to fine powder and then mixed in a glass or china mortar; the solution of zinc is slowly poured on while the whole is kept in constant motion by the pestle so that there shall be no lumping. (Daniel Lewis, *Annals of Surgery*, Vol. xvii, p. 395.)

For the superficial cutaneous epitheliomata of the face the trichloride (butter) of antimony has proved by far superior to any of the pastes, in my hands. It has the advantage of not attacking the skin which has not been deprived of its natural oil, and is not so painful as the pastes. It requires a number of applications, but has the advantage of leaving a smooth scar.

Up to the present time we must confess that all of the methods of treatment based upon toxins, antitoxins, or the different sera have been failures. The hope that the profession generally have had for some years past, in consequence of the large amount of investigation going on in the different laboratories—that the infectious cause of cancer would be discovered and some means developed that would prove curative—has up to now proved fallacious. I would not by this statement have the impression get abroad that this line of investigation is likely to be a failure. On the contrary, I believe that from the work that is being so carefully conducted in the State Laboratory at Buffalo, and in other institutions devoting themselves to this line of work, much good must come eventually. Generally speaking, however, I believe that up to the present time the results of these investigations have been negative. That very fact, though, aids in clearing up the mooted question of the primary cause of the disease. If ultimately they prove that there is no parasites, or no microbe of cancer, it will not be necessary to waste more time along these lines, and effort will be concentrated on determining other causes for its propagation.

Some few years ago much was expected from the use of different toxins and antitoxins—especially erysipelas combined with the toxin of the bacillus prodigiosus, but this has also failed to cure. It is true that many of these methods of treatment do seem to exhibit an inhibitory action on the growth and relieve pain for a certain period of time, but further than that, up to the present, nothing has resulted from any of these methods.

It seems to me, then, that from the standpoint of clinical observation, as well as in consequence of statistical results, we are forced to the conclusion expressed by the Harvard Cancer Research Laboratory, that up to the present time an early and complete excision of all cancerous disease is the best-known method of treatment, and it becomes equally important to urge on the profession at large the necessity of immediate operation as soon as the malignant change in any given case is recognized. This will not deter further investigations along other lines. There must always be inoperable cases upon which investigation along other lines of treatment can be carried out.

I believe, too, that something can be done by the application of the X-ray and of radium in controlling the possibility of recurrence, and we should advise these methods of treatment for a considerable period after the operation has been performed.

One other duty devolves upon the surgeon in all cases of this disease—constant watchfulness of the patient for a number of years. It is my habit to advise all my cancer cases to submit themselves to careful examination at least once a month during the first year; during the second year, I ask them to return every two months, and I see them three or four times during the third year. While the three-year limit has been accepted generally as indicating a cure, it must be remembered that frequently recurrences appear at longer intervals, and I impress upon these patients the necessity of having any ulceration or any nodule appearing in the operative field excised as soon as it is discovered, no matter how long a time may have elapsed.

Constant watchfulness, therefore, in all of these patients is essential to ultimate success.

A PATHOLOGICAL-CLINICAL CONSIDERATION OF ARTERIO-SCLEROSIS.*

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THE ultimate changes in arteriosclerosis form an effort of nature to repair damage to the vascular coats, caused by increased vascular pressure, over-distension of the vessels, and the consequent infiltration of the intima and media with coagulable fluids from the blood and

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from the protoplasm of the tunic cells of the larger vessels, and hyperplasia and degeneration of the inner coats of the smaller. These changes are irregularly distributed over the vascular system, some parts being more frequently affected than others.

There is no absolute law which determines the localization of these sclerotic areas, save that involved in the degenerative changes incident to the over-taxation of tissues, and possibly, as Thoma insists, certain local mechanical conditions. To understand arteriosclerosis requires a clear conception of that mechanism of the blood vessels which governs their action.

The circulatory apparatus as a whole is naturally divisible into five distinct parts which have particular function, and each of which operates with the others to secure the circulation of the blood, and certify tissue nutrition. These are the heart, the larger arteries with abundance of yellow elastic and less muscular tissues, the smaller arteries with well-developed muscular coats, the capillaries, and the veins. All of these divisions of the cardio-vascular apparatus are normally more or less distensible, either because of the relaxation of their muscular structures, or by virtue of their elastic fibres. For the same reasons they contract; and it is this constant change in calibre of the vascular channels which governs the flow of blood through them, and determines the amount of blood supplied to the tissues for trophic purposes. The elastic vessels of youth are responsible for buoyancy. This elasticity is governed in large measure principally in the smaller arteries, by means of the vaso-motor nerves. Just as the iris responds automatically to the influence of light upon the retina, so the vaso-motor apparatus holds in check the muscular coats of the blood vessels, causing them to relax or contract, as the case may be, automatically, in accordance with the influence of trophic demands from the tissues. It is the cardiac cycle, together with this calibration of the blood vessels, which regulates blood pressure and osmosis.

The rôle of the nervous system in controlling the circulation is very important. The heart is dominated by nerves from the cerebro-spinal axis, the sympathetic, and its own intrinsic nervous mechanism. The number per minute, and the force and character of the contractions is determined by these various nerve elements; while the blood vessels, especially those which are distal, with well-developed circular and longitudinal muscular coats, are caused to contract or expand through similar influences of nerves from these same sources. It is the combined effect of cardiac and vascular action under nervous control which gives rise to what is termed vascular tension, a condition of blood pressure really brought about by the influence of the processes of metabolism in the somatic cells upon the vaso-motor apparatus. Tension is very largely influenced by the degree of contraction of the distal or smaller vessels. It is also influenced by the elasticity of

the larger ones with abundance of yellow elastic tissue; but this latter influence is passive and not under nervous control.

Cardiac and vaso-motor control are normally actuated by three different types of cause:

1. Centric: impressions emanating directly from the cord and brain.

2. Somatic: impressions emanating from the functional activity of the somatic cells.

3. Peripheral: impressions emanating from surface conditions of the body. The *modus operandi* may be very simple, or complex, but the end result is always the same: either to stimulate or inhibit the heart action, or to contract or dilate the distal blood vessels.

It is, indeed, difficult to draw a mental picture of the incessant activity of the vascular apparatus under these various causes, which operate in obedience to laws and forces as silent and unalterable as those which govern the movements of the heavenly bodies. Latent energy is here being converted into active force, which in turn regulates the flow of blood to the somatic cells, and, thus controlling their nutrition, makes function possible. Longevity largely depends upon the preservation of this action of the heart and arteries. The ancient aphorism that, "A man is no stronger than his heart and arteries," has a deeper and truer meaning in the higher light of these facts. As the years roll on, and we begin to approach the cataplastic period of life, it is normal that these phenomena should be less perfect. Indeed, arteriosclerosis is defined by some as a wearing out of the vessels. They lose their resiliency and power of contraction, their coats become thickened, and their calibres either greater or less than normal—they can no longer respond to those stimuli which act to regulate the supply of food to the tissues. There is something wrong in the commissariat, the sound of the grasshopper is low, and one is preparing to go to his long home.

It is a fact which is becoming more and better recognized that this change in the vascular apparatus is by no means restricted to the later years of life. It obtains in the very young as well as the old. The degree of mental activity, the daily environment, what we eat and drink—all are influential in straining the blood vessels, and when carried to excess will surely lead to their degeneration. In the daily struggle for existence we forget the fact that wear and tear are constantly calling upon both heart and blood vessels for greater activity to meet present demands; and that, depending upon the degree of strain, will be their power to constantly maintain function. It has long been the general consensus of opinion that excessive mental activity, prolonged hard labor, abuse of alcohol and food, all help to produce arteriosclerosis. To the modern clinician these causes are active in producing constant over-tonicity of the peripheral arteries, and thus increased resistance to the flow of blood to the capillaries. To the modern pathologist they

mean first hypertrophy of the muscular tunics of these distal arteries, which is succeeded by the degenerative processes which Dr. Murray has described in detail, and which finally yield to their permanent stenosis. To both clinician and pathologist the end result is increased tension which seriously affects the larger vessels, compromising their elasticity and inducing degenerative processes first in their intima, and then their media, and which also in many instances causes cardiac hypertrophy, thus adding an often dangerous element of increased pressure from an overdeveloped myocardium.

The term arteriosclerosis should be distinguished from atheroma. By the former is meant those changes in the vascular walls resulting in irregular thickening and loss of resiliency and contractility; in the latter there is deposit of lime and cholesterin in the substance of the vessel wall which becomes hard and brittle. Arteriosclerosis is often, but not always, complicated by atheroma. Marchand says: "In the broadest sense we must include under the term arteriosclerosis all those changes in arteries which lead to thickening of their walls, particularly the intima, in the development of which there appear degenerative changes, fatty degeneration with its consequences, sclerosis, calcification, inflammatory and productive processes." "In this way," he further says, "the arteries may become widened, lengthened, cirroid, or stenosed."

Our knowledge, anatomic and pathogenic, of these conditions is due largely to investigations covering the last two decades by Thoma and his pupils, Jores, Brault, Letulle, Huchard, V. Schrötter, Chiari, Benda, Marchand, Ribbert, and others. The finer details of the lesion have already been ably described by my colleague, Dr. Murray. The point to be emphasized here is that these changes are brought about in the vessels in two ways, first by over-action of the vaso-motor apparatus, with consequent hyperplasia, and succeeding degeneration of the inner and middle coats of the distal vessels, and, second, through increased pressure in the larger vessels, owing to the obstruction in the peripheral circulation. These larger vessels, under the effect of this heightened tension, degenerate, first in their inner and then in their middle coats. Ribbert, of Göttingen, holds this view, as a result of his own experiments. In brief he says: "The regressive and, following these, the progressive changes are brought about in such manner that, principally in consequence of increased pressure, the fluid portions of the blood are squeezed into the intima whose fibres are forced apart, and the normal spaces between them widened, while the ground substance of the fibres swells, albuminous materials coagulate in firm masses in the widened spaces, and the remaining fluid passes off by way of the lymph channels in the media." Hyaline infiltration and fatty degeneration of the intima are succeeded by these more pronounced changes.

These various changes deprive the blood ves-

sels of their power to functionate, and thus render impossible accurate distribution of food for assimilation by the somatic cells; and this disturbance of nutrition will depend in its degree upon the quality and extent of the degenerative processes. When the hyaline deposits make their appearance in the vascular coats their tissue elements re-act and small-round-cell infiltration and other phenomena of productive inflammation obtain, which are often followed by infiltration of the parts with lime and cholesterine.

These conditions, when once established, are probably permanent—certainly so unless the causes behind them are rendered inoperable.

We are still in the dark as to many of the body conditions which may stand in causal relation to arteriosclerosis. The internal gland secretions belong in this category: the thyroid, parathyroids, pituitary body and adrenals must be here reckoned, and it is probable that they all, in some way or other, either directly or indirectly, modify vaso-motor action. In the same way auto-toxins from the intestinal canal may be responsible for vascular changes of this character. The picture of many cases of acute ptomaine poisoning gives abundant evidence of the effect of these toxins upon the peripheral blood vessels; and it is highly probable that less intense grades of poison are not infrequently found in the *prima viæ* constantly, and produce slow but persistent effect on vascular tonus. The infectious diseases generally, but especially typhoid fever, are the starting point in many cases of arteriosclerosis. Years after recovery the patients seek the physician's aid for a complex of symptoms which are very obscure, and tax his diagnostic acumen to the utmost. The diagnosis cannot be made in some cases, in others the palpable vessels, characteristic sphygmogram, high tension, and many symptoms referable to special organs, as the eye, ear, upper air tract, the digestive apparatus, and the genito-urinary system, make the condition unmistakable.

Romberg, in the last congress of Internal Medicine at Leipzig, makes the following classification of causes in etiologic relation to arteriosclerosis. He says: "If we review these etiologic influences we cannot regard arteriosclerosis as more than a disease of old age. The damage reaches its necessary intensity in many individuals only after a long life. But how many we see in the thirties, and forties, and fifties, suffering and dying of this disease! Arteriosclerosis is much more a disease of wear and tear." This last remark seems to the writer to be peculiarly apt. It is the steady grind of certain influences which imperceptibly produce the permanent effects whose morphology has been briefly reviewed—effects which denote the wearing out of the vessels.

The same author lays great stress upon the influence of hard labor upon the blood vessels. Analysis of 1,500 of his dispensary cases is shown in this chart. In males of this class the percentage rises rapidly from the fifteenth year, and between thirty and thirty-five years it reaches one-

seventh, and from forty to forty-nine nearly one-third of the cases. In females it begins almost without exception at thirty, and is not nearly as common as in males until about sixty. Altogether, males are affected nearly three times as frequently as females. Romberg regards this as being explained by the difference in nature of the work of the two sexes; that of males, being a greater strain on the blood vessels, wears them out sooner. He applies the same deduction to explain the not uncommon finding of a higher grade of arteriosclerosis in the vessels of the right arm than those of the left.

Next to body strain he places nervous influences. It is certainly striking that out of forty-nine of his cases of arteriosclerosis before the fortieth year, thirty-seven had neuroses, and most of them well developed neurasthenia. The combination of hard work with nervous excitement is responsible for many cases of early arterio-sclerosis. This statement, Romberg says, finds some backing in the relative rarity of the disease in the lower animals, they being far less frequently subjected to nervous influences than humans.

Obesity is a predisposing cause, especially of coronary sclerosis, on account of the strain upon the heart in carrying the overweight of the body.

Splanchnic arteriosclerosis is frequent in contracting kidneys, and is explained by Romberg on the theory of increased pressure in the splanchnic vessels in renal cirrhosis.

Erb has shown that the oscillating calibration of vessels in frequent and marked variations of temperature predisposes to sclerosis. The tachycardia and exaggerated systole of the disease itself may also act as being contributory to the wearing out of the vessels.

Abuse of alcohol, tobacco, coffee and tea lead to vascular disease through the marked variations they induce in vascular tonus. Romberg avers that these materials do not act by immediate contact with the vessels, but in affecting the vaso-motor apparatus.

The difference in disposition of families to develop the disease is very great, and it is certain that the transmission of nervous traits is a weighty factor in the heredity of the disease. Romberg cites in this connection a case of arteriosclerosis in a boy of twelve, and he states that he has seen it repeatedly at the age of fourteen and fifteen years.

The semiology of arteriosclerosis is complex and depends upon the degree of the lesion and its distribution. Where the entire circulation is more or less involved, the symptoms are many and various. When the changes are restricted to relatively small vascular areas, the symptoms will depend upon the degree and quality of tissue involved, and will consist in some modification of the function of the tissue affected.

Indeed, the whole consideration must be regarded as one of troponomy in its relation to trophology; from the first it is a question of

nutrition in its relation to cell metabolism. The overactivity of groups of somatic cells calls for more cell nutrition, and this calls for vaso-motor readjustment, which, as it is intense and persistent, calls for the hyperplastic and degenerative changes above described; and thus is introduced another class of factors which again concern ultimate nutrition, only now instead of an over-feeding of the cells, they cannot get enough and must inevitably degenerate. It is of the utmost clinical importance to keep in mind the fact that such changes may occur in organs up to a certain point and give no symptoms whatever, for the simple reason that they are disseminated, involving only circumscribed areas of tissue, other areas remaining normal and maintaining a normal standard of function. The value of this lies in the fact that once inaugurated, this disease is progressive, and the only hope in the matter lies in an effort to combat its cause; so that, inasmuch as we may not hope to restore those vessels already damaged, it is of the utmost importance to arrest, if possible, the progress of the disease by eliminating the cause underlying it. For the reasons just stated, I would repeat, therefore, that an organ, or organs, may be damaged and present no symptoms until it is too late to hope for much benefit from treatment; and it is the business of the physicians of to-day to find the facts before they assert themselves to the patient, or, at least, before he complains of those grosser symptoms incident to the more advanced and hopeless stages of the disease.

It is, in my judgment, a very creditable achievement to diagnosticate correctly incipient arteriosclerosis, an achievement calling for the best use of mental faculty and any and all apparatus that offers help.

How many times the general practitioner and, indeed, the surgeon are "put wise" to the fact that their patients have arteriosclerosis by the oculist's report on an eyeground, or the aurist's findings in certain chronic internal ear conditions. The same is true of every other specialist. They are all at times in the way of striking the keynote of solution of a condition dependent upon vascular disease, which, while obviously producing symptoms, does not produce a symptom-complex which makes the diagnosis clear.

It would be impossible to mention all of the symptoms of vascular disease in a short paper, and equally unprofitable.

But there are a few symptoms which are usually either overlooked or not associated with this disease, and which appear in the earlier stages of it, at a time when to remove the cause might offer hope of at least arresting its progress.

One of these is neuralgia which persists in spite of all efforts to stop the pain. Another is a peculiar susceptibility of the vaso-motors of the face; slight psychic influences are enough to cause rapid vasodilation, which is just as rapidly succeeded by constriction of the vessels.

A third is tachycardia, which becomes marked

under the least excitement. One of the most valuable of all the early symptoms is the general sense of exhaustion which is often extreme on the slightest exertion. Indigestion, with vague abdominal pains, is not uncommon in early sclerosis of the splanchnic vessels.

Much may be accomplished by the systematic use of the sphygmograph, the sphygmomanometer, the tonometer, and careful examination of the heart at regular intervals.

On account of the vicarious distribution of the lesions, and the peculiar nature of the blood supply in some organs, valuable symptoms are often lacking. A man may die of old age with advanced arteriosclerosis of his superficial vessels, and have no symptoms. The reason assigned by Romberg for this is, that the capillaries of the voluntary muscles not only inosculate very freely with each other, but are much larger than the average, so that they compensate for the lesion. The heart is supposed to hypertrophy only with involvement of the splanchnics.

Vertigo is more common in involvement of the cerebral circulation, and may be absent entirely with advanced splanchnic sclerosis. In order to arrive at a correct diagnosis, in many of these cases it may require considerable time and much study of the case. There is no room for guesswork; and when the diagnosis is made there should be no need for its reversal. If the condition is incipient much can be accomplished; if advanced it is incurable, and the greatest difficulty is often experienced in coping with urgent symptoms.

Of the treatment, I have simply to say that it can only be properly based upon etiology and exact diagnosis, the degree of progress in the given case, and the nature of the symptoms. Theoretically, to arrest exaggerated vaso-motor action and reduce tension in the early cases and to ward off impending hemorrhage, and combat pain in the advanced cases, are some of the most important duties.

Just one word on the subject of remedies: iodine and the iodides have long been supposed to reduce tension by their vaso-dilator action. This is now shown to be an error. The latest theory of the action of these remedies is that the blood is lubricated through the reduction of its viscosity under the exhibition of these drugs, and this is supposed to take place by virtue of the affinity of iodine for the erythrocytes which are, so to speak, greased by it and caused to slip more easily through the stenosed vessels. There is a new preparation of iodine, iodipin, which is better borne in some cases than the usual salts. It is a solution of it in sesame oil, and it is put up in 10 and 25 per cent. strengths. The Germans believe that relatively small doses of iodides act much better than large ones.

ORATION ON SURGERY.

By ROSWELL PARK, A.M., M.D., LL.D.

BUFFALO, N. Y.

Ex-President of the Medical Society of the State of New York,
and of the American Surgical Society.

(Concluded.)

HOSPITALS provide mainly for local needs and are supported both by private and public generosity, but there come occasionally calamities and wars which make demands which no fixed hospital can supply. It is to meet the needs of such exigencies that the Red Cross Association was founded, and it has been in furtherance of its objects that devoted men and women have sacrificed their time, their labors, and even their lives, in doing good to others, relieving the distressed, caring for the sick and wounded, and demonstrating the noblest of human and humane traits. It is doubtful if altruism can reach a higher degree of development than has been evinced by those who have so nobly performed these duties.

But here this actually brief, though apparently long, résumé of a century's progress must be brought to a close. I say "of a century's progress," when nearly all of the work has been done within the last third of it. The writer is painfully conscious that he has had to omit much, both in the matter of men's names as well as their deeds, which should find a place in such an epitome. He has found it far more difficult to be reasonably brief than to be fair and just to all. Much has, therefore, been omitted which he would gladly have included did space permit. The record as it stands is perhaps a just one; at least the endeavor has been sincere to make it such.

So far we have dwelt with the past and the present. What is to be said of the future?

Each Year Book of Surgery shows us that it is still too soon to speak, as did Erichsen, of Finality in Surgery. The records show that practically no part of the body which is accessible by any route has been omitted from experimental attack; time may still be required to indicate whether these attacks are to be frequently repeated or not.

The so-called "anatomical surgeon" of the past generation has practically found his limitations. Gross anatomy holds but little now in store for even the most conscientious student. Therefore, the day of the surgical anatomist and operator alone has passed, unless to his purely anatomical knowledge he has added much of collateral origin and interest. To every surgeon, however, more and more must come that final knowledge of anatomy gained only through the microscope, and employed to his advantage in studying as well the processes of repair as of disease. Such additions, for instance, to our mine of knowledge as have been afforded by recent investigations concerning the neurons have a far-reaching sig-

nificance which entitles them to the consideration of the surgeon as well as of the neurologist.

Into surgical pathology our surgeons must be led ever more and more deeply, sometimes by direct, again by devious ways. That the surgical laboratory will maintain a more and more important position, both in surgical teaching and in preparation for surgery, must go without saying. In surgery, as well as in general medicine, though probably in lesser degree, we shall learn that, to use an Hibernicism, the best way to treat disease is to prevent it. In so far as we draw nearer to a discovery of the foundations of life, the surgeon will profit with the biologist and the general practitioner. The future is too misty to say where we shall find ourselves in this regard at the end of the second century of our existence.

The tendency of late has been for the surgeon to drift away from the internist, for reasons which are obvious to all. He has, however, in my estimation, drifted too far, and needs to come back into closer correlation with his colleague and closer comparison of methods with results. The pendulum has swung a little too far in the direction of divorce between medicine and surgery. There is work enough for each in his respective field, and it will be to the interests of humanity that they work rather toward than away from each other. Calm judgment, patience and discretion should go hand in hand with the most active research. Only by combination may the latter be made of its greatest possible avail.

Your orator is deeply regretful that he cannot be prophetic, but he regards it as unsafe to indicate what will be the trend of our thought or what changes will be made in our methods during the next hundred years. There is no field of work in which men are plodding more industriously and indefatigably than in the problems before us. Unfortunately, these problems are seldom simplified as they are one after another attacked, but seem to assume ever wider and far-reaching proportions. Whether the relation of actual knowledge to inquiry and doubt will be materially altered one hundred years from now no one may safely say; but one may safely say considering what a quarter of a century has afforded, that the completion of the present century will find our profession not merely endowed but actually burdened with facts of which to-day we have no glimpse. He may also feel that the practice of surgery has not been simplified, but sadly complicated and made more difficult. On one matter I am sure all will agree, that is, that, foreseeing the complexities which are still more thickly to surround us, preparation for our work must be longer, more arduous in its beginnings, more comprehensive, than that as yet provided by our schools; in other words, the lengthening and broadening of our medicinal curricula will be necessitated. In fact, the time is almost in sight when one must have attained years of not merely discretion but of ripened knowledge be-

fore he may feel that he is entitled to commence the practice of our art.

That New York State has contributed to the best of what there has been and is in this direction gives promise that she will not fail us in these respects in the future. It is fair, then, to hope that the Empire State may be wisely forehanded in this regard, since she has not been unmindful in the past of her duties in this direction. The destinies of our local profession have proven to have been in safe hands during the first one hundred years of our Society's existence. It is not asking nor expecting too much of those who follow us that our record be maintained in this regard, and that New York State will prove herself ever in the van in recognizing what is good, and maintain her standards in this as in other matters pertaining to science.

Gentlemen, again I thank you deeply for the honor of addressing these words to you at this time, realizing fully the impossibility of doing justice to such an occasion, but assuring you that I feel its significance to the fullest, even if I have shown my inability to rise to it.

APPENDIX

In which are added historical statements concerning some of the operations and surgical procedures, in which American, and especially New York State, surgeons have figured most prominently.

In the interest of fairness and justice it seems necessary to add some further statements to those made previously in the paper, especially for the sake of credit in the matter of priority of achievement.

In this country, as elsewhere, many of the boldest of the earlier operations were directed toward the blood vessels.

In 1813, Wright Post first tied the common carotid successfully for the cure of aneurism, repeating the operation four years later. During this latter year he successfully tied the subclavian artery in its third portion for the first time, the operation having previously failed at the hands of Ramsden, Abernethy and Cooper.

In 1817, Gurdon Buck first tied simultaneously the common and internal carotids. The subclavian artery in its first portion, between the scaleni, was first tied for aneurism by Kearney Rogers, an operation which, according to Gross, made his name famous throughout the world, since until his time the operation had been considered impossible. Although the patient died, the possibility of the procedure was demonstrated. Since then it had never been successfully repeated until 1892, when it was done by Halsted in Baltimore.

The carotids were first tied simultaneously for the treatment of elephantiasis of the neck and face by Carnochan in 1867, while both internal iliacs were first simultaneously tied by Dennis, of New York, in 1886.

During the first half of the past century no

man was more distinguished for thorough knowledge of anatomy and daring operative skill, combined with didactic ability, than was Valentine Mott, who was born in 1785, and who lived until 1865, whose career, therefore, was a long one, and whose achievements were many. It was in 1818, when he was 34 years of age, that he carried out the "bold, brilliant and difficult feat of taking up the innominate artery for aneurism of the subclavian, which he was the first to execute, and which attracted the attention of the entire surgical world." Mott's subsequent work with ligation of large vessels was so exceptional that it was truly said of him that he had made more operations for ligation of large vessels than any other living surgeon. He was the first to tie the common iliac for aneurism of its external branch in 1827, although Gibson, of Baltimore, had tied it in 1812 for gun-shot wound. He was supported by a number of distinguished colleagues, among them Kissam, Kearney Rogers, Stevens and Bush.

The mitigation of violent inflammation in the extremities by controlling their blood supply was first undertaken by Onderdonk, of New York, who, as early as 1813, tied the femoral artery to control excessive inflammation consecutive to a wound of the knee joint. Fifty-three years later the procedure was independently planned and carried out by Campbell, of Atlanta, Georgia.

Another New York operator whose career reminds one much of that of Mott was James R. Wood (1816-1882), who belonged to the older anatomical school of surgeons, and who was extremely daring, rapid and certain in his work. He was practically the founder of Bellevue Hospital and Bellevue College, both of which were very much enriched by the exceedingly large collection of specimens which he brought together, and which constitute to-day a large part of the Wood Pathological Museum.

In the surgery of the nervous system, the American surgeons were early in the field. In 1832, Mott suggested the removal of the Gasserian ganglion for neuralgia, while Carnochan was one of the first to attack nerves for facial neuralgia, and the method which he devised for removal of the infra-orbital nerve up to its root is practiced even to-day. Up to the present, American surgeons have performed about half of the entire number of all the operations upon the Gasserian ganglion which have been reported, and since Hartley published his modification of the Krause method a large number of these operations have been done according to his plan.

In the treatment of fractures and dislocations New York State surgeons have been pre-eminent. It was Kearney Rogers who first successfully practiced wiring of fragments, while Gurdon Buck popularized and promoted the treatment of fracture of the thigh by traction with weight and pulley, a method which had been introduced by Daniells, of Savannah, in

1819, and improved by Anthony, of Augusta, in 1836. How much Buck did for this method appears in the still common use of his name in connection with it, although, as mentioned, he is not entitled to the credit of its device. It was Buck, also, who suggested practically the osteotomy of the present day for removal of bony ankylosis of the knee, and it was Van Ingen, of Schenectady, who suggested elevation of the foot of the bed in order to make Buck's plaster and coaptation splints more effective.

Frank Hastings Hamilton (1813-1886) became first known as professor of surgery in the old and disbanded schools in Fairfield and Geneva. Later he moved to Buffalo, where he taught for years, the first occupant of the chair of surgery in the medical department of its university, where he gained an experience upon which he based that philosophic and encyclopedic work on fractures and dislocations which made him famous the world over. Subsequently he moved to Brooklyn, and then to New York, where he died. Dextrous, scholarly, always didactic, with great facility for literary expression, he was ever a commanding figure in surgery, and his loss was long felt. To Hamilton also is due the credit for introduction of skin-grafting, which he first practiced in Buffalo in 1854, and which he called "anaplasty." In this he had priority over Reverdin, of Geneva, to whom abroad it is usually ascribed, although, in all probability, the measure was original with each of them, neither knowing what the other had done. That the method has since been modified by Thiersch, and extended by others, detracts nothing from the credit due to Hamilton for its introduction.

Hamilton was succeeded in Buffalo by E. M. Moore, of Rochester, of whom it was said, in one of the London journals, that he probably had done more original work in the matter of fractures and dislocations than any other living man. This was particularly true regarding fractures of the clavicle, the upper extremity of the humerus, the lower extremity of the radius, and, perhaps, the hip. No one who ever heard him expound the pathology and the proper treatment of these injuries could forget the dignity and the magnetism of his manner, and the choiceness of his speech, or fail to be impressed with both his earnestness and correctness. Indeed, for a long time and widely, Moore was known as the "Nestor of the American surgical profession," a title which he well deserved.

Aside from what Hamilton accomplished with original methods and studies concerning fractures and dislocations, and what has been already credited to Moore, probably the greatest services in this department of surgery during the middle portion of the last century were rendered by Reid, of Rochester, and Swinburne, of Albany. Probably Reid is more entitled to credit for his researches into the mechanism of hip-joint dislocation and its reduction by manipula-

tion than either Bigelow, Gunn or Moore, although his name is not mentioned nearly as often in this connection as it should be. Without doubt, he was the pioneer in this line of work.

In amputations it was the improvements in technique suggested by Markoe, Brinton and Stephen Smith that revived the operation of amputation at the knee-joint, which had been practically discarded as unsafe or unsatisfactory, and it was the method of using long pins devised by Wyeth which has made amputation both at the hip and shoulder a very much less formidable and bloody operation than it previously had been.

New York surgeons had much also to do with the excision of bones. For instance, Mott, in 1828, first removed the entire clavicle for malignant disease, an operation which in his day was certainly most formidable and daring. He was accustomed to speak of it as his Waterloo operation, not, however, because of its character, but because he performed it upon the anniversary of Wellington's great battle. Carnochan did much of this kind of work, and in 1853 he had removed both the entire ulna and the entire radius, while it was he who first operated for relief of ankylosis of the lower jaw.

It was David L. Rogers, of New York, who first made resection of both superior maxillary bones, and no operator living has yet had quite the measure of success which came to James R. Wood in securing complete reproduction of the lower jaw after two operations for removal of its necrosed halves. Incidentally, while speaking of this surgery about the mouth, it might be added here that the interdental splint for the treatment of fractures of the lower jaw was devised about the same time and independently by Gunning, of New York, and Bean, of Georgia, and that myotomy of the masseter muscle was made by Schmidt, of New York, before it had been done by either Ferguson or Dieffenbach.

Carnochan's name has been mentioned so frequently in connection with his work on nerves and bones that it is worth while to call attention here to the fact that he was one of the first to study congenital dislocation or misplacement of the hip-joint, and his monograph published in 1850 in which he gathered together reports of thirteen cases, was one of the very earliest publications upon this subject.

During the first half of the previous century surgery had not included, so far as I know, complete removal of any organ of the body, and I believe the first effort in this direction should be credited to Wollcott, of Milwaukee, who first extirpated the kidney, antedating in this matter Simon, of Heidelberg, by some years, although, as usual, the priority is too generally given to the foreigner.

Extirpation of various organs is now such a common matter that this statement will probably have only an historical interest. Nevertheless, in those days it was a tremendous accomplishment.

Fifty years ago both the thorax and the abdomen were sanctums, in a surgical sense, into which the surgeon rarely, if ever, ventured to intrude. The advances that have been made within the half century are to be likened to nothing else than the progress of electricity. Thus, no one ventured to operate for gun-shot wound of the abdominal viscera, especially of the intestines, until the matter was taken up by Bull, of New York, and Parkes, of Chicago. Their initiative has given rise to a line of work and teaching which, a few years ago, when it was new, startled the entire professional world. Bull, moreover, and Boseman, who has just passed away, are to be credited as among the earliest operators on pancreatic cysts.

Elsewhere in this paper I have alluded to some of the early work upon what used to be called perityphlitic abscesses. This was initiated and popularized especially by Willard Parker, who died in 1884, at the age of 84, who wrote but little, though he excelled in operative skill, being ambidextrous, and who made a most capable and successful teacher. He it was who popularized not only the repair of lacerated perineums, but the opening of perityphlitic abscesses. He showed, in 1867, that early operation would save 75 per cent. of these cases, advocating that the opening should be made between the fifth and twelfth days. Then came Fitz, of Boston, who, as a pathologist rather than a surgeon, made an exhaustive study of the whole subject, and, in consequence, advised complete removal of the appendix early rather than late in these cases. It was perhaps Morton, of Philadelphia, in 1887, who performed the first operation of this kind, reporting it at the thirty-ninth meeting of the American Medical Association. Then it was taken up by McBurney, of New York, to whom the profession will always accord the credit for showing under what circumstances and how easily the appendix may be and should be removed, thus describing both its diagnosis and its operative removal. That he may be suitably entitled the "father of the operation for appendicitis" will never be denied. What a glorious field for surgery his early efforts in this direction have opened up to all of us needs no rehearsal at this time. However, his reputation and fame as an operator do not rest upon this one accomplishment. For a long time head of one of the largest surgical clinics in this country he has left his impress upon operative surgery in many different directions.

In the surgery of the male pelvis we may note in passing that Stevens was the first surgeon in this country to perform external urethrotomy, in 1817, and to show its advantages and usefulness. It was William Barker who first demonstrated, in 1846, the value of opening the bladder for the relief of chronic cystitis, thus affording physiological rest, a measure which Bozeman applied to the female in 1861. The first successful operation done anywhere for extroversion of the

bladder was made by Carrell, in New York, in 1858, and later, during the same summer, by Pancoast; again by Ayres in 1859. All of these cases antedated those of Wood and the other British surgeons who are usually credited with priority, while to Alexander, of New York, must be credited the most successful operation for relief of epispadias in the female.

In the female pelvis it was Emmet who demonstrated the mechanism of lacerations of the cervix and their close relations to epithelioma, and who worked out the methods for their repair, showing as well the advantage of removal or amputation of more or less of the elongated cervix as a part of the procedure; yet writing very recently and expressing himself with the ripeness of advanced years, he says: "Yet it is difficult to determine whether the good which has been obtained under all favorable circumstances counterbalances the evil from the great abuse which has existed from operating unnecessarily." How true this is and how applicable the statement to numerous other operative procedures! It was Sims who first revealed the possibilities of closing fistulæ by means of silver wire, and who paved the way for the more complete plastic methods of Emmet.

Although Marion Sims was of Southern origin, he nevertheless lived so long in New York City and worked there so successfully that he may be very properly included in the summary herewith given of the work of New York surgeons. He went abroad about the beginning of the Civil War, but before he left he read a notable paper before the New York Academy of Medicine, in which he dealt with the results of his work, and showed what brilliant promise they offered for the future. Sims, in most of his work, used the scalpel, while Emmet taught the advantage of substituting scissors in nearly all gynæcological plastic surgery. To Sims are due numerous improvements, especially in gynæcological surgery. First of all, the form of speculum everywhere known by his name made possible examinations and operations which previously had never been attempted. He also popularized the use of silver wire, and he taught us the proper posture of the patient's body by which much pelvic work could be made vastly easier and more successful. In fact, the introduction of this posture and of his speculum really gave origin to that new branch of surgery which was then called "gynæcology," of which Sims may be almost said to be the "father." It was by following out methods thus demonstrated by him that many other New Yorkers rose to eminence in this particular line of operative work, including Emmet, already mentioned, and Thomas who, in 1870, devised and performed the operation of vaginal ovariectomy, removing an ovarian cyst of considerable size through the cul-de-sac of Douglas.

But time and space both fail in which to do justice to even a small number of New York State's great surgeons. I would be glad if I could render

due honor to men like Swinburne, March, Otis, Gouley, Barker, White, Sands, Mason, Sabine, Little, Markoe and dozens of others who have, in one way or another, left their impress upon the teachings and practices of their day, impresses which, in many instances, still endure and will be lasting. It is simply impossible in such a review as that upon which I have ventured to be comprehensive or complete. With apologies then to the memories of those whose names are necessarily omitted, and with infinite respect for what has been accomplished by those already named, I must pass on and can afford to mention but two other prominent features in the recent history of surgery in this State. It surely will be a glaring omission were something not said about the life and labors of Dr. Joseph O'Dwyer and his connection with the development of intubation. In 1882 he began experimenting, at first with bivalve tubes like a miniature bivalve speculum, opening with a spring, and having a gutta percha collar, fearing at first that without a collar the tube would slip into the larynx. After many devices and changes in model, O'Dwyer, who did not know of Bouchut's work in Paris, and who had demonstrated that the larynx would tolerate a tube, dared to make the first attempt upon one of the little patients in the Foundlings' Hospital. Up to that time all severe cases of croup, that is, diphtheria of the larynx, had died, and every case which had been tracheotomized had been lost. It took no small courage of his convictions to enable O'Dwyer to entirely change the method and to brook repeated failures with his new device. It soon became evident that a solid tube must replace his bivalve. Then came another course of experiments with tubes upon the cadaver, and so he worked for four or five years on this matter alone, attaining at last his final triumph in the lateral flattening of the tubes to avoid pressure on the cords, and the retaining swell to prevent their loss downwards. Think of it! Five years of hard work and study, with experiments on the cadaver and occasional efforts on marasmic babies. At last he had a successful case in the hospital, then another outside it, with complete return of voice, and then came publication of his results, and then further disappointment because others who tried to imitate them failed. It seemed as if everybody who had an unhappy result wrote to him, and thus his life was made a continuous worry, while all sorts of errors made by other operators were regarded as reflections on the operation. Unskillful men took up the operation without any previous practice on the cadaver, and then blamed O'Dwyer for their lack of success. Thus intubation had many martyrs. Nevertheless, its final triumph was complete, and the operation stands to-day as one of the most life-saving and valuable of any, and one which we, to our great pleasure, may ascribe to a former member of our Society.

Only one other feature can find place in this record, namely, the development of orthopedic

surgery as a specialty. The real father of orthopedic surgery in this country is Dr. Henry G. Davis, to whom we owe many of those methods which others have perhaps improved, yet without affecting the truths which he discovered and taught. In 1867 he published his "Conservative Surgery," in which he gave us the benefit of over thirty years of previous work. He enlarged the usefulness of the principle of traction in the treatment of fractures, and improved it by the introduction of elastic materials, and then applied it in the practice of orthopedic surgery. He urged the use of extension in the treatment even of simple synovitis, claiming that under all such circumstances not only rest but traction was called for. But it is especially in the treatment of tubercular joint disease, by combination of rest and traction, that Davis rendered his greatest service. He was the pioneer in this regard, his efforts being so warmly seconded by Sayre, C. F. Taylor and Bauer, that Davis himself has been too often forgotten, and undue credit extended to the others mentioned. He insisted that in hip joint disease, for instance, traction should be applied in the direction of the shaft of the femur or, as Sayre used to put it, in the line of deformity, a teaching to-day too often neglected. To him, also, are we indebted for demonstration of how to use adhesive strips for these general purposes, and even the apparently trifling addition of the spiral bands which make their purpose so much more complete we owe to him.

The studies and labors of Davis attracted a large number of followers and a brilliant following. The practical result was the development of an American School of orthopedic surgeons whose most brilliant lights, aside from those above mentioned, combined in the organization of numerous special hospitals, with which our large cities are now provided, in the special teaching of orthopedic surgery in the schools, in the organization of an Association of Orthopedic Surgeons, whose transactions are replete with matters of great interest and contain much of the best work of the past twenty years published anywhere in the world. They have contributed as well to a wealth of other laboratory, text-book and journal articles, which have crowned American Orthopedia as something to be applauded all over the world, and have caused American methods and her ingenious appliances to be imitated everywhere where surgery is practised.

OSMIC ACID INJECTIONS. J. R. EASTMAN finds that for the treatment of neuralgia the injection of 10 drops of osmic acid in a 2 per cent. solution is safe and usually curative. The injections must be made into the nerve, and not merely about it.—*Jour. Am. Med. Assoc.*, Feb. 24, 1906.

THE STATE HEALTH REPORT shows that during the past year 1,554 deaths from typhoid fever occurred in the State, all of which were due, most probably, to infected water, and all, most probably, preventable.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By JAMES J. WALSH, M.D., Ph.D.

NEW YORK.

(Continued.)

CHAPTER IV.

NEW YORK AS A LEADER IN MEDICAL LAWS.

THE series of laws relating to the practice of medicine which we have quoted shows that New York, far from being a laggard in the matter of legal enactments for the upholding of professional dignity, was rather an exemplar to others. Indeed, the colonial law of 1760, which we have quoted, requiring a license from the Court, represents the highest standard in any of the colonies for medical licensure. It was imitated not long afterwards in the colony of New Jersey, the assembly of which passed a law practically corresponding in every particular to that of the sister colony of New York. The law of 1806, with which this history begins, represented once more an acme of attainment in the matter of the maintenance of professional dignity, and at the same time the protection of the community in all medical matters. The fact that now the licensing of physicians was handed over to a medical society which was supposed to conduct serious medical examinations, shows how much the community had learned to trust the medical profession, and to realize that its own highest interests could be best fostered by a conservative legal regulation of medical practice in the doctors' own hands.

In these modern times, when New York is the Empire State, with the largest population of any of the States, and a condition of culture and education that is worthy of so great a commonwealth, it does not seem surprising that New York should have been a leader. It must not be forgotten, however, that New York, before the beginning of the nineteenth century, by no means occupied the position of prominence among the sister colonies and States which she has since come to hold. As a matter of fact, even North Carolina was far ahead of her in population, and New York just after the Revolution was only fifth of the States in the number of its inhabitants. It has seemed worth while, then, to quote a passage from an authoritative historian, which states the position of New York at this time. The quotation is from Roberts' American Commonwealth. (New York: Houghton, Mifflin, & Co., 1888.)

"New York was at this time fifth of the States in population. Virginia had more than double its number of inhabitants; Pennsylvania had nearly one-fourth more; North Carolina exceeded it by the total census of New York City and Long Island; Massachusetts surpassed it in nearly equal degree. When the war closed, Maryland was its peer in population; and Connecticut and even Tennessee followed it very closely.

Its share in the inception, the organization, and the prosecution of the war for independence and its services in framing the constitution and in its ratification must be judged by these figures. Critics have paid the State the compliment of comparing its record with that of Virginia on the one hand, and of New England as a whole on the other. History justifies the comparison and must render its verdict, with due regard to the population engaged and to the difficulties of situation and of military pressure."

These difficulties can best be measured by the effect of their removal. The State of New York grew in population, in seven years preceding 1790, by nearly one-half, mounting up to 340,12; it reached 589,051 in 1800; and in 1810, with 959,049, attained the second rank, very nearly equalling Virginia, and surpassed it by one-third in 1820.

The center and the west of the State, which had been the scene of contest, became in this interval the chosen field of immigration. Tryon County, renamed Montgomery in 1784, had furnished territory for more than a score of counties; and while New York had risen to the head in population, Albany stood in 1820 thirteenth in rank; while Ontario, Genesee and Oneida were respectively second, third and fourth in number of inhabitants. The incoming multitudes as early as 1796 made necessary the opening of a State road from Whitestown to Geneva, from the Mohawk to the interior lakes; and in 1798 roads were cut from Genesee to Buffalo and Lewiston, while the water routes from the south, as well as from the east, were much used. Before the eighteenth century closed a regular post-rider connected Albany and the Genesee Valley by trips every fortnight, a grand road was opened from the capital to Clinton county, and a regular line of stages beside the Hudson prophesied the swifter travel of later days.

Roberts calls attention to the fact that the population of New York State during and just after the Revolution was much more mixed than of any of the other thirteen original States. The comparative mildness of the New York Colonial Government and the commercial opportunities afforded by the harbor and the growing city, with the shipping it attracted, served to bring many Europeans of different nations to Manhattan and the surrounding districts. As a consequence, the population of New York State in the early days of our Government more nearly resembled that which has come to be the characteristic condition all over the country in recent years, than that of any other State. Somehow out of the friction of all these different nationalities, there came a spirit of enterprise, greater than was to be found in any of the colonies in which a more exclusive racial condition obtained.

To quote Roberts once more:

"But if in the Revolution the population of the State was so inferior, discipline and trial had given it character. If New England was Puritan and Virginia Cava-

lier, and both positively English, New York was the first to become distinctively American. In spite of its strong loyal element, its separation from the crown severed fewer ties of blood and nature, because of the diverse races which mingled on its soil. The original Dutch current had run by inter-marriage into the veins of many families whose names bear no testimony of it. Other races also have joined hands. In the framing of the nation many streams of race mingled. To the Declaration of Independence, Philip Livingston subscribed with the vigor of Scotch blood; Francis Lewis with the ardor of a Welshman; William Floyd and Lewis Morris, with the prudence of mingled Welsh and English descent. Philip Schuyler, the major general, was of pure Dutch blood. Nicholas Herkimer, the hero of Oriskany, was the son of a German from the Palatinate. Alexander Hamilton, born in the West Indies, was Scotch and Huguenot in origin; and John Jay, the first chief justice of the United States, was of clear Huguenot strain. George Clinton, the first Governor of the State, was the son of an Irish immigrant, as was General Montgomery, who fell at Quebec. Englishmen there were who then and afterwards added lustre to the service of the commonwealth; but it is the distinction of New York that its early history was molded in the furnace and from the varied elements which have given to the nation its character and its name as American."

Perhaps it is as a consequence of this, then, that New York has always maintained a leadership in nearly all of the practical advances that tend to make life more pleasant and more healthful. We have made this claim already with regard to medical regulation. It will be remembered, in addition to this, however, as we shall see in the proper place, that it is to the New York Medical Society that is mainly due the United States Pharmacopeia, and the organization of a committee to continue the work on this important contribution to progressive medical science. Before the middle of the nineteenth century it was to the initiative of the New York Medical Society that the profession of the century owed the organization of the American Medical Association.

New York's rapid progress in scientific medicine, just after the Revolution was undoubtedly due to the fact that the inhabitants of the colony had taken to heart the precious advice of the old poet-philosopher, that it is the art of a wise man to learn even from an enemy. During the time that New York City was in the hands of the British, and it must not be forgotten that the occupation lasted from 1776 to 1783, there were many opportunities to see the practice of the British Army surgeons, many of whom were men of wide learning, of the best training, and of large experience. Physicians might not be able to go abroad, but some good opportunities were provided them at home. There is no doubt that they were taken advantage of. A previous opportunity of nearly the same kind had occurred during the French and Indian Wars, only ten years before, and it is Toner who calls attention to the fact of how much the physicians of the colony must have gained from contact with the British Army surgeons.

As Toner, in his "Medical Progress," says:

"The war which resulted in the conquest of Canada

gave perhaps the first material improvement to the condition of medicine in America. The English army was accompanied by a highly respectable medical staff, most of them landed in the City of New York, and continued for some years in the neighboring territory, affording to many young Americans, opportunity of attending military hospitals and receiving professional instruction."

CHAPTER V.

QUACKERY BEFORE LEGAL REGULATION.

It might have been expected that in a country as loosely governed as were the original colonies, and under the conditions of lack of opportunities for medical education and proper medical training, that quackery would have flourished extensively during the early years of our history. Conditions, however, were not as bad at the beginning as might have been anticipated. In New England, at least, the earliest practitioners of medicine were the clergy, and quite usually the functions of the physician and the divine were performed for each community by the same individual. As Dr. Beck remarks:

"This combination has not been uncommon in the history of the world. In the early dawn of medicine the priests of Egypt and Greece collected and preserved what was known of the healing art, and in the infancy of every country the same association will probably be found to exist. Nor is it by any means an unnatural one. Physical and moral evil are so intimately connected that those who are administering to the relief of one cannot be regardless of the other. Hence, in the absence of the regular physician, the priest appears to be his most proper representative. Besides this the character of the first emigrants and the high tone of religious feeling, which drove them for an asylum to this western world, continued for a long time to give a preponderating influence to the clergy in all secular as well as religious concerns of the colony. In the annals of the first colonists, accordingly, will be found the names of several clergymen who practiced the healing art. These men were not, as might be inferred, mere empirics. On the contrary, they were by no means unqualified to practice medicine. For several years, previously to their leaving England, and anticipating the loss of their situations as clergymen, many of them had turned their attention to the study of medicine, and for upwards of a century after the settlement of New England, numbers of native clergy were continually educated in both professions. Altogether they were a highly respectable class of men. Besides being good divines, they were skilled in the medical learning of the day and many of them appear to have been good practical physicians. Besides the clergy some of the first governors of the eastern colonies also practiced physic. Two of them, of the name of Winthrop, appear to have been particularly celebrated. One of them was Governor of Massachusetts, the other of Connecticut and New Haven. Of the latter, Cotton Mather says: 'He was furnished with *noble medicines*, which he most charitably and generously gave away upon all occasions.' He was a member of the Royal Society of London, and some of his communications are to be found in their transactions."

Notwithstanding the adventitious circumstances that gave many of the early physicians dignity and prominence, and undoubtedly added to the estimation in which all practitioners of medicine were held, it readily can be understood that they represented only a very few of those

who practiced medicine, and that the standing of most of the others was, indeed, low. Anyone who will recall the position occupied by the apothecaries who represented the physicians of that day in rural England, about the middle of the eighteenth century, will have forcibly impressed upon him the very low station which the medical practitioner in country places, at least, occupied at this time. Thackeray gives pictures of at least one of them that is neither creditable to the personal standing of the men themselves, nor to their professional dignity. There is no doubt, however, that the novelist had plenty of historical details as the groundwork of his picture.

It is not surprising, then, to find that Dr. Beck deprecates the condition of medical practice in the American Colonies during the seventeenth and eighteenth centuries. The wonder of it is that he was large-minded enough to see that it had the good qualities of its defects and that our forefathers are by no means so much to blame for the abuses that inevitably crept in at that time, and that, indeed, if we compare conditions at that time with what has come to be the state of affairs in our more cultured nineteenth and twentieth centuries, there will not be room for much condemnation. Dr. Beck said:

"As may naturally be presumed, in a country circumscribed as the American Colonies were for a long period after their original settlement, the medical profession continued for a succession of years in a low and degraded condition. In point of respectability it undoubtedly stood lower than either the legal or theological professions. The religious difficulties in England had filled the ranks of the latter with men of learning, talents and piety, while the offices of honor and emolument under the crown offered allurements sufficiently powerful to induce many who were distinguished in the law to emigrate to this western world. With medicine it was far otherwise. It is only in populous towns and cities that our art can flourish, and the wilds of America, however fragrant they might be with the spirit of freedom, offered no attractions to the medical men of the old world. The advantages attending an emigration were too distant and precarious to warrant such a step; and accordingly for a long time, with some few exceptions, none but those who had failed to attain respectability or employment at home would venture on so dangerous an experiment. Nor were the young native physicians for a long time calculated to remedy the evil. To become a well qualified physician requires a course of study and a variety of observation which was not to be obtained in any of the colonies. There were neither lectures nor hospitals which could be resorted to, while the great expense attending a foreign education put it out of the power of all except a favored few to avail themselves of the only means of becoming regularly instructed. Under such circumstances it was not to have been expected for a long series of years after the first settlement of the country that our profession would be at all distinguished for character or knowledge. The progress of civilization, an augmenting population, together with the increasing facilities of European communication, tended gradually to ameliorate this condition of things, and for many years preceding the Revolution, medicine could boast of not a few names who shed a lustre upon the profession to which they belonged."

Just after the middle of the eighteenth century there seems to have been a determined effort

made to secure legislation for the regulation of medical practice in the Province of New York. A series of publications pointed out the abuses which existed and necessarily suggested a remedy for the evil. The remedy, as usual, was to be found in legal regulation. The steps by which the sentiment in favor of such legislation was created can be traced to various contemporary publications. Dr. Beck quotes particularly from a paper by William Douglass, M.D., entitled "A Summary, Historical and Political, of the First Planting Profession, Improvements and Present State of the British Settlements in North America," in which the doctor does not hesitate to state his opinion of the medical evils of the time in a very forcible way. The whole passage as it is to be found in Dr. Beck's article seems worth while quoting because of its chastening character for the abuses of all times:

"If we may believe the authority of Dr. Douglass, who wrote about the year 1753, and of Smith,* the historian of New York, the general character of the profession could not have been very elevated, and quackery must have flourished in great perfection. Douglass speaks of it in the following terms: 'In general, the physical practice in our colonies is so perniciously bad that, excepting in surgery and some very acute cases, it is better to let nature, under a proper regimen, take her course than to trust to the honesty and sagacity of the practitioner; our American practitioners are so rash and officious, the saying in the apocrypha (38 and 15) may with much propriety be applied to them. *He that sinneth before his Maker, let him fall into the hands of the physician!*' Frequently there is more danger from the physician than from the distemper. Our practitioners deal much in quackery and quackish medicines, as requiring no labor of thought or composition, and highly recommended in the London quack bills (in which all the reading of many of our practitioners consists) inadvertently encouraged by patents for the benefit of certain fees to some offices, but to the very great damage of the subject.' 'In the most trifling cases they use a routine of practice. When I first arrived in New England I asked a most noted facetious practitioner what was their general method of practice; he told me their practice was very uniform: bleeding, vomiting, blistering, purging, anodynes, etc.; if the illness continued, there was *repetendi*, and finally *murderandi*; nature was never to be consulted or allowed to have any concern in the affair. What Sydenham well observes is the case with our practitioners: *Aeger nimia medici diligentia ad plures migret.*'" (From overzeal on the part of physician, the patient goes over to the majority)—an expression that might very well have been adopted as a motto for many generations of medical men in the 200 years since it was written.

William Smith, who wrote a history of New York from the first discovery to the year 1732, notes another effort to influence public opinion for the purpose of securing the legal regulation of medicine, made in the same year. He said:

"The necessity of regulating the practice of physic, and a plan for that purpose were strongly recommended by the authors of the Independent Reflector in 1753, when the City of New-York alone boasted the honor of having above forty gentlemen of that faculty."

Smith wrote in 1758, and not unnaturally had something to say about the abuses existing in his

own time, in telling the story of the earlier times. He said further:

"Few physicians among us are eminent for their skill. Quacks abound like locusts in Egypt, and too many have recommended themselves to a full practice and profitable subsistence. This is the less to be wondered at, as the profession is under no kind of regulation. Loud as the call is, to our shame be it remembered, we have no law to protect the lives of the King's subjects, from the mal-practice of pretenders. Any man, at his pleasure, sets up for physician, apothecary and surgeon. No candidates are either examined or licensed, or were sworn to fair practice."

Not much immediate improvement was brought about, even by the Act of 1760. It can readily be understood that the system of quackery would have so thoroughly established itself as not easily to be eradicated and then besides, the legislation was not retroactive, nor could it be, according to English law, and consequently all those who had been engaged in the practice of medicine, however unworthy their methods, or however incomplete their education, were allowed to continue. Accordingly, it is not surprising to find Dr. Beck quoting Dr. Middleton, who gives a rather striking arraignment of the condition of affairs toward the end of the first decade after the legal regulation of the practice of medicine was supposed to have been accomplished. Dr. Middleton, who was a thoroughly competent and reasonably conservative witness, said in 1767:

"Yet many, too many, are the instances, even in this place, of men, otherwise valuable for their penetration and good sense, who have given up their own judgments to the opinions of the credulous vulgar; and joining in the belief of nostrums, or secret cures, have countenanced and even employed the most obscure and superficial traders in physic. While the practitioner of modesty and real merit, conscious of his own integrity and knowledge, and scorning the little arts of such licensed freebooters and secret homicides or to stoop to the unreasonable humors or petulance of very simple employer, has often had very circumscribed practice; or has been abandoned in favor of some ignorant or mercenary sycophant. This conduct in such men will ever discourage genuine worth and the prospect of farther discoveries in that useful profession; which in all time, and among all polite nations, has ever been esteemed honorable, and worthy of men of the first rank and learning.

Such being the state of physic here, what wonder is it that this city should be pestered in so remarkable a manner with the needy outcasts of other places, in the characters of doctors; or that this profession of all others, should be the receptacle and resource for the refuse of every other trade and employment? The wonder indeed is, that we should be such dupes to their effrontery as to employ them, or buy their pernicious compositions; not that they should frequent so beneficial a market. So amazingly easy of belief are some people in these miracle-mongers, that, as if there was something creative in the name of Doctor, seldom any other test of their skill is required than their assuming that title; so that this appellation with a competent presence of mind and a string of ready-coined cures, carefully propagated by such as find their account in carrying on the cheat, have seldom failed of procuring traffic in New-York."*

* "A Medical Discourse, or an Historical Inquiry into the Ancient and Present State of Medicine." *New York, Hugh Gaine, 1760.*

* *History of New York, by William Smith, A. M., p. 326.*

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Editorials.

SEXUAL MORALITY.

IT is a remarkable thing that the subject of sexual morality, which is closer than most others to the happiness of domestic life, should have been the most neglected of all the subjects of teaching. When Herbert Spencer asked and answered the question, "What Knowledge is of Most Worth?" he presented, as no teacher had ever done before, the preëminent importance of a knowledge of the laws of health as the supreme safeguard of the happiness of the individual. But tardily have educators proceeded to apply the great principles which he laid down. It is to the credit of the medical profession that this question of sexual morality is now just beginning to receive the attention which its importance merits. Neglected by the Church, posing as the guardian of public and individual morality; with studied care ignored by the school, from which the child should receive the instruction which best fits him for happiness and usefulness; and, saddest of all, avoided with prudish cowardice by the parent, whose obligation it is to point out the path by which the child should walk—this question of sexual morality has been left for elucidation to the lewd companions, the gamins of the street and the habitués of the brothel. It is to be hoped that the attention now being given to this subject may increase in power and in results, to the end that the neglect which it has suffered may be atoned for.

This movement which is spreading so rapidly had its beginning in the study of venereal diseases and their direful consequences; and the injuries inflicted by these diseases upon the inno-

cent have aroused the sympathies of students of this class of maladies. The committees of medical societies and the societies for sanitary and moral prophylaxis, which are engaged upon these questions, have before them a work and results even of greater importance than that of the organizations for the elimination of tuberculosis.

There is no need for hysterical revivals. The matter has been taken up by medical bodies and societies under medical guidance. The simple truth is all that is needed. That will make us free—free from the ignorance which has lain at the root of sexual sins. The physiology of the sexual organs should be *taught*, not vaguely and covertly hinted at. The fallacy of sexual necessity, promulgated by the sexual sinner, should be replaced by the knowledge that the exercise of the sexual organs is not necessary for health. The prevalence and the direful results of venereal diseases should be known, and especially their consequences to the innocent. And, finally, the meaning of *normal marriage* should be made clear to all young men and women. Marriage can be founded neither upon sexual feeling nor platonic affection; it must combine mental and animal harmony in the divine passion of love.

The teaching of the truths which are necessary for the happiness and usefulness of the child should begin at home. The greatest responsibility rests upon the parent. This instruction should be continued in the school; and the Church, and other organizations for moral instruction can well afford to devote some attention to the teaching of these most helpful truths. Education, not legislation, is the solution of this great problem. Violations of the health of the body are moral sins, in which no remedy is so effective as the simple knowledge of the truth.

Seduction and promiscuous sexual intercourse were not only not frowned upon, but were matters of parlor conversation as recently as the time of Addison and the *Spectator*. Drunkenness did not exclude a man from polite society as recently as the Civil War period. Tight lacing and piercing the ears for the purpose of hanging jewels upon them, have only within the memory of the young, become unpopular among cultivated people. It is surely not too much to hope that public opinion will soon place its stamp of disapproval upon the inequality of sexual privilege now prevalent, and demand from the man the same measure of virtue as it does from the woman.

JAPANESE MEDICINE AND SANITATION.

WE have already learned much of the Japanese methods employed in the late war in which that nation engaged. A people, however, who have advanced so rapidly, and who have, in many respects, so far outstripped all others, must for a long time remain an object of study for the nations which they have surpassed. It is no treasonable statement when we assert that, at least in the matter of the medical department of our army, we belong to one of these nations.

In a report just issued by our Government, Dr. William C. Braisted, surgeon in the navy, presents an account of the work of the Japanese naval surgeons, which he has viewed with impartial and critical eyes. He calls attention to the too prevalent custom of idealizing everything Japanese. The case is cited of an American medical gentleman who went in raptures, and indulged in superlatives which astonished the frank and simple Japanese surgeon, who was showing him one of their poorest, dirtiest, and most illy equipped hospitals. Not everything is perfected, but they are working in the direction towards perfection faster than any other nation.

Japan has roamed the world, and taken the best wherever it could be found. The people are intensely patriotic, and possess a profound reverence for law and the administrative authorities. The authorities take advantage of this for the public good. Orders issued to soldiers not to drink are obeyed explicitly. Instructions in the care of the body, the clothing, and the food, emanating from the competent health authorities, are obeyed, because the people have faith in their advisers and respect for their authority. They are thus free from the diseases of filth and of careless living. As a nation they are characterized by cleanliness. They enjoy the great advantage in sanitary matters of having at the head of their affairs men of superior intelligence and education, who make wise laws and issue instructions which the people take pleasure and pride in following.

In the making of their army they used the method of conscription, but a rigid physical examination excluded all the unfit. The splendid showing made by this army from a sanitary point of view was greatly helped by the peculiarly good character of the personnel. They started with a

well-trained force of patriotic men, in perfect health, strong, sturdy, intelligent, and accustomed to life and exercise in the open air. They were men who had indulged in but few luxuries, whose health had not been impaired by alcoholic excesses,—men who were quiet in demeanor, earnest when occasion demanded, and possessed of a saving sense of humor. Men of this sort, under the guidance of much respected officers, who are dignified but approachable, and kind, interested and tolerant, may be expected to keep in better health than the American recruit, who on account of his peculiar spirit of independence, is most difficult to control.

Surgeon Braisted, after a thorough inspection, declares that, while the Japanese hospitals are good, they are adapted to the care of the Japanese only. Their institutions would not be at all satisfactory to our people, nor could they be compared in any way with the beautiful and efficient hospitals that are to be found in almost every city of our country.

While the Japanese surgeons are devoted to their work they have excelled only in emergency surgery. They do comparatively little of the higher branches, and but little abdominal surgery is undertaken.

The honesty, the simplicity and the faithfulness of these people have made them superior.

PROTEID METABOLISM.

PHYSIOLOGICAL experiments conducted in recent times have added much to our knowledge of foods and their relation to metabolism and energy. The most important of these investigations have been conducted in the laboratories in Germany. They usually have corroborated the conclusions which have been drawn from clinical knowledge, but occasionally they have shown the error in beliefs which were based only upon crude observations. The consumption of albumin in the animal body has been studied by Voit, who affirms that in hunger the albumin which is consumed first is the circulating albumin which exists in the fluids of the body. A deficiency of albumin ingested causes a diminution of the circulating albumin, and an excess of albumin ingested causes an increase. The amount of albumin consumed in the animal body in a given time depends to a surprising degree upon the amount of albumin ingested. When the amount of proteids consumed is excessive or beyond the

normal requirements of the organism, albumin is not stored up in the system, as is the case with carbohydrates, but the albumin consumption in the tissues and the nitrogen elimination keeps pace with the excessive ingestion.

The relation of muscular energy to albumin has been elucidated especially by Caspari, who found that as a result of hard muscular labor the albumin of the tissues was not consumed but was actually increased, the materials that were consumed and converted into force being the carbohydrates. Cellular activity is the cause of increase of muscle tissue, and not excessive nourishment.

The researches of Voit, Weintraud, Krug, and Noorden, furthermore, have tended to show that debilitated, convalescent, and neurasthenic individuals, such as Mitchell had treated with rest and forced feeding, do better and are improved in nourishment more rapidly if muscular activity instead of muscular rest is employed. With muscular exercise, if the strength will permit, forced feeding can be practiced more successfully, and the accumulation of both carbohydrate and proteid tissues is promoted.

Observations.

Now is the season when the student about to graduate in medicine casts his covetous eye around for the hospital whose congenial walls shall receive him and harbor him for some two years, while he pursues the work which he hopes will culminate in the making of a doctor. He is fortunate, indeed, if he rids himself of the idea that he is after an hospital: he is wise if he is imbued with the thought that he is seeking knowledge and experience. There will be classmates of his who, without becoming internes, will excel him in both of these. The internship is but an opportunity: there are many others. The earnestness and the fidelity and the thoroughness that he puts in his study tell the story. He can get out of his cases only the knowledge that he works out of them. There is no easy-chair method. Scientific knowledge must be worked for: it is never a gratuity. So let the student try for his internship: he is fortunate if he gets it—fortunate for the opportunities which it affords. Happy is he if his college has taught him enough of a subject to whet his appetite for more.



Let us understand that we are brothers, and always students, in a great confraternity. It is for none to arrogate to himself the title of master. The interne of yesterday is the attending of today; and the knowledge of each is incomplete.

Happy the two if they work together as fellow-students in mutual helpfulness and sympathy. That hospital is a blessing in which the attending has a personal delight in the faithfulness of the house surgeon and the thoroughness and perspicuity of the historian, and in which the internes observe with pride the diagnostic acumen and therapeutic skill of the attending, which he has developed out of the same opportunities which now are theirs.

The Observer has recently heard a house physician boast that he had had entire charge of the service ever since he came on duty. My dear house physician, you might have had that anywhere in the great outside world of private practice. Here is a house surgeon who tells that he did six abdominal sections in a month, but the chances are that the attending surgeon was either lazy with satiety or indifferent with overwork.



The hospital interne is vastly better off in the hospital, where he is associated with thorough, painstaking, and conscientious attendings, who treat him as a fellow-student, working together with them to learn and to improve themselves in their branch of medical knowledge, than he is in an institution where he is given responsibilities, and goes it alone without the co-operation of those of greater experience, knowledge and skill. All his life must be one of personal responsibility; in the hospital he should bend his energies to learning from others and with others.

And here I come to the question of learning. Learning is of value as it has trained the mind and the hand, and as it is available when needed. I once saw a case of trichinosis slip through the diagnostic fingers of three men, and be caught by the fourth who had never before seen a case; and the first three could have passed a better examination in trichinosis than the man who caught the pig. The first three had been hospital internes, the last had not. Number four had no more knowledge of the subject than the others, but he had his knowledge formulated and available. He had it in prospective relation to a case of trichinosis; the others had theirs wrapped up and pigeon-holed as independent abstract material. It is the business of the student to run a wire to his knowledge, and keep the line in order.



Finally, it is not the college, it is not the hospital, it is the animus within the man that shall make him superior. If he has the thirst for knowledge, he shall have it; if he has the longing to perfect himself he shall excel. We have pretty much what we desire: provided always that we are worthy and capable. There is many a country practitioner—who once had the advantages of the help and sympathy of a good preceptor—who carefully studies his cases, thinks about them, reads about them, compares them with previous cases, who is above ready made

diagnoses and ready made prescriptions,—who is in his art and science a peer, and in his community the well-beloved physician and the noblest type of a well-rounded man.

Items.

PAID PHYSICIANS FOR BELLEVUE.—The board of trustees of the Allied Hospitals of New York have arranged to have four paid physicians in the receiving wards of Bellevue Hospital. A salary of \$600 annually has been fixed. The positions will naturally go to internes who have completed their terms of service.

A SEASIDE HOSPITAL FOR TUBERCULOUS CHILDREN.—John D. Rockefeller, Jr., has offered to the Association for Improving the Condition of the Poor the sum of \$125,000 towards the building of a seaside hospital for children suffering with tuberculous disease of the bones, joints, and glands, provided that an equal amount be raised by the association. Much of this has already been secured.

THE SMOKE NUISANCE IN NEW YORK has been taken hold of by the Academy of Medicine. A committee consisting of Drs. Joseph D. Bryant, Robert Abbe and Walter B. James has been appointed to investigate and report with recommendations. Dr. F. M. Crandall, president of the New York County Medical Society, has brought the matter to the attention of his society. The agitation of this subject will undoubtedly be productive of results.

A FIELD HOSPITAL FOR THE NATIONAL GUARD in New York State has been provided for by a law just signed by the Governor. The law provides for an extra medical organization to be attached to the State Headquarters. The personnel consists of one major surgeon, three captain assistant surgeons, six hospital sergeants, eight corporals, thirty privates, one musician, and one cook. The following medical officers have been appointed: Dr. W. S. Terryberry of the Twelfth Regiment, Dr. W. E. Butler of the Twenty-third Regiment, Dr. T. A. Neal of the Seventh Regiment, and Dr. G. M. Muren of the Forty-seventh Regiment.

ST. FRANCIS HOSPITAL.—The new St. Francis Hospital, occupying the entire block, bounded by One Hundred and Forty-second Street, One Hundred and Forty-third Street, Brook Avenue and St. Ann's Avenue, and containing 400 beds, was dedicated on March 1st.

MANHATTAN BEACH FOR CONVALESCENTS.—Comptroller Metz has recommended that the City of New York lease the properties now occupied by the Manhattan Beach and the Oriental Hotels, including the buildings, to be used as convalescent homes for the sick poor of the city. The properties can be leased for \$150,000 a year or bought for \$3,150,000.

LECTURES BY DR. L. DUNCAN BULKLEY will be given at the New York Skin and Cancer Hospital, Second Avenue and Nineteenth Street, on March 21, 28, April 4 and 11, at 4:15 P. M., on "The Principles and Application of Local Treatment of Diseases of the Skin." The lectures are free to members of the medical profession.

A LECTURE ON MALIGNANT AND NON-MALIGNANT GROWTHS will be given by Dr. William Seaman Bainbridge, on April 18, at 4:15 P. M., at the Skin and Cancer Hospital, to which the medical profession is invited by the governors of the hospital.

FOR CHEAPER HOSPITALS.—At a recent meeting of the Bellevue Alumni Dr. Russell Bellamy made a plea for cheaper hospital construction. The Japanese hospitals are constructed usually of the lightest material. Dr. Bellamy suggested that hospitals might be built of sufficiently cheap material to be burned down every five years and rebuilt.

TO COMPEL THE PUBLICATION OF FORMULÆ.—A bill has been introduced in the Legislature of New York by Assemblyman Wainwright and Senator Stevens, entitled, "An act to amend the public health law by providing for the proper labeling of proprietary and other medicinal preparations containing alcohol or narcotic or other powerful potent drugs, and for the inspection, analysis and regulation of the manufacture and sale of the same." This bill requires that the qualitative and quantitative formula shall appear upon the package of preparations coming under this law.

CONNECTICUT HOSPITALS RECEIVE AID.—The Stamford Hospital has received \$50,000 by the will of the late John Weed. The Hospital of Yale University has received \$15,000 from the estate of Mrs. Chas. P. Taft. The Litchfield County Hospital has received \$5,000 from Mrs. Julia C. Griswold.

BOSTON MILK DEALERS FINED.—For selling milk below the legal standard, twenty-four dealers in Boston have been subjected to fines since January of this year.

SANITARY AND MORAL PROPHYLAXIS.—The Philadelphia County Medical Society held a meeting on March 28, devoted to the consideration of venereal disease and its prevention. The question was discussed from both the medical and moral standpoint. Dr. Prince A. Morrow, of New York, was the principal speaker.

AMERICAN GASTRO-ENTROLOGICAL ASSOCIATION will hold its ninth annual meeting in Boston on June 4 and 5, 1906. The president, Dr. H. W. Bettmann, of Cincinnati, will deliver an address upon "The Mutual Obligations of the Surgeons and Internists in the Proper Development of Gastric Surgery."

FEDERAL ACTION AGAINST TUBERCULOSIS.—President Roosevelt has issued an order to the heads of departments in Washington, giving

instructions for the combatting of tuberculosis among Federal employees. Copies of these orders and rules to prevent the spread of the disease are to be displayed in all Federal buildings.

MEDICAL VACANCIES IN THE UNITED STATES NAVY.—Through the provisions of a law enacted by the Fifty-seventh Congress, March 3, 1903, the Medical Corps of the Navy was increased 150 numbers; 25 to be appointed each calendar year for six years. The number of vacancies occurring through retirements, resignations, and casualties average about 10 a year. There are afforded, therefore, for candidates for the position of assistant surgeon about 35 appointments each year for the six years following the above date.

For further information address President Naval Medical Examining Board, U. S. Naval Medical School, corner Twenty-third and E Streets, N. W., Washington, D. C., or President Naval Medical Examining Board, U. S. Naval Hospital, Mare Island, Cal.

MEDICAL PRACTICE DEFINED.—It has been ruled by the Supreme Court in the State of Iowa, in the case of a so-called "healer," that "a person shall be held as practicing medicine who publicly professes to heal or cure diseases or ailments of the human body, if such profession be made under such circumstances as to indicate that it is made with a view of undertaking to cure the afflicted."

AN ORDINANCE TO PROHIBIT THE DISTRIBUTION OF PATENT MEDICINES in the form of free samples from house to house or upon the streets, has been passed by the Common Council of the city of Grand Rapids, Mich. The same action has been taken by Selma, California.

MIKULICZ MEMORIAL.—A committee has been appointed to raise funds and perfect the arrangements for a monument in honor of Johannes von Mikulicz-Radecki, late professor of surgery at Breslau. The labors of von Mikulicz have greatly advanced the art of surgery, and an opportunity is thus given to honor the memory of this eminent man. Contributions may be sent to Dr. W. W. Keen, 1729 Chestnut Street, Philadelphia, Pa.

THE BRITISH MEDICAL ASSOCIATION TO MEET IN AMERICA.—The next annual meeting of the British Medical Association will be held at Toronto from August 21 to 25, 1906.

IMMUNITY TO TUBERCULOSIS AMONG LIME WORKERS.—The *Siglo Medico* makes the announcement that material is being collected on the "Immunity to Tuberculosis of Workers in Lime and Gypsum Kilns," to be presented at the International Medical Congress at Lisbon. Those who have made any observations in this line are requested to communicate them to Dr. G. Fisac, Provincia de Ciudad Real, Daimiel, Spain.

DRUNKENNESS IN LIVERPOOL.—Statistics of the past year show that arrests for drunkenness in Liverpool are decreasing among men and increasing among women. The Liverpool Society for the Prevention of Cruelty to Children dealt with over 10,000 children last year, and most of these required the attention of the society because of drunkenness among the mothers.

MEDICAL MEMBERS IN THE AUSTRIAN HOUSE OF PARLIAMENT.—The House of Parliament of Austria includes nine medical practitioners among its members. This representation has had no inconsiderable influence in the shaping of sanitary measures.

Correspondence.

TOXIC ARTHRITIS.

The paper under this title of Dr. Henry A. Fairbairn, published in the Centennial Number of the NEW YORK STATE JOURNAL OF MEDICINE, I have read with great interest, but I am sorry to say I have been disappointed, because the author does not refer to the most important of all the nomenclatures of the different forms of arthritis, the one given by Professor Max Schneller in his work "Die Pathologie und Therapie der Gelenkzundungen," published in the year 1887, and more recent definitions of Schneller's views. Schneller classifies the different forms of inflammations of the joints according to etiological moments, pathologico-anatomical changes, and the most important clinical symptoms. He discovered and described chronic villous bacillary polyarthritis, and he has shown that this form is caused exclusively by the dumbbell bacillus, discovered and demonstrated by him. He has furnished conclusive evidence that this bacillary arthritis is a distinct form, a form *sui generis* without etiological relation to rheumatic arthritis, without relation to arthritis deformans, to metastalic or other infectious arthritides. This discovery of Schneller dates from the year 1897, and it is difficult to understand that we do not find it even mentioned in American literature. By these lines I wish to draw attention to the investigations of Schneller, who is considered one of the authorities on joint diseases.

New York, March 28, 1906.

A. ROSE.

Any attempt at extended reference to the bibliography of arthritis, in the paper entitled "Toxic Arthritis," was intentionally avoided. That of recent years alone is far too voluminous for a thesis of moderate length. To turn back and review the pages of the last twenty years would weary hearer and reader to a dangerous degree. To my prompter, Dr. Rose, acknowledgment of a feeling of satisfaction is hereby made for his expression of "great interest" in my argument. The reason for a failure to refer to Schneller's dissertation is given above, and will sufficiently answer similar expressions of disappointment which may be forthcoming from others for a lack of reference to many classifications, denominated by their various admirers as "the most important." If Dr. Rose will refer to Gould's Year Book of 1898 (page 86) he will find Schneller's discovery noted in American literature.

HENRY A. FAIRBAIRN.

Brooklyn, N. Y., March 31, 1906.

Current Medical Literature.

PRACTICE OF MEDICINE.

THE DIAGNOSTIC SIGNIFICANCE OF COLIC. G. PAUL LA ROQUE says that in every case of abdominal pain, the phenomena of colic must be immediately differentiated from those of peritonitis, and refers to the following table:

Pain in Colic: Less sudden onset. Gradually rising to maximum. Waxing and waning in intensity. Paroxysmal. Less positively localized to a point of greatest intensity.

Pain in Peritonitis: More sudden onset. May be preceded by the pain of the primary lesion. No spontaneous waning in intensity; persistently severe; often positively localized; and unless diffuse, there is always a point of greatest intensity.

Decubitus in Colic: Generally doubled up, patient may lie in any position. Restlessness is marked by frequent changes in position.

Decubitus in Peritonitis: Thighs may be flexed, but no positive doubling up. Dorsal decubitus is generally assumed, and instinctively maintained.

Vomiting in Colic: May or may not occur; when present is expulsive in type.

Vomiting in Peritonitis: Practically always occurs, and is of the easy type.

Bowels in Colic: Constipation only accidental, except in intestinal obstruction and in plumbism. Purgatives are effective except in obstruction. Diarrhea may be a part of symptom complex.

Bowels in Peritonitis: Constipation marked, though purgatives in large doses may be effective. Diarrhea never present except in peritonitis arising from pelvic organs.

Peristalsis in Colic: Normal or exaggerated.

Peristalsis in Peritonitis: Never exaggerated. Absent in the segment of gut involved, but in local peritonitis this is difficult to determine.

Tenderness in Colic: Cutaneous sensibility greatly exaggerated; broad, steady deep pressure is grateful, though a vague deep-seated tenderness of the causative lesion may be elicited.

Tenderness in Peritonitis: Skin tenderness insignificant as compared with the fixed deep seated excruciating tenderness.

Muscular Rigidity in Colic: Never positive nor continuous, except in plumbism or great distention. May be overcome by gentle, steady pressure, and is not confined to a small circumscribed area.

Muscular Rigidity in Peritonitis: Always reflexed and continuous. Not easily overcome by pressure. In localized disease may be circumscribed.

Diaphragmatic Mobility in Colic: Never impaired, except by great distention. Movements are not generally causative of pain.

Diaphragmatic Mobility in Peritonitis: Generally reflexly diminished, especially when the upper abdomen is involved. Sudden efforts, such as coughing and deep breathing, are painful.

Meteorism in Colic: May or may not occur; not characteristic, except in obstruction.

Meteorism in Peritonitis: Generally noted early, though in many cases slight till disease becomes well marked.

Leucocytosis in Colic: Rarely present and never progressive.

Leucocytosis in Peritonitis: May not be present, but generally exists, and if progressive is of diagnostic value.

Fever may or may not exist. A sudden fever, especially if preceded by rigor, points to peritonitis, though its absence is perfectly compatible with this disease.—*New York Medical Journal*, March 24, 1906.

TWO POSSIBLE CAUSES OF EMACIATION NOT GENERALLY RECOGNIZED. RICHARD C. CABOT says that loss of weight, gradual or fairly rapid,

is often observed as part of the aging process in persons past middle life. Associated with this, arteriosclerosis is often found, possibly as the result of it, possibly as the concomitant effect of some third factor, so far unknown. The rapid gain in weight often observed in growing children and in convalescence from wasting diseases is not directly a result of abundant food, and may occur even when the food supply is below the normal. This gain must be due to an extraordinarily rapid cell production, due primarily to heightened growth energy in the cells themselves. That influence, connected with the organs of sex, may exert a controlling force on nutrition is strongly suggested by the changes in flesh and figure following parturition and the menopause. The importance of internal secretions in the maintenance or perversion of nutrition is exemplified in the emaciation of Graves' disease, the increased weight of the myxoedematous, and perhaps in the more local hypertrophies of acromegaly and Paget's disease. The possible decisive influence of insomnia on weight is suggested by the rapid emaciation occurring in cases of aneurysm when sleep is prevented by pain, although the appetite remains.—*Jour. Am. Med. Assoc.*, March 17, 1906.

A MORE LIBERAL DIET IN TYPHOID FEVER. T. A. CLAYTON recommends a more liberal diet in enteric fever. It has been his custom to begin the treatment of a case of typhoid, no matter on what day the case came under his care, with the regulation six ounces of milk every two hours, night and day, while awake. Animal broths are given in place of milk to vary the monotony. Each day after the subsidence of the more acute symptoms, the patient is asked if he feels hungry; and if he is, a soft boiled or poached egg is allowed, and if well borne the number is gradually increased to three or more a day. The next additions are jelly, custard, soft toast, soft parts of a baked apple, or well-boiled rice. The last to be used are scraped beef or chop, chicken and baked potato. Each case must be studied and treated individually. Of 26 cases treated this way all recovered. In five cases one or more hemorrhages occurred.—*Med. Record*, March 17, 1906.

WITHOUT MOSQUITOES THERE CAN BE NO YELLOW FEVER. JAMES CARROLL is of the impression that the yellow fever parasite belongs to the animal kingdom, for the following reasons: It is absolutely necessary for its continued residence that it pass alternately, through man and mosquito, and its parasitic existence in these hosts is obligatory.

The fact that a period of about two weeks must elapse before the contaminated mosquito is capable of infecting, points to a definite cycle of development in that insect.

The limitation of its development cycle to mosquitoes of a single genus, and to a single vertebrate, conforms to a natural zoological law, and does not agree with our present knowledge of the life history of bacteria.

The effects of climate and temperature upon stegomyia and upon the rate of development of yellow fever parasite within the body of the insect are exactly the same as the effects of the same conditions upon the anopheles mosquito and the malarial parasite. That yellow fever is non-contagious has been proved.

There should be, therefore, a war against mosquitoes.—*Am. Medicine*, March 17, 1906.

THE ETIOLOGY OF THE HEMORRHAGIC DIATHESIS. W. W. CARTER treats this subject in a broad sense as an acquired transient condition; and from a more restricted view, as a hereditary, habitual affection known as hemophilia. He thinks it is a temporary tendency to bleed, and is usually developed secondarily to some disease or condition in which there is a marked disturbance in the physiological relations between the blood and vessel walls. It is classified as follows: 1. Infectious diseases and toxic conditions as etiologic factors, such as malaria. 2. Cachectic conditions. 3. Purpura hemorrhagica. 4. Hemophilia. A

transient type is sometimes developed in severe types of acute infectious disease, as in measles, variola, typhus, and infections of the new-born. It is entirely symptomatic and due to the chemical action of the toxins on the walls of the vessel, and to their poorly nourished condition. The hemorrhages are petechial in character, and can scarcely be considered more than indicative of a very intense degree of infection. In hemophilia the predisposing element is heredity; the proportion of males to females affected is about one to thirteen; the Anglo-German and Jewish races seem more predisposed to it, and it may be due to the greater frequency of consanguineous marriages among these people. The opinions as to the etiology differ widely.—*Am. Medicine*, March 24, 1906.

SURGERY.

THE RESULTS OF THE SURGICAL TREATMENT OF EXOPHTHALMIC GOITRE. B. F. CURTIS, of New York, says that while there has been an apparent increase in the opposition to surgical treatment of this disease, the results of non-operative measures have not improved very much, in spite of the various serums and of the Roentgen rays. In his opinion, surgical treatment should be reserved for severe cases which have resisted medical treatment; but this does not mean that it should be undertaken only as a last resort and forlorn hope. The only operations which he considers are partial thyroidectomy and extirpation of the cervical sympathetic nerves and ganglia.

Although the results of sympathectomy were fairly good, after operating upon four cases, the author, hoping to secure better results, turned his attention to partial thyroidectomy. Ten cases of partial thyroidectomy showed better results, eight cases being practically cured of their symptoms.—*Annals of Surgery*, March, 1906.

PRIMARY WOUND CLOSURE WITHOUT DRAINAGE IN EARLY APPENDICITIS OPERATIONS. J. BORELIUS, of Lund, Sweden, reports cases showing that the abdomen may be closed after operations in the acute stage often, as well as in the interval operations for appendicitis. He presents the statistics of the surgical clinic of Lund for the year 1905; 123 cases were treated. Of these, 108 were operated upon, and 15 not operated; 59 were operated in the acute stage, and 49 in the chronic stage, or in the so-called interval. Four cases, all from the acute stage, died. Most of the acute cases were operated upon the second day of the disease. In 43 of the acute cases drainage was used; in 16 cases no drainage was used. These 16 cases were operated mostly on the first and second day of the disease. The author lays down the rule that the earlier one operates in these cases the oftener can closure without drainage be used.—*Zentralblatt für Chirurgie*, Nr. 4, 1906.

SOLID TUMORS OF THE MESENTERY. J. VANCE, of El Paso, Texas, finds in the literature but twenty-seven cases of tumor of the mesentery. These were, in the order of frequency—fibroma, sarcoma, lipoma, myxofibroma, carcinoma, lymphangioma, tuberculosis, colesteoma, hematoma, myxoma, and a large spindle-celled tumor. Out of these twenty-seven operations there were thirteen resections of gut. The author reports a case of a woman of twenty-six years of age, who had had a movable swelling in the abdomen just to the right of the navel, since she was twelve years old. At the age of eighteen it was the size of an apple. After the birth of two children the tumor grew more rapidly and began to give pain. The patient suffered with suppression of urine, and when operated upon was in bad condition. A rapidly growing sarcoma was found, involving the mesentery, and spreading out under the peritoneum in every direction, pressing the ureters, and impossible of removal. This tumor had evidently been a benign growth of some sort until the last few months, when it had taken on a malignant change.—*Annals of Surgery*, March, 1906.

CHYLOUS CYSTS OF THE MESENTERY. M. F. PORTEK, of Fort Wayne, Indiana, reports nineteen cases from the literature and one from his own experience. He concludes that chylous cysts of the mesentery are surgical rarities. Many begin as multiple cysts, later become multilocular, and finally unilocular by process of pressure-absorption. Trauma seems to be a causation factor in the origin of this disease. The treatment consists in the removal of the cysts by the technic which seems best adapted to the case in hand. Fourteen of the twenty cases have been operated upon, with three deaths. Of the eight cases, treated by excision of the sac, six recovered. Of the five, treated by stitching sac to abdominal wall and draining, all recovered. Six cases were reported post mortem.—*Annals of Surgery*, March, 1906.

LOCAL ANESTHESIA IN OPERATIONS. T. C. WITHERSPOON, during 1903, operated on 105 patients under local anesthesia as follows: Three partial thyroidectomies for exophthalmic goitre; one ligation of left sup. thyroid artery for goitre; one resection of spinal accessory nerve for torticollis; three radical operations for malignant breast tumor; two resections of ribs for empyema; two abdominal explorations; two operations for hepatic cirrhosis (omentopexy with partial hepatectomy); two gastrotomies; two gall-stone operations (removal with drainage); three appendectomies in the interval between attacks; one left inguinal colostomy; one decortication of right kidney; one drainage of right kidney pelvis; one nephrectomy for kidney tuberculosis; two hysteropexies for retroverted uterus; one myomectomy for fibroid of the uterus; two operations for removal of large ovarian cystoma; three radical inguinal herintomies; two radical umbilical herintomies; three perineal cystomies; two operations for removal of tumor of testicle; one open operation for Dupuytren's contraction of the palmar fascia; two operations for Hallux Valgus (Tubby); and two radical operations for varicose veins of leg; in one patient both legs were varicose. Operation consisted in the removal of a section of the internal saphenous (Treudelenburg) and a circular subcutaneous division of the veins of the leg.

The other operations included circumcision, radical removal of varicocele; removal of superficial tumors, dead bone and foreign bodies; opening of abscesses; division of fistulae and fissures; radical removal of hemorrhoids, and radical removal of inner quarter of nail of large toe for ingrowing nail. He uses 1-10 per cent. of a solution of beta eucaine freshly made, and finds this simple solution perfectly satisfactory.—*St. Louis Med. Review*, March 24, 1906.

THE MODERN TREATMENT OF FRACTURES. CARL BECK says that the Rontgen method, in combination with the usual methods of examinations, determines the character of a suspected bone injury. If there is no injury to the bone, the proper treatment is massage followed by immobilization with a movable splint. If there is a fissure or fracture with no displacement, all manipulation should be avoided and immobilization in the most comfortable position applied. Plaster of Paris usually answers this purpose. At the end of two or three weeks this should be removed and massage begun. In case of displacement, reduction must be accomplished or tried at once. This can be either under the control of the fluoroscope on a translucent table, a plaster of Paris dressing being applied after reposition is perfect. This method is simple, short and cheap. A more tedious but safer way is to reduce the displacement under the guidance of a skiagraph taken before. This will indicate in which direction the efforts at reduction must be made and how far. After a plaster of Paris dressing, padded with cotton layers at its end only, is applied, the skiagraph is taken through it, to ascertain whether reposition is complete; if not, reposition must be done over again. An anesthetic should be used if necessary. In those cases in which, on account of entangling of the fragments, extensive

splinter formation, or similar complications, reposition, even under anesthesia, cannot be accomplished, the fragments must be exposed by the scalpel and brought into apposition. If there be no tendency to displacement, a plaster of Paris dressing will insure immobilization. If the fragments slip out easily it is safer to unite them with catgut, provided there is enough periosteum to be utilized for that purpose. It is best, otherwise, especially if large bones come into consideration, to keep them together with a bronze wire suture. The sooner this is done, the better it will be, on account of the fewer changes taking place in the soft tissues.—*Med. Record*, March 24, 1906.

SURGICAL INTERVENTION IN BENIGN GASTRIC LESIONS. A. J. McCOSH says that as a result of modern gastric surgery the following conclusions have been logically reached:

1. That many gastric symptoms formerly considered as purely functional are caused by distinct anatomical conditions or pathological lesions.

2. That for diagnostic purposes the stagnation test is of much greater value than is any chemical examination of stomach contents.

3. That spasmodic pyloric contraction frequently occurs as the result of derangement of gastric secretion or abrasions of the mucous membrane of the stomach and duodenum.

4. That gastric hemorrhage frequently occurs without the existence of the typical round ulcer, the bleeding emanating from minute abraded spots or cracks, which may be scattered about throughout a patch of intensely congested mucus membrane.

5. That not uncommonly, large inflammatory masses, constituting a palpable tumor, may exist, caused by and surrounding an ulcer. Formerly such masses were considered malignant. In many, gastroenterostomy was done, and a fatal end, in the course of a year or so, prophesied. We now encounter some of these patients in a perfect state of health many years later, with complete disappearance of the mass. Based upon such an experience, we can now generally, at the time of operation, arrive at a correct diagnosis of the character of these masses.

6. That duodenal ulcers are of frequent occurrence. While less common than gastric, they yet are now supposed to exist in the proportion toward the latter of 1 to 3. This is the view held by the operators. We must, however, remember that, as Jacobi has wisely stated, neither specialists, hospital surgeons nor even hospital physicians are the best judges of either the frequency or curability of the ulcers of the intestinal tract.

7. That in the great majority of cases of contracted pylorus, whether it be due to pyloric spasm, inflammatory hyperplasia of the circular muscular fibres, or stricture with adhesion from an ulcer, a gastroenterostomy will effect a cure, or at least markedly relieve the symptoms.

8. That in a long series of cases, the mortality of this operation should not be over 5 per cent., provided that through neglect the patients have not been allowed, by so-called conservative treatment, to drift into a semi-moribund condition.

9. That in cases of simple dilatation with atrophy of the stomach without constriction of the pylorus, a gastroenterostomy will generally fail to cure the patient.

10. That following gastric operations, there must be, if we strive for perfect results, continuous dietetic and hygienic treatment, extending over months or even years.—*N. Y. Med. Jour.*, March 17, 1906.

PRACTICAL POINTS IN THE SURGERY OF THE LARGE BOWEL. C. B. NANCREDE, of Ann Arbor, Michigan, after reporting a number of illustrative cases of operations upon the large intestine, calls especial attention to the fact that neoplasms of the large intestine give rise for long periods to little beyond what is called by patients constipation and attacks of cramp-

ing pains with some passing distention; and that this may be all that has been noticed, when during operation, or at the post mortem, the lumen of the bowel seems incapable of transmitting feces. Vomiting is a late or even absent symptom, but may suddenly supervene with all the symptoms of acute obstruction. He also concludes that we are too accustomed to disregard the possibilities of localized, massive formations of tubercle with matting together of adjacent structures, occasionally simulating malignant neoplasms. In doubtful cases tuberculin might settle this question. Again the desirability of opening the intestine to produce sufficient collapse to enable the operator to deal radically with a stricture in the presence of acute obstruction is questionable, unless by this device side-tracking by a lateral anastomosis be rendered possible between a loop above and below the obstruction, otherwise colostomy or enterostomy is the proper operation. Too often the attempt is made to eradicate malignant disease by free resection, when side-tracking would be equally efficient and productive of as much palliation as resection, with vastly less risk to life. Lateral anastomosis, he says, is superior to end-to-end suturing or the Murphy button, while it can be successfully employed where sutures are out of court, *i. e.*, when one end or the ends of the bowel are bound down, thus preventing the free handling and ready access to all portions of the line of union so essential for securing suturing.—*Annals of Surgery*, March, 1906.

IRRIGATION OF THE ABDOMINAL CAVITY FROM A BACTERIOLOGICAL STANDPOINT. T. W. VAUGHAN says that the habit of irrigation in infectious conditions of the peritoneum is a pernicious one, and without scientific or clinical endorsement, and one which appears to be as difficult for the general surgeon to give up as anterior suspension or fixation has been for some gynecologists. Many of the leading surgeons have abandoned irrigations in peritonitis from appendiceal trouble, and their results alone should cause others to follow. Why should the same principle be adopted in typhoid perforations, and in fact perforations from any cause? He further believes that if this course was generally adopted the mortality would be markedly reduced.—*Jour. Am. Med. Assoc.*, March 17, 1906.

GENITO-URINARY SYSTEM.

CONSERVATIVE TREATMENT OF URETHRAL STRICTURE. G. M. MUREN advocates gradual dilatation in the treatment of urethral stricture. In men after middle life, before any instrumentation, he also recommends thorough flushing of the anterior urethra. The best lubricant is made from Irish moss, and a little formalin is added. This has proven the most satisfactory to him. The author has been more successful in filling the urethra with a number of straight instruments, successively attempting the passage of each, then in the use of instruments having twisted or curved ends. All stricture patients with healthy bladders should hold their urine a couple of hours before treatment. Voided immediately after dilatation it irrigates the urethra without discomfort.—*Med. Record*, March 17, 1906.

AN ATTEMPT TO PREVENT CATHETER-CYSTITIS. R. GERSUNY says that the usual sterilization of instruments, the cleansing of the vestibule, and the injection of an antiseptic fluid into the bladder before withdrawing the catheter, have diminished the possibility of cystitis, still it does occur and too often for the comfort of the surgeon. He calls attention to traumatism of the bladder mucous membrane as a contributing cause of cystitis. After the catheter is introduced, the urine runs freely until the bladder wall is felt forcibly to impinge upon the catheter; the finger then closes the outer end and the catheter is withdrawn. The mucous membrane, which has been sucked against the side opening of the catheter, is ren-

dered hyperæmic or some of its epithelial cells are detached. This leaves a locus of lessened resistance where, if infection becomes implanted, it produces inflammation. Gersuny has had constructed a hard rubber catheter, consisting of a slightly curved tube, without side openings, and with a shoulder, 6 cm. from the vesical opening, to prevent entrance into the bladder too far. This shoulder is in the middle of the catheter, which has a slight curve like the italic letter *f*. The ends of this instrument are smoothly rounded. The calibre of the tube is 0.5 cm., which is much smaller than the ordinary catheter and allows the urine to escape more slowly and naturally. After using this catheter in a large number of cases, he has found much less cystitis, which improvement he attributes chiefly to the absence of side openings and to the smaller calibre. *Zentralblatt für Gynäkologie*, Nr. 4, 1906.

THERAPEUTICS AND MATERIA MEDICA.

THE VALUE OF ALCOHOL IN CARBOLIC ACID POISONING. THOMAS W. CLARKE and EDGAR D. BROWN have carried out a series of experiments from which they conclude that alcohol has a local antidotal effect in carbolic acid burns, due to its solvent action. There is no evidence of chemical antagonism between alcohol and phenol, and there is no effect produced by alcohol in carbolic acid poisoning after the latter has been absorbed into the system. Alcohol and phenol placed in the stomach give no different results from phenol alone, while lavage with alcohol is effective when the phenol is in the stomach; but its superiority over lavage with water is pronounced.

From the clinical aspect it appears that alcohol has a local antagonism to carbolic acid. The procedure recommended is immediate, abundant lavage with 10 per cent. alcohol to be followed by lavage with plain water and stimulation with strychnine and digitaline, eggs and milk with magnesium phosphate. The point to be borne in mind is that alcohol is not effective after the carbolic acid has been absorbed, and to be of value must be used while the poison is still in the stomach.—*Jour. Am. Med. Assoc.*, March 17, 1906.

CAMPHOR IN DISEASES OF THE LUNGS. HOFERAT DR. VOLLAND, of Davos-Dorf, cites at length a case of influenza sequelæ accompanied by temperature and clogged pulmonary alveoli and dyspnoea, with attacks of cardiac weakness. After these attacks the pulse was weak and thready, 150 to 180 a minute. He was given hypodermics of 10 per cent. camphor oil every 10 or 15 minutes. With this treatment the facial cyanosis gradually lessened. Dyspnoea continued however. These attacks occurred with more or less frequency, and once during straining at stool, a slight hemoptysis occurred; also he had one attack of Cheyne Stokes respiration. This condition continued with more or less frequency for six months. Pulse then was more regular, of a better tension and quality and about 100 a minute. Hypodermic injections of camphor had been assiduously used three times daily. One month later pulse was about 80. During this period of seven months he was given about 350 hypodermic injections; in all about 35 grams of camphor. Rales and coughs also disappeared. The author cites several cases of tuberculosis, chronic cardiac weakness and asthma, in which camphor was used successfully, bringing about an entire amelioration of all symptoms.—*Therapeutische Monatshefte*, February, 1906.

GYNECOLOGY.

DISPLACEMENT OF THE FALLOPIAN TUBES TO PRODUCE STERILITY. A. E. ROCKEY reports five cases illustrating the justifiability to produce sterility. There are conditions in which the possible occurrence of pregnancy would expose the patient to danger which it is most desirable to avoid. Ordinary measures are not infallible. The author

recommends the displacement of the uterine ends of the Fallopian tubes, either through an anterior vaginal incision or a very short suprapubic incision, and gives his technic as follows:

When the cornu of the uterus is brought into the field of incision, the tube should be seized near its uterine end with the forceps. The sharp point of the scissors is thrust into the cornu, and the uterine end of the tube is cut out by a V-shaped incision. The wedge-shaped point of the excised end of the tube is then cut off so that the severed end of the tube will slip into the peritoneal sheath and be completely covered by it. Through this cuff is then passed one catgut stitch, then through the fundus posterior to the inner end of the V-shaped incision from behind forward, and is tied, thus fastening the closed end of the tube back of its original position. Two more stitches are passed around the tube and through the cornu close to the V. The tube is fastened to the outside of the closed cornu.—*Med. Record*, March 17, 1906.

GONORRHEA IN WOMEN. PALMER FINDLEY is of the opinion that a diagnosis of gonorrhœa can be made certain by the detection of the gonococcus in the tissues. On account of the small size of the gonococcus, this is often a hard procedure. Grave mistakes have been made in diagnosis by assuming that no infection is present because the usual complaints of an acute infection are not given by the patient. Since the cure of gonorrhœa is so unsatisfactory, and when deeply seated is usually only accomplished by mutilating and unsexing operations, prophylaxis becomes the paramount issue in the management of gonorrhœa in the female. Unfortunately, it is not alone the laity which is in need of education in this respect; the profession is often guilty of being too hasty in pronouncing a cure and in giving sanction to marriage and to the resumption of the marital relation. Untimely interference with uterine and urethral applications in the early stage of the disease too often causes an extension of the infection and makes a serious lesion of what might otherwise have been a self limiting disease. A man should not marry until repeated bacteriological examinations have demonstrated the entire absence of the gonococci. When the wife is infected, pregnancy should be interdicted until a cure is effected.—*Am. Medicine*, March 17, 1906.

THE UTERUS AND OVARY OF NEURASTHENIA. R. L. DICKINSON, in over one hundred cases, observed the associated lesions in this class of cases.

1. In the ovary, chronic oophoritis, chiefly microscopic.
2. In the uterus, endometritis, usually cervical, was present in the majority of cases, and was seldom accompanied with thickening.
3. A high degree of sclerosis of the vessels of the uterine walls and of those of the endometrium was sometimes discovered in cases of long standing, and the venous enlargements were many.
4. About the vulva, certain hypertrophies were noted in two-thirds of the cases.
5. In the bladder, congestion of the trigone was frequent.
6. In the rectum, catarrh, congestion, and atony were present and persistent in a large number.—*Med. Record*, March 24, 1906.

THE STATE LUNACY COMMISSION has awarded contracts for improvements in the State hospitals at Rochester, Poughkeepsie and Willard. At the Hudson River State Hospital a refrigerating plant is to be installed at a cost of \$7,395. A new cold storage building is to be constructed at Willard at a cost of \$10,131, with refrigerating machinery to cost \$7,163. The equipment of these State institutions is rapidly being made as perfect as possible.

THE STATE BOARD OF CHARITIES has recommended to the Legislature that the Craig Colony of Epileptics be enlarged as rapidly as possible, so that it may be able to take epileptics of all classes from alms houses and other places where they cannot receive proper care.

Medical Society of the State of New York.

Franklin, Niagara, Oneida, Ontario, Rensselaer, Rockland, Richmond, Ulster and Westchester County Medical Societies have adopted new by-laws in conformity with the State by-laws.

Notices that meetings will be called in April and May, to adopt new by-laws, have been received by the Secretary of the State Society from the Medical Societies of the Counties of Albany, Chemung, Chenango, Delaware, Essex, Greene, Oswego, Steuben, Sullivan, St. Lawrence, Warren, Washington, Wyoming and Suffolk.

Before May 1st, three-fourths of the County Societies of the State will have adopted uniform by-laws.

This number of the JOURNAL contains a copy of the Principles of Medical Ethics of the American Medical Association, which are to be submitted to a referendum vote of the society, in pursuance with the agreement of the Joint Committee of Conference, *Section Seventh*, as soon as all the County Societies have sent in corrected lists of their members.

The History of the Medical Society of the State of New York, by Dr. Walsh, is really a history of medicine in New York State. It is designed to make this complete and accurate; and to this end the author invites corrections, criticism, and comments. Any one having documents, pictures, or information bearing upon the early history of medicine in this State is requested to communicate with Dr. Walsh or the Editor.

THE OSTEOPATHIC BILL OBJECTED TO BY THE MEDICAL SOCIETY OF THE COUNTY OF ERIE.

The Medical Society of the County of Erie has sent the following communication to each member of the Senate and Assembly of New York State:

BUFFALO, N. Y., March 20, 1906.

Dear Sir:

The Medical Society of the County of Erie asks you to give consideration to the following objections to Senate Bill Number 293:—

This Bill is specious and misleading and contradicts itself flagrantly. It seems to recognize the policy of the State regarding the importance for a high standard of preparedness for those who would "treat diseases of the human body," and yet it would license an enormous number of persons to this high privilege without giving the State a chance to test one of these persons as to their fitness for this professional responsibility. Its advocates vehemently claim that they ask only for a square deal, and yet, upon its face, this bill deals

most unequally with the persons it proposes to make members of its examining board, the persons it proposes to license without examination, and with the persons it proposes to license after examination. The State of New York cannot afford to be so glaringly inconsistent.

Again, the bill is grotesquely absurd in its provisions in that it asks the State to declare that it is in the interest of the Public Health that persons without limit of number should be licensed to treat "diseases of the human body" and that said unnumbered persons should not be allowed "to prescribe drugs or to perform surgery." The advocates of this bill are untrue in their statements, that should the State license the persons described by Section 6, lines 3 to 18, the State would only be doing for such persons just what the State had formerly done for the physicians, the fact being that never in the last one hundred years has any person been licensed to practice medicine in this State save after the completion of the legal preparation for such practice and after examination by some duly constituted body, authorized by law to make such examination and to grant such license. The allegation that men have ever been licensed to practice medicine in the State of New York in a general way and in bulk after the manner of the provisions of Section 6 of this bill is false in general and in particular.

Again this bill is objectionable in its general direction, that is toward the multiplication of Examining Boards. There is one science of medicine and only one the State can ever know. There are as many styles of its practice as there are individuals engaged in that practice and of the relative value of these styles, opinions will differ. The State is concerned that the science of medicine should be encouraged and that the practice of medicine should be in as safe hands as possible, and the State is anxious to see one Examining Board where we now have three. Each step in the opposite direction, each new Examining Board is a step backward, and this fact is so obvious to all that it is scarcely necessary to point your attention to the fact that in 37 of our States the New York Medical Law has been copied save that these States have a single board.

As we have before stated, the bill provides three separate standards or requirements for the practice of osteopathy:—One standard for the Examining Board, a second standard for those who are to be licensed in the future, and a third standard for the persons practicing osteopathy at the time when this law shall go into effect.

1. The Board of Examiners are to be chosen from a list of ten persons recommended to the Regents by the New York Osteopathic Society, all of whom are to be graduates of a School of Osteopathy, which now maintains a standard recognized by the Education Department of the State of New York, and they are to show that they are graduates in good standing of "an Osteopathic Institution of Learning" at which students are given instruction in anatomy, physiology, pathology, chemistry, obstetrics, diagnosis and the theory and practice of osteopathy. It will be observed that this set of provisions does not make it necessary for the examiner to have actually studied these subjects, nor need he produce any proof that he has ever actually studied these subjects. Take, for example, a School of Osteopathy located outside of the State of New York in which these medical subjects were not taught originally, but in which these subjects are now taught, and which now conforms to the requirements of the Regents. Under this section of the Statute a graduate of this institution is eligible and must be appointed by the Regents merely on proof that he is a graduate, without reference to how much he knows or how much education his school furnished at the time when he was graduated.

2. The provision relating to the license of future applicants is more rational. These applicants must prove by oath the following facts:

1. That he is more than 21 years of age.
2. That he is of good moral character.

3. That he has the general education required preliminary to admission to examination to practice medicine and dentistry in this State.

4. That he has been graduated from a regularly conducted School of Osteopathy maintaining a standard to be approved by the Education Department of the State of New York, and conferring the degree of Osteopathy.

The section contains a novel feature, however, in permitting the Regents to accept as an equivalent for any part of the three of said requirements above referred to, evidence of five or more years' reputable practice of osteopathy. It is a question whether, under this section, the Regents can require proof of the length of time which the applicant has studied and whether they can require proof of his having studied anatomy, physiology, pathology, chemistry, obstetrics, diagnosis and the theory and practice of osteopathy.

3. In Section Six of the Law providing for a license of persons now practicing osteopathy, we have set forth clearly the object of this statute. Under this Section all that practicing Osteopaths need to show is that they are graduates of a School of Osteopathy, etc., requiring courses of study of two years or longer, with an actual attendance of not less than twenty months and which now require a course of not less than three full years of at least nine months each of any three different calendar years, and requiring thorough study in anatomy, physiology, etc., which facts are to be shown by their diplomas and affidavits. It is impossible to tell from the reading of this ambiguous section whether the School must be one now requiring a thorough study in anatomy, physiology, etc., or a School which did require these subjects at the time when the applicant was graduated. The strange use of "requiring" and "required" makes the object of the section thoroughly obscure. These facts, however, are clear: The applicant need not be a resident of this State nor a citizen of the United States, nor a person of full age; he need not show that he has ever studied anatomy and the other medical subjects mentioned. All that he is required to show is that he is a graduate of a regularly conducted school, having a two years' course and which now has a three years' course. The School need not be one approved by the Regents. Any graduate of any regularly conducted School must be licensed on the recommendation of the Examining Board, provided the School had a two years' course and now has a three years' course.

4. There is not a single Osteopathic Institution situate in the State of New York nor is there any institution in this State in which osteopathy is taught. Under these various standards the whole question is whether a man has been graduated from any regularly conducted School of Osteopathy. In this connection it is interesting to study what are the standards maintained by these various Schools of Osteopathy. The Atlantic School of Osteopathy at Buffalo was a leading institution, and during its entire career graduated about 100 students. During the summer of 1905 it was closed up and driven out of the State by a criminal prosecution, instituted by the Board of Regents. The School has since been declared in an action of law to have been illegal and unlawful. Under this statute all of its resident graduates will be licensed as regular practitioners. The Faculty of the Atlantic School, in which obstetrics, anatomy and the other medical subjects were taught, consisted of 12 osteopaths, one dentist and two physicians. The School advertised to teach and did teach obstetrics, pathology, etc. The report to the Regents showed that in anatomy no dissecting was ever done by students, that in pathology no autopsies were ever witnessed; that in obstetrics only one case was observed in the space of a year and a half. Almost no clinical work was ever observed and the one noteworthy result of the college dispensary was an action of malpractice brought against the college, and which was settled by the payment of a sum of money to the plaintiff.

The advertisement of a large school at Kirksville,

which is a leading American school, shows that in 1892 the Faculty consisted of only one man, the founder, the equipment a small room in a cottage and the student body a half dozen men and women. The first class graduated there was graduated in 1894, so that the oldest living graduate of "an osteopathic Institution of Learning" has not been practicing 12 years.

5. One virtue claimed for this law is that in any medical subjects applicants must pass the same examination which is prescribed for medical students. A close reading of Section 7 shows that this is not the case. That section which is loosely copied from the Public Health Law provides that all the questions to be asked by the Regents must be taken from the list of questions submitted by the Board of Osteopathic Examiners. It further provides that in Medical subjects these questions are to be the same as for candidates for license to practice medicine. This is an impossibility, for if the questions are to be taken from the questions submitted by the Osteopathic Examiners, they cannot be the same questions which are proper for the Medical Examiners.

The Medical Society of the County of Erie denounces this bill as a pernicious measure. It believes that its passage would lead to evils so great as to be criminal in character; it recognizes that its main object is to legalize the practice of the thousands of osteopaths now practicing in this State, rather than to provide for the education of others in the future, and it respectfully, but most positively and forcefully, requests the representatives of the people of the entire State in Senate and Assembly to exhaust all reasonable means to defeat the aforesaid bill.

We present this petition and urge this protest without prejudice against the osteopath personally and altogether aside from the merits or demerits, if there be any such, of the system employed.

Signed for the Medical Society of the County of Erie by the Committee on Legislation.

ARTHUR G. BENNETT, M.D., Chairman,
ERNEST WENDE, M.D.
WILLIAM C. KRAUS, M.D.

PRINCIPLES OF MEDICAL ETHICS OF THE AMERICAN MEDICAL ASSO- CIATION.

The American Medical Association promulgates as a suggestive and advisory document the following:

CHAPTER I.

THE DUTIES OF PHYSICIANS TO THEIR PATIENTS.

SECTION 1.—Physicians should not only be ever ready to obey the calls of the sick and the injured, but should be mindful of the high character of their mission and of the responsibilities they must incur in the discharge of momentous duties. In their ministrations they should never forget that the comfort, the health, and the lives of those entrusted to their care depend on skill, attention, and fidelity. In deportment they should unite tenderness, cheerfulness, and firmness, and thus inspire all sufferers with gratitude, respect, and confidence. These observances are the more sacred because, generally, the only tribunal to adjudge penalties for unkindness, carelessness or neglect, is their own conscience.

SEC. 2.—Every patient committed to the charge of a physician should be treated with attention and humanity, and reasonable indulgence should be granted to the caprices of the sick. Secrecy and delicacy should be strictly observed; and the familiar and confidential intercourse to which physicians are admitted, in their professional visits, should be guarded with the most scrupulous fidelity and honor.

SEC. 3.—The obligation of secrecy extends beyond the period of professional services; none of the privacies

of individual or domestic life, no infirmity of disposition or flaw of character observed during medical attendance, should ever be divulged by physicians, except when imperatively required by the laws of the State. The force of the obligation of secrecy is so great that physicians have been protected in its observance by courts of justice.

SEC. 4.—Frequent visits to the sick are often requisite, since they enable the physician to arrive at a more perfect knowledge of the disease, and to meet promptly every change which may occur. Unnecessary visits are to be avoided, as they give undue anxiety to the patient; but to secure the patient against irritating suspense and disappointment the regular and periodical visits of the physician should be made as nearly as possible at the hour when they may be reasonably expected by the patient.

SEC. 5.—Ordinarily, the physician should not be forward to make gloomy prognostications, but should not fail, on proper occasions, to give timely notice of dangerous manifestations to the friends of the patient; and even to the patient, if absolutely necessary. This notice, however, is at times so peculiarly alarming when given by the physician, that its deliverance may often be preferably assigned to another person of good judgment.

SEC. 6.—The physician should be a minister of hope and comfort to the sick, since life may be lengthened or shortened not only by the acts but by the words or manner of the physician, whose solemn duty is to avoid all utterances and actions having a tendency to discourage and depress the patient.

SEC. 7.—The medical attendant ought not to abandon a patient because deemed incurable; for continued attention may be highly useful to the sufferer and comforting to the relatives, even in the last period of the fatal malady, by alleviating pain and by soothing mental anguish.

SEC. 8.—The opportunity which a physician has of promoting and strengthening the good resolutions of patients suffering under the consequences of evil conduct ought never to be neglected. Good counsels, or even remonstrances, will give satisfaction, not offense, if they be tactfully proffered and evince a genuine love of virtue accompanied by a sincere interest in the welfare of the person to whom they are addressed.

CHAPTER II.

THE DUTIES OF PHYSICIANS TO EACH OTHER AND TO THE PROFESSION AT LARGE.

ARTICLE I.—DUTIES FOR THE SUPPORT OF PROFESSIONAL CHARACTER.

SECTION 1.—Everyone on entering the profession, and thereby becoming entitled to full professional fellowship, incurs an obligation to uphold its dignity and honor, to exalt its standing and to extend the bounds of its usefulness. It is inconsistent with the principles of medical science and it is incompatible with honorable standing in the profession for physicians to designate their practice as based on an exclusive dogma or a sectarian system of medicine.

SEC. 2.—The physician should observe strictly such laws as are instituted for the government of the members of the profession; should honor the fraternity as a body; should endeavor to promote the science and art of medicine and should entertain a due respect for those seniors who, by their labors, have contributed to its advancement.

SEC. 3.—Every physician should identify himself with the organized body of his profession as represented in the community in which he resides. The organization of local or county medical societies, where they do not exist, should be effected, so far as practicable. Such county societies, constituting as they do the chief element of strength in the organization of the profession,

should have the active support of their members and should be made instruments for the cultivation of fellowship, for the exchange of professional experience, for the advancement of medical knowledge, for the maintenance of ethical standards, and for the promotion in general of the interests of the profession and the welfare of the public.

SEC. 4.—All county medical societies thus organized ought to place themselves in affiliation with their respective State associations, and these, in turn, with the American Medical Association.

SEC. 5.—There is no profession from the members of which greater purity of character and a higher standard of moral excellence are required than the medical and to attain such eminence is a duty every physician owes alike to the profession and to patients. It is due to the patients, as without it their respect and confidence can not be commanded; and to the profession, because no scientific attainments can compensate for the want of correct moral principles.

SEC. 6.—It is incumbent on physicians to be temperate in all things, for the practice of medicine requires the unremitting exercise of a clear and vigorous understanding; and in emergencies—for which no physician should be unprepared—a steady hand, an acute eye and an unclouded mind are essential to the welfare and even to the life of a human being.

SEC. 7.—It is incompatible with honorable standing in the profession to resort to public advertisement or private cards inviting the attention of persons affected with particular diseases; to promise radical cures; to publish cases or operations in the daily prints, or to suffer such publications to be made; to invite laymen (other than relatives who may desire to be at hand) to be present at operations; to boast of cures and remedies; to adduce certificates of skill and success, or to employ any of the other methods of charlatans.

SEC. 8.—It is equally derogatory to professional character for physicians to hold patents for any surgical instruments or medicines; to accept rebates on prescriptions or surgical appliances; to assist unqualified persons to evade the legal restrictions governing the practice of medicine; or to dispense, or promote the use of, secret medicines, for if such nostrums are of real efficacy, any concealment regarding them is inconsistent with beneficence and professional liberality, and if mystery alone give them public notoriety, such craft implies either disgraceful ignorance or fraudulent avarice. It is highly reprehensible for physicians to give certificates attesting the efficacy of secret medicines, or other substances used therapeutically.

ARTICLE II.—PROFESSIONAL SERVICES OF PHYSICIANS TO EACH OTHER.

SECTION 1.—Physicians should not, as a general rule, undertake the treatment of themselves, nor of members of their family. In such circumstances they are peculiarly dependent on each other; therefore, kind offices and professional aid should always be cheerfully and gratuitously afforded. These visits ought not, however, to be obtrusively made, as they may give rise to embarrassment or interfere with that free choice on which such confidence depends.

SEC. 2.—All practicing physicians and their immediate family dependents are entitled to the gratuitous services of any one or more of the physicians residing near them.

SEC. 3.—When a physician is summoned from a distance to the bedside of a colleague in easy financial circumstances, a compensation, proportionate to traveling expenses and to the pecuniary loss entailed by absence from the accustomed field of professional labor, should be made by the patient or relatives.

SEC. 4.—When more than one physician is attending another, one of the number should take charge of the case, otherwise the concert of thought and action so essential to wise treatment can not be assured.

SEC. 5.—The affairs of life, the pursuit of health and the various accidents and contingencies to which a physician is peculiarly exposed sometimes require the

temporary withdrawal of this physician from daily professional labor and the appointment of a colleague to act for a specified time. The colleague's compliance is an act of courtesy which should always be performed with the utmost consideration for the interest and character of the family physician.

ARTICLE III.—THE DUTIES OF PHYSICIANS IN REGARD TO CONSULTATIONS.

SECTION I.—The broadest dictates of humanity should be obeyed by physicians whenever and wherever their services are needed to meet the emergencies of disease or accident.

SEC. 2.—Consultations should be promoted in difficult cases, as they contribute to confidence and more enlarged views of practice.

SEC. 3.—The utmost punctuality should be observed in the visits of physicians when they are to hold consultations, and this is generally practicable, for society has been so considerate as to allow the plea for a professional engagement to take precedence over all others.

SEC. 4.—As professional engagements may sometimes cause delay in attendance, the physician who first arrives should wait for a reasonable time, after which the consultation should be considered as postponed to a new appointment.

SEC. 5.—In consultations no insincerity, rivalry or envy should be indulged; candor, probity and all due respect should be observed toward the physician in charge of the case.

SEC. 6.—No statement nor discussion of the case should take place before the patient or friends, except in the presence of all the physicians attending, or by their common consent; and no opinions nor prognostications should be delivered which are not the result of previous deliberation and concurrence.

SEC. 7.—No decision should restrain the attending physician from making such subsequent variations in the mode of treatment as any unexpected change in the character of the case may demand. But at the next consultation reasons for the variations should be stated. The same privilege, with its obligation, belongs to the consultant when sent for in an emergency during the absence of the family physician.

SEC. 8.—The attending physician, at any time, may prescribe for the patient; not so the consultant, when alone, except in a case of emergency or when called from a considerable distance. In the first instance the consultant should do what is needed, and in the second should do no more than make an examination of the patient and leave a written opinion, under seal, to be delivered to the attending physician.

SEC. 9.—All discussions in consultation should be held as confidential. Neither by words nor by manner should any of the participants in a consultation assert or intimate that any part of the treatment pursued did not receive his assent.

SEC. 10.—It may happen that two physicians can not agree in their views of the nature of a case and of the treatment to be pursued. In the event of such disagreement a third physician should, if practicable, be called in. None but the rarest and most exceptional circumstances would justify the consultant in taking charge of the case. He should not do so merely on the solicitation of the patient or friends.

SEC. 11.—A physician who is called in consultation should observe the most honorable and scrupulous regard for the character and standing of the attending physician, whose conduct of the case should be justified, as far as can be, consistently with a conscientious regard for truth, and no hint or insinuation should be thrown out which would impair the confidence reposed in the attending physician.

ARTICLE IV.—DUTIES OF PHYSICIANS IN CASES OF INTERFERENCE.

SECTION I.—Medicine being a liberal profession, those admitted to its ranks should found their expectations of practice especially on the character and the extent of their medical education.

SEC. 2.—The physician, in his intercourse with a pa-

tient under the care of another physician, should observe the strictest caution and reserve; should give no disingenuous hints relative to the nature and treatment of the patient's disorder, nor should the course of conduct of the physician, directly or indirectly, tend to diminish the trust reposed in the attending physician.

SEC. 3.—The same circumspection should be observed when, from motives of business or friendship, a physician is prompted to visit a person who is under the direction of another physician. Indeed, such visits should be avoided, except under peculiar circumstances; and when they are made, no inquiries should be instituted relative to the nature of the disease, or the remedies employed, but the topics of conversation should be as foreign to the case as circumstances will admit.

SEC. 4.—A physician ought not to take charge of, nor prescribe for, a patient who has recently been under the care of another physician, in the same illness, except in case of sudden emergency, or in consultation with the physician previously in attendance, or when that physician has relinquished the case or has been dismissed in due form.

SEC. 5.—The physician acting in conformity with the preceding section should not make damaging insinuations regarding the practice previously adopted, and, indeed, should justify it if consistent with truth and probity; for it often happens that patients become dissatisfied when they are not immediately relieved, and, as many diseases are naturally protracted, the seeming want of success, in the first stage of treatment, affords no evidence of a lack of professional knowledge or skill.

SEC. 6.—When a physician is called to an urgent case, because the family attendant is not at hand, unless assistance in consultation is desired, the former should resign the care of the patient immediately on the arrival of the family physician.

SEC. 7.—It often happens, in cases of sudden illness, and of accidents and injuries, owing to the alarm and anxiety of friends, that several physicians are simultaneously summoned. Under these circumstances, courtesy should assign the patient to the first who arrives, and who, if necessary, may invoke the aid of some of those present. In such case, however, the acting physician should request that the family physician be called, and should withdraw unless requested to continue in attendance.

SEC. 8.—Whenever a physician is called to the patient of another physician during the enforced absence of that physician the case should be relinquished on the return of the latter.

SEC. 9.—A physician, while visiting a sick person in the country, may be asked to see another physician's patient because of a sudden aggravation of the disease. On such an occasion the immediate needs of the patient should be attended to and the case relinquished on the arrival of the attending physician.

SEC. 10.—When a physician who has been engaged to attend an obstetric case is absent and another is sent for, delivery being accomplished during the vicarious attendance, the acting physician is entitled to the professional fee, but must resign the patient on the arrival of the physician first engaged.

ARTICLE V.—DIFFERENCE BETWEEN PHYSICIANS.

SECTION I.—Diversity of opinion and opposition of interest may, in the medical as in other professions, sometimes occasion controversy and even contention. Whenever such unfortunate cases occur and can not be immediately adjusted, they should be referred to the arbitration of a sufficient number of impartial physicians.

SEC. 2.—A peculiar reserve must be maintained by physicians toward the public in regard to some professional questions, and as there exist many points in medical ethics and etiquette through which the feelings of physicians may be painfully assailed in their intercourse, and which can not be understood or appreciated by general society, neither the subject-matter of their differences nor the adjudication of the arbitrators should be made public.

ARTICLE VI.—COMPENSATION.

SECTION 1.—By the members of no profession are eleemosynary services more liberally dispensed than by the medical, but justice requires that some limits should be placed to their performance. Poverty, mutual professional obligations, and certain of the public duties named in Sections 1 and 2, of Chapter III, should always be recognized as presenting valid claims for gratuitous services; but neither institutions endowed by the public or by the rich, or by societies for mutual benefit, for life insurance, or for analogous purposes, nor any profession or occupation can be admitted to possess such privilege.

SEC. 2.—It cannot be justly expected of physicians to furnish certificates of inability to serve on juries, or to perform militia duty; to testify to the state of health of persons wishing to insure their lives, obtain pensions, or the like, without due compensation. But to persons in indigent circumstances such services should always be cheerfully and freely accorded.

SEC. 3.—Some general rules should be adopted by the physicians in every town or district relative to the minimum pecuniary acknowledgment from their patients; and it should be deemed a point of honor to adhere to these rules with as much uniformity as varying circumstances will admit.

SEC. 4.—It is derogatory to professional character for physicians to pay or offer to pay commissions to any person whatsoever who may recommend to them patients requiring general or special treatment or surgical operations. It is equally derogatory to professional character for physicians to solicit or receive such commissions.

CHAPTER III.

THE DUTIES OF THE PROFESSION TO THE PUBLIC.

SECTION 1.—As good citizens it is the duty of physicians to be very vigilant for the welfare of the community, and to bear their part in sustaining its laws, institutions and burdens; especially should they be ready to co-operate with the proper authorities in the administration and the observance of sanitary laws and regulations, and they should also be ever ready to give counsel to the public in relation to subjects especially appertaining to their profession, as on questions of sanitary police, public hygiene and legal medicine.

SEC. 2.—It is the province of physicians to enlighten the public in regard to quarantine regulations; to the location, arrangement and dictionaries of hospitals, asylums, schools, prisons and similar institutions; in regard to measures for the prevention of epidemic and contagious diseases; and when pestilence prevails, it is their duty to face the danger, and to continue their labors for the alleviation of the suffering people, even at the risk of their own lives.

SEC. 3.—Physicians, when called on by legally constituted authorities, should always be ready to enlighten inquests and courts of justice on subjects strictly medical, such as involve questions relating to sanity, legitimacy, murder by poison or other violent means, and various other subjects embraced in the science of medical jurisprudence. It is but just, however, for them to expect due compensation for their services.

SEC. 4.—It is the duty of physicians, who are frequent witnesses of the great wrongs committed by charlatans, and of the injury to health and even destruction of life caused by the use of their treatment, to enlighten the public on these subjects, and to make known the injuries sustained by the unwary from the devices and pretensions of artful impostors.

SEC. 5.—It is the duty of physicians to recognize and by legitimate patronage to promote the profession of pharmacy, on the skill and proficiency of which depends the reliability of remedies, but any pharmacist who, although educated in his own profession, is not a qualified physician, and who assumes to prescribe for

the sick, ought not to receive such countenance and support. Any druggist or pharmacist who dispenses deteriorated or sophisticated drugs or who substitutes one remedy for another designated in a prescription ought thereby to forfeit the recognition and influence of physicians.

Transactions of Societies.

THE MEDICAL SOCIETY OF THE COUNTY OF COLUMBIA will hold its centennial anniversary meeting at Hudson, N. Y., on May 8.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, March 20, 1906.

Scientific Program.

"Custom and Fashion in Surgery," by John Chalmers Da Costa, M.D., of Philadelphia.

Discussion by Frederick Holme Wiggin, M.D., of N. Y. City; J. Riddle Goffe, M.D., of N. Y. City; John Welsh Croskey, M.D., of Philadelphia.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, March 26, 1906.

Program.

I. "Presentation of a Case of Rhinoscleroma." By William S. Gottheil.

II. "Report of a Case of Complete Inversion of the Uterus." By J. S. Emsw, M.D.

III. "A New Pelvimeter." By Sidney D. Jackson, M.D.

IV. "The Clinical Manifestations of the Toxemia of Pregnancy." By J. Clifton Edgar, M.D.

V. "The Chemistry of Toxemia of Pregnancy." By G. G. L. Wolf, M.D.

VI. "The Medical and Surgical Treatment of the Toxemia of Pregnancy." By George L. Broadhead, M.D.

VII. Discussion by Egbert H. Grandin, M.D.; S. Marks, M.D.; Austin Flint, Jr., M.D.

The Medical Society of the County of New York celebrated the centennial anniversary of its incorporation at the Hotel Astor, in New York, on Wednesday evening, April 4, 1906. This celebration was participated in by a large and representative assemblage of medical practitioners of New York County. The President of the Society, Dr. Floyd M. Crandall, presided. Dr. Wm. M. Polk spoke upon the "Medical Society of the County of New York," and Dr. Samuel B. Ward upon the "Medical Society of the State of New York and its Relations to the State and County." Other speakers were the Hon. J. J. Delany, the Rev. Dr. Chas. S. Fagnani and the Hon. Job E. Hedges.

RENSELAER COUNTY MEDICAL SOCIETY.

REGULAR MEETING, March 13, 1906.

Program.

1. "Intermittent Claudication Due to Angio-sclerosis of the Extremities," Dr. R. H. Irish.

2. "The Etiology of Mastoiditis," Dr. F. M. Sulzman.

3. "Hernia of the Bladder," Dr. C. H. Kivlin.

MEDICAL SOCIETY OF THE COUNTY OF MONROE.

REGULAR MEETING, March 20, 1906, ROCHESTER, N. Y.

Program.

CONTRACT MEDICAL PRACTICE.

"Lodge Practice," J. R. Culkan.

"Railroad Surgery," W. R. Howard.

"Insurance Examinations," E. C. Boddy.

MEDICAL SOCIETY OF THE COUNTY OF
ST. LAWRENCE.

Annual meeting of the Medical Society of the County of St. Lawrence, Gouverneur, N. Y., April 3, 1906.

There was an address by the President, Dr. H. J. Morgan.

Scientific Program.

1. "The Importance of an Early Diagnosis in Cholelithiasis." J. B. Harvie, M.D., Troy, N. Y.
2. Title unannounced, G. C. Madill, M.D., Ogdensburg, N. Y.
3. "Surgical Interference in Cases of Pregnancy Complicated by Albuminuria," W. B. Hanbidge, M.D., Ogdensburg, N. Y.

MEDICAL SOCIETY OF THE COUNTY OF
SARATOGA.

REGULAR MEETING, March 23, 1906, SARATOGA SPRINGS,
N. Y.

Program.

- "Symptoms and Diagnosis Abscess of Kidney," Dr. Resseguie.
"Therapeutics of Artificial Digestants," Dr. Towne.
Report of a Case, Dr. Fish.

MEDICAL SOCIETY OF THE COUNTY OF
ULSTER.

REGULAR MEETING, April 3, 1906, KINGSTON, N. Y.

Program.

- "Diagnosis and Treatment of Gastric Ulcer," Leo H. Neuman, M.D., Albany, N. Y.
"The Importance of an Early Diagnosis in Orthopedic Practice," Wisner R. Townsend, M.D., New York.

MEDICAL SOCIETY OF THE COUNTY OF WASHINGTON
will hold its annual meeting May 15, 1906, at Sandy Hill, N. Y.

New Books.

A TREATISE ON SURGERY. In two volumes. By GEORGE RYERSON FOWLER, M.D., New York. Vol. I. Philadelphia, W. B. Saunders Company, 1906.

This excellent work was written by one of the masters of surgery. No surgeon of our time has been more resourceful or had a more practical grasp upon his art than the author of this treatise. This, together with his vast experience, his intense application to his work, with a terse and forceful power of expression, have combined to produce a treatise on surgery which presents the features which are most desirable and valuable to the student, the physician and the surgeon. It is so practical that it is an invaluable text-book; and so exhaustive that it is an indispensable book of reference.

This volume treats of general surgery, and takes up the regional surgery of the head, neck, and thorax. The first chapter is devoted to inflammation, and considers it from the standpoint of its usual surgical occurrence in connection with wounds. Following the discussion of wounds comes the section on the etiology of inflammation, in which the surgical bacteria are considered. Surgical fever and the treatment of inflammation close the chapter.

Following in order are chapters on injuries and diseases of separate tissues; gunshot injuries; acute wound diseases, erysipelas, tetanus, etc.; chronic surgical infections, syphilis, tuberculosis, actinomycosis; tumors; laboratory aids in surgical diagnosis and prognosis; surgical operations in general;

surgical anesthesia; general principles of operative technique; operations on individual structures; foreign bodies; bandaging. These constitute the general surgery.

Tumors are classified according to their structural characteristics, and are hence divided into connective tissue growths, epithelial growths, dermoids, and cysts. A most valuable chapter is that on laboratory aids in surgical diagnosis; it adds much to the value of this work. Doycn's surgical engine is shown and recommended for bone operations. The section on surgical bacteriology gives a clear and well-illustrated description of the bacteria of surgery. The excellent chapter on gunshot injuries is largely illustrated by pictures from the Japanese war.

This volume possesses the rare merit of using only original illustrations. These are all of a high class, and contribute decidedly to the value of the work.

We shall look forward with much interest for the appearance of the second volume, with the expectation that it will continue the high character of work displayed in the first.

MODERN CLINICAL MEDICINE. Diseases of Metabolism and of the Blood; Animal Parasites; Toxicology. Edited by RICHARD C. CABOT, M.D., and JULIUS L. SALINGER, M.D. New York, D. Appleton & Company, 1906.

This book is one of the series called "Modern Clinical Medicine," a translation of "Die Deutsche Klinik." The translation is well made and well edited. The more important feature is that the translation is made from one of the best German publications on clinical medicine. Those who have not this publication in the original will do well to possess the translation. The articles in this volume number nineteen of the best and most instructive, and are contributed by the most eminent clinicians of Germany. Weintraud and Von Noorden, on food values and nutrition; Naunyn and Gerhardt on diabetes; Epstein, of Göttingen, on gout and obesity; C. A. Ewald, on organotherapy; Reiss, on Addison's disease; Benda, on acromegalia; His, of Basel, on rheumatism; Blumenthal, on Pentosuria; Lazarus, on blood examination; Ehrlich, on anemia; Grawitz, on chlorosis; Teube, on leukemia; Senator, on pseudo-leukemia; Litten, Peiper and Von Jaksch are the contributors to this volume.

It is a splendid work, and well worth reading and owning as a book of reference.

A TEXT-BOOK ON THE PRACTICE OF GYNECOLOGY. By WILLIAM EASTERLY ASHTON, M.D., LL.D. *Second Edition.* Philadelphia, W. B. Saunders Company, 1906.

This is a most practical work. But little space is given to the abstract. The author goes straight at the subject, and tells not only what to do, but how to do it in a manner which is concise and yet satisfactory and complete. The text of this work is deserving of the highest commendation for its practical character. One does not look in vain for the important things pertaining to the general health and treatment of the gynecological case, which usually are much neglected. Nor has the author followed the beaten track of gynecology, but he has displayed originality and given the reader the benefit of resources which commonly are omitted from books on this subject. Aside from the discussion of the accustomed subjects, we find valuable chapters on such subjects as hydrotherapy, constipation and its hygienic treatment, diet, in-door exercise, history taking, and the physiology of menstruation.

This book of a thousand pages contains 1,046 illustrations, made by John V. Altender, every one of which is from an original drawing. These pictures are semi-schematic, very simple, and accurate. They possess the merit of showing the thing which the author desires to show, in a most instructive manner; and while they can not lay claim to great artistic merit, they serve the purpose for which they are made better than do those

complicated pictures, now much in vogue, and which by their esthetic character detract the attention of the beholder from their very object and purpose.

REFERENCE HANDBOOK OF THE DISEASES OF CHILDREN. By PROF. DR. FERDINAND FRÜHWALD, of Vienna. Edited by THOMAS S. WESTCOTT, M.D. Philadelphia, W. B. Saunders Company, 1906.

This is a translation, with additions by the editor, of Frühwald's *Kompendium der Kinderkrankheiten*, which was brought out to supply the lack of a compact teaching manual in Austria. The work is a good clinical guide, covering pretty fully the department of diseases of children. The subjects are arranged alphabetically, and from abscess to zoster is a large amount of easily available information.

A TEXT-BOOK OF MATERIA MEDICA, THERAPEUTICS AND PHARMACOLOGY. By GEORGE F. BUTLER, PH.G., M.D., of Chicago. *Fifth Edition*. Revised by SMITH ELY JELLIFFE, M.D., PH.D., of New York. Philadelphia, W. B. Saunders Company, 1906.

Under the editorship of Dr. Jelliffe, this popular work has been entirely remodeled, rewritten and reset. This has been made necessary by the recent advancements in this branch of medicine, and in order to adapt it to the revised pharmacopeia. Dr. Jelliffe has changed the arrangement of the book so that those drugs whose actions are upon the same system of organs of the body shall come together, thus associating them therapeutically as well as pharmacologically.

This book supplies the student and practitioner with a clear, concise, and practical text-book to which they may turn for ready information.

INTERNATIONAL CLINICS. Edited by A. O. J. KELLEY, A.M., M.D., Philadelphia. Vol. IV., 1906. Philadelphia, J. B. Lippincott Company, 1906.

As recently as four or five years ago this work was one of the poorest things published in this line, and did little credit to the excellent house from which it emanated. The general character of the articles which it has contained has steadily improved, until now it may be regarded as a legitimate competitor of the similar works.

This volume is particularly rich, and contains contributions from many of the most advanced teachers. There are several chapters under each of the following headings: Treatment, Medicine, Surgery, Obstetrics and Gynecology, Ophthalmology, and Pathology. All of these are of distinct value to the practitioner.

THE OPHTHALMOSCOPE AND HOW TO USE IT. By JAMES THORNTON, A.M., M.D., of Philadelphia. P. Blakiston, Son & Company, Philadelphia, 1906.

This little book will serve the student or practitioner who wishes to obtain a working knowledge of the ophthalmoscope. It is systematic, practical, well written and illustrated. The title is somewhat misleading, for the reason that the book is also devoted to the diagnosis, symptoms and treatment of diseases of the globe of the eye.

ESSENTIALS OF GENITO-URINARY AND VENEREAL DISEASES. By STARLING S. WILCOX, M.D. Philadelphia, W. B. Saunders Company, 1906.

This is an addition to the Saunders Question-Compendis, which should be fully as successful as the others of the series. It is illustrated, and pretty thoroughly covers the field of venereal diseases.

NURSING IN THE ACUTE INFECTIOUS FEVERS. By GEORGE P. PAUL, M.D., of Troy, N. Y. Philadelphia, W. B. Saunders Company, 1906.

This is essentially a book on medical nursing, because most of the acute diseases are in the class of which it treats. It is written for the instruction and

help of the nurse, and contains much sound information. The physician will find much help in the pages of this unpretentious volume.

A MANUAL OF PHARMACY FOR MEDICAL STUDENTS. By M. F. DE LORME, M.D., Ph.D., of New York. The John C. Lindsay Co., New York, 1905.

This is a most valuable little book; and, while intended for the student, it might be used profitably by the general practitioner. If every practitioner of medicine had this book conveniently at hand, and would read it, it is certain that he would resort less to ready-made prescriptions. The book tells how drugs are compounded, and how they may be ordered. It might be put in the hands of every medical student to good advantage.

THE CRUX OF PASTORAL MEDICINE. By REV. ANDREW KLARMANN, A.M. *Second Edition*. F. Pustet & Company, New York, 1905.

It might be supposed by its title that this book is devoted to the trials of the country practitioner; but the author assures us that it concerns "the perils of embryonic man: abortion, craniotomy and the cesarean section; myoma, and the porro section." It is largely a collection of ecclesiastical verbiage as obscure to the reader as it probably is unintelligible to the writer. Here and there are found some good counsel and worthy sentiment. There is also a great deal that comes under neither of these headings.

The physician, whose patient is dying from *hyperemesis gravidarum*, is advised against emptying the uterus. The author says: "He must leave his patient in the hands of God who has often righted things that sat awry with greater hopelessness than these cases. And if the patient dies, let him console himself with the consideration that his conscience is free from the guilt of murder, and that people die of other ailments equally elusive of medical skill and care."

Here is the ecclesiastic, sitting in his easy chair in his library, surrounded by his volumes of superstition, and evolving "observations" on biology and the laws of heredity, to contradict the men who have worn out their lives in the search for the great truths in nature. Witness this misrepresentation: "Thus the discoveries of the scientists, instead of strengthening Darwinism and kindred excrescences, make towards opposing them in formidable array." A chapter of sophistries, errors and misstatements on heredity closes with the sage and italicized utterance: "Hence we may safely conclude: Heredity is a very problematical factor in propagation." The very learned author also writes upon the assumption that superstition is a necessary accompaniment to morality.

This book is well bound and well printed, and has a distinct historic value in furnishing an insight into the dogmas and superstitions of our own times.

THE MEDICAL DISEASES OF INFANCY AND CHILDHOOD. By ALFRED CLEVELAND COTTON, A.M., M.D., of Chicago. Philadelphia, J. B. Lippincott Company, 1906.

The important and valuable feature of this book is the first part, which is devoted to the anatomy, physiology, and hygiene of the developing period of the child. In this it is very superior to the other books on pediatrics. We can not have too much of the hygiene of childhood, for as the study of this and its application increase, the necessity for the treatment of the diseases of childhood diminishes.

This book is well written and practically illustrated, and is founded upon sound knowledge and wide experience in the subject of which it treats. It gives us pleasure to accord it high commendation.

TRANSACTIONS OF THE LACKAWANNA COUNTY MEDICAL SOCIETY. JONATHAN M. WAINWRIGHT, Editor. Volume I. 1905.

This very creditable volume of transactions contains some twenty-seven papers read before this society, all

of distinct scientific value. The transactions are well edited and reflect much credit upon the society from which they emanate.

PROCEEDINGS OF THE CONFERENCE OF SANITARY OFFICERS OF THE STATE OF NEW YORK. Albany, 1905.

This volume contains the reports of the proceedings of this conference, held at Albany, on October 4 and 5, 1905. It contains a number of addresses delivered by sanitary officers from several states and cities, and is an index of the advanced trend of official sanitary work.

RECENT ADVANCES IN PHYSIOLOGY AND BIO-CHEMISTRY.

Edited by LEONARD HILL, M.B., F.R.S. New York, Longmans, Green & Company, 1906.

This book presents the progress which has been made in the branches of physiological study which have an immediate bearing upon pathology and therapeutics. It gives an insight into the methods of research, and a training in the processes of education, which cannot be gained by the study of text books. It contains articles on many subjects compiled by special authors, who furnish a bibliography which will guide the reader to further investigations if he desires.

Among the chapters may be mentioned those on chemical transformations in living matter, enzymes and cells, secretion and glandular mechanisms, the conditions of the atmosphere and its relation to life, water and its relation to metabolism, the metabolism of fat, the respiratory exchange, internal secretions, the formation of urea, the mechanism of absorption from the small intestine, and experimental diabetes.

This is a work of much value for the student.

DISEASES OF THE EYE. By G. E. DE SCHWEINITZ, A.M., M.D., of Philadelphia. *Fifth Edition*. Philadelphia, W. B. Saunders Company, 1906.

This is one of the best known and most popular books on the eye in the English language. It has always been kept up to date by revision whenever necessary, and this fifth edition comes to us completely revised and augmented by paragraphs and chapters upon a large number of new subjects. We can recommend the work in even higher terms than we have the four preceding editions.

THE DISEASES OF INFANCY AND CHILDHOOD. By L. EMMETT HOLT, M.D., Sc.D., LL.D., of New York. *Third Edition*. New York, D. Appleton & Company, 1906.

The dicta of Holt have come close to the border line of authority in pediatrics. They have been built upon the foundation of pathology, followed by extensive clinical observation and careful study. The foundation of much of the splendid work appearing in this book was laid at the autopsy table. It is the most complete and satisfactory book on this subject that has been written. It is one of the works that have contributed to the recognized and growing eminence of American medicine.

This third edition shows many alterations and changes, chiefly, however, in the chapters on the examination of the sick child, stenosis of the pylorus, dysentery, vaginitis, meningitis, mental defects, status lymphaticus, and diphtheria.

Every practitioner of medicine who has to do with sick children should have access to this book.

THE OPERATING ROOM AND THE PATIENT. By RUSSELL S. FOWLER, M.D., of New York. Philadelphia, W. B. Saunders Company, 1906.

In Dr. Russell Fowler's admirable work we have a much needed book, a work devoted entirely to operative technic, with the pre-operative procedures of sterilization and preparation. Written by a surgeon of rich clinical experience for the use of surgeons, nurses assisting at operations, and hospital internes, it clearly describes the preparation of material of all kinds; indi-

cates the instruments required for the various operations; details the preparation and care of the patient before and after operations, and the methods of anesthesia; describes and illustrates the positions of the patient for different operations; and contains much information, a knowledge of which is necessary to produce high efficiency. It is an excellent and valuable work for practical use; and the operating surgeon will find it of value as it furnishes him a guide to which he may readily add his own variations of technic.

Deaths.

SANFORD W. ADAMS, M.D., died at his home in Mount Vernon, N. Y.; aged 29 years.

C. E. BOYNTON, M.D., formerly of Onondaga, N. Y., died in California, February 12; aged 45 years.

ELIZABETH N. BRADLEY-BYSTROM, M.D., a graduate of the University of Paris in 1887, died at her home at Dobbs Ferry, N. Y., March 9; aged 53 years.

H. HOYLE BUTTS, M.D., of New York, died on March 26; aged 43 years.

DANIEL WEBSTER COOPER, M.D., for many years a practitioner of Port Jervis, N. Y., died at Mount Salem, February 14; aged 74 years.

EDWARD W. DERBY, M.D., for more than fifty years a practitioner of medicine in New York City, died at his home, March 10; aged 77 years.

ROBERT OGDEN DOREMUS, M.D., of New York, a chemist who brought fame to his country and added lustre to his profession, died on March 22, 1906; aged 82 years.

WILLIAM F. DRAKE, M.D., died at his home in New York City, March 1; aged 39 years.

DAVID FAWDRY, M.D., one of the oldest practicing physicians in Watertown, N. Y., died suddenly of apoplexy on February 20.

CHARLES LOUIS FINCKE, M.D., aged 33 years, of Brooklyn, New York, died on March 19 from an infection contracted in the performance of his professional work.

SAMUEL H. FREEMAN, M.D., of Albany, N. Y., died on March 15; aged 85 years.

LAWRENCE J. GEROLD, M.D., of Bath, N. Y., died from disease of the heart, on March 15; aged 41 years.

AUGUSTUS L. GILBERT, M.D., died at his home in North Cochocton, N. Y., February 22; aged 81 years.

JOHN O. F. HILL, M.D., of Brooklyn, New York, died February 27; aged 43 years.

LEOPOLD HIRSCHMANN, M.D., died at his home in New York City, March 15; aged 35 years.

FREDERICK B. MCKENNEY, M.D., died at his home in Varysburg, N. Y., on March 17; aged 33 years.

JOHN UDOLPHUS HAYNES, M.D., a member of the Board of Education of Cohoes, N. Y., died at his home, February 23; aged 56 years.

JOSEPH E. WELLS, M.D., died at his home in Brooklyn, New York, February 26; aged 41 years.

"Basking in the glorious and transcendent splendor of modern science, and with a future before us so full of possibilities, we somewhat ungratefully forget the gloomy night and obscure dawn through which the good and true workers of times past have painfully toiled."—*John W. Ogle, M.D., Harveian Oration, 1889.*

"We are sharers not only of animal life, but of vegetable life, sharers with the highest brute animals in common instincts and feelings and affections. It seems to me that there is a sort of meanness in the wish to ignore the tie. I fancy that human beings may be more humane when they realize that, as their dependent associates live a life in which man has a share, so they have rights which man is bound to respect."—*Natural Science and Religion, Asa Gray.*

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Original Articles.

SOME FEATURES AND RESULTS OF THE TREATMENT AND PREVEN- TION OF DIPHTHERIA BY THE USE OF ANTITOXIN.*

By HERBERT D. PEASE, M.D.,

ALBANY, N. Y.,

Director Antitoxin Laboratory, New York State Department of Health.

IN attempting to put the material at my disposal into an interesting paper, I have kept in mind that probably without exception all are convinced of the following facts: First, that diphtheria antitoxin heads the list of the so-called specific remedies; second, that in small doses it will prevent the onset of diphtheria in practically all those well persons who have been exposed to the disease; third, that the death rate in diphtheria has been reduced 50 per cent. or more through the general administration of the remedy; fourth, that the use of the serum has greatly reduced the number of cases in which either intubation or tracheotomy is required, and has greatly lessened the severity of the disease in those requiring these operations; and, finally, that the earlier the remedy is administered the better the results.

I shall, therefore, assume that these points require no argument on my part, and shall merely touch upon them in the course of other remarks. An exception will be made of the last point, namely, the importance of the early administration of the remedy.

Out of the many thousands of cases of diphtheria, which have been treated in this State since the summer of 1902 with the diphtheria antitoxin prepared in the Antitoxin Laboratory of the State Department of Health, the physicians have made fairly full and accurate reports on its use in 4,000 cases.

Of these cases, 335 ended fatally, giving a mortality of 8.3 per cent. These cases have been arranged in a table to show the influence upon the mortality of the time of the first injection of antitoxin.

TABLE I.

Showing influence of time of first injection of antitoxin.

	DAY OF DISEASE OF FIRST INJECTION.							Totals
	1	2	3	4	5	6 and over.	Not stated.	
Cases.....	822	1231	662	346	199	280	460	4000
Deaths.....	13	57	57	60	42	55	51	355
pr.ct. Mortality	1.7	4.6	8.6	17.3	21.1	19.6	11.2	8.3
pr.ct. Mortality in 3,628 cases, New York City	1.5	2.8	4.6	15.2	19.8	18.5	3.1	5.9

The result is certainly a most striking demonstration of the absolute and tremendous efficiency of the remedy when administered early.

Kindly notice the fact that the mortality rate doubles itself for every day that the first injection of antitoxin was delayed up to four days, and that even after that it is increased in the fifth and later day groups. While one-half of all the cases were injected on the first and second days of the disease, only one-fifth of all the deaths occurred in those injected on those days. These results are in close harmony with the results in New York City in over 3,000 cases treated by city inspectors, recently reported by Billings,¹ and indicated on the last line of Table I.

Time will not permit me to speak in detail of the influence of the size and number of doses of antitoxin used in the 4,000 cases mentioned. I wish merely to state that, judging from our statistics, their importance appears at present to be small in comparison with the matter of the time of the first injection.

Realizing the importance of obtaining the full benefit of the antitoxin injected at the earliest possible moment, let me emphasize some matters of detail in the administration of the remedy, which are frequently not taken into consideration.

The serum should be injected into such tissues as will enable it to be absorbed into the blood circulation as rapidly as possible. Antitoxin injected into the lower layers of the skin causes excessive pain and subsequent local disturbances. That forced into intermuscular spaces and into adipose tissue will doubtless be absorbed in time if the patient lives long enough. In a case of tetanus, I found at autopsy unabsorbed salt solution, which had been injected 12 hours

* Read before the Albany County Medical Society, January 10, 1906.

¹ Billings: *New York Medical Journal*, 1905, 82, 1310.

before death into the subcutaneous tissues, which contained but little more than the ordinary amount of adipose tissue.

Intravenous injections have been more frequently used in treating tetanus than in diphtheria, but they represent the theoretically ideal method of administration. Cruveilhier² has demonstrated this experimentally in guinea pigs. He found that moderately large, single intravenous injections were superior in every way to single or repeated subcutaneous or intracerebral injections.

Biernacki and Muir used the intravenous method in 45 cases of diphtheria, and while they obtained good results in these cases, considering their severity, they hesitate to say that in any individual case the result was better than the subcutaneous method would have given. However, they resorted to general anesthesia in two of their cases, and apparently neglected to properly warm the serum in others, which might account in part for their results.

Cairns used intravenous injections in single doses up to 50,000 units in twenty of the most severe cases in a consecutive series of fifty without resorting to general anesthesia. In seventeen of the twenty, tracheotomy was required; and of these but one died. He claims that all those receiving intravenous doses did remarkably well, and that the skin and other disturbances, due to the horse serum, were no worse than with the subcutaneous injections. Suber³ also speaks well of intravenous injections, stating that they are harmless.

However, Meltzer and Auer⁴ have recently shown that the absorption of substances, injected directly into muscles, is incomparably more rapid than that of those injected into subcutaneous tissues, and was almost equal to direct intravenous injection. It would seem, therefore, as if the use of the intravenous method were hardly necessary in any but the most desperate cases, and that the general adoption of injections of antitoxin directly into the muscles should be strongly advocated.

For the further appreciation of the importance of the early use of the antitoxin injections, let us consider some results obtained from delayed antitoxin treatment.

Of the 335 fatal cases of my series, the termination was attributed to heart failure or cardiac paralysis in 72, or over 20 per cent., and undoubtedly many more of the fatal terminations were of this character, for, as no special request for the statement of fatal endings is made on the report blanks, such details are not usually recorded by the attending physicians.

Of the 71 so-called heart deaths, in but 12 patients was the first dose of antitoxin recorded

as having been given before the third day; and I am convinced that in many of these 12 cases the records are not correct, and that the disease had been present longer than the records indicated. Eighty per cent. of the heart deaths, therefore, followed the delayed treatment. In 1904 31 fatal terminations were attributed to heart failure, and in only one instance did the records indicate that the first injection had been given before the third day.

Of the 12 fatal heart cases in which the first injection was given on the first or second day of the disease, 5 received comparatively small doses of antitoxin and all died late in the disease, chiefly from sudden strains put upon the heart.

White and Smith⁵ give closely approximating figures for nearly 1,000 cases treated at the Boston City Hospital during one year. Thus about one-quarter of the cases died of heart complications, and of these, at least two-thirds averaged a delay of four to five days before the antitoxin treatment. These authors differentiate between the cases of very acute toxemias occurring within the first week of the disease, and those of heart failure and sudden collapse, which rarely occur earlier than the latter part of the second week. The incidence of these latter cases, they state, cannot be foretold; but the more severe the illness, and the greater the delay in the treatment with antitoxin, the greater the liability of their occurrence. White and Smith report that they had no sudden deaths after apparent convalescence as a result of unusual exertion, but this was doubtless due to the fact that their cases received proper hospital restraint and care. In my series of fatal heart cases there were fifteen such occurrences. Without the accident of unusual strain these cases might have recovered as did a large number of the White and Smith cases, which had serious heart disturbances. They state, however, that in all their cases which recovered after serious cardiac difficulties, the first antitoxin injection had not been given before the third day.

Bolton,⁶ who considers the heart complications to be more common than the last mentioned authors, agrees that "their only prevention is the use of efficient doses of antitoxin given at as early a period as possible."

For the determination of the immediate causes and pathologic mechanism of these cardiac disturbances, extensive experimental and histological investigations have been made, and much has been written. Undoubtedly the histological findings vary in accordance with the character and duration of the infection, and the time and amount of the antitoxin injections.

In the experimental work the marked complexity of possible governing factors renders positive conclusions of doubtful force. Thus the

² Cruveilhier: *Annales de L'Institut Pasteur*, 1904, 18, 249.

³ Suber: *Hygieia* (Stockholm), 1905, 67, No. 7.

Reference: *Journal American Medical Association*, 1905, 45, 1614.

⁴ Meltzer and Auer: *Journal Experimental Medicine*, 1905, 7, 59.

⁵ White and Smith: *Boston Medical and Surgical Journal*, 1904, 151, 433.

⁶ Bolton: *Edinburgh Medical Journal*, 1902, 53, 334.

recent conclusions of Passler,⁷ Romberg⁸ and others that the important toxic action is that affecting the nervous mechanism of the vasomotor system, and that the myocardial degeneration is secondary, are in direct contrast to those of Ritter von Stejskal,⁹ Eppinger,¹⁰ and others, who consider the toxic degeneration of the heart muscle the important factor; but Ritter von Stejskal does not deny the influence of the vasomotor changes in some conditions.

From a general survey of the literature the conclusion would appear to be warranted that both the heart muscle and the controlling cardiac and circulatory nervous mechanism are subject to severe toxic action by the diphtheria poison.

Hans Meyer¹¹ has shown for diphtheria toxin, what he and Marie and Morax¹² had previously demonstrated for that of tetanus, that the absorption of these poisons takes place by the nerves only through their distal terminations. These authors also satisfactorily demonstrated that when the toxin has been so absorbed, it is effectually insulated from any antitoxin substances present in the circulating blood or body fluids.

As Marie and Morax also demonstrated that the vagus and the nerves of the sympathetic system absorbed toxin in the same manner as the spinal nerves, it is quite possible that a large part of the late cardiac and circulatory disturbances in diphtheria are due to the effect of the toxin absorbed by the heart and vessel-controlling nerves, and that the late appearance of these symptoms is probably due to the time taken for the absorption and passage of these toxins through the nerves towards the nerve cells affected. In other words, the condition is, to a certain extent, analogous to the incubation period in tetanus. Doubtless, therefore, all diphtheria antitoxin injected after the absorption of the toxin by such nerves accomplishes no more towards its neutralization than does tetanus antitoxin injected after the symptoms of tetanus are well advanced. In both instances the antitoxin must be administered before the toxin has been absorbed by the nerves if damage to the nerve cells is to be avoided.

Whether or not this method of nerve absorption is the important factor in the causation of the late cardiac disturbances, it certainly holds an important place in the causation of diphtheric paralysis as has been shown by Babonneix.¹³ Certain clinical observations of paralysis are of special interest in this regard.

Rolleston,¹⁴ in his excellent and exhaustive historical and clinical study of the paralysis, occur-

ing in the hospitals of the Metropolitan Asylums Board of London, states that the number of cases of paralysis has increased by 6 to 10 per cent. since the introduction of the antitoxin treatment, but that antitoxin has no tendency in itself to make paralysis more likely to occur. He affirms, on the contrary, that the earlier the remedy is used the less the liability of the appearance of paralysis, especially in the severe infections.

In his table of 115 cases of paralysis of all kinds, arranged according to the day of the disease in which the patients were first injected, the per cent. for each day, beginning with the first, increases in the following order: 5, 15, 18, 28, until the fifth day when it was 35 per cent., and with but little increase for the days following. Of forty-one severe forms of paralysis none occurred in the cases injected on the first day; and the second, third and fourth day cases had four, eight and twelve, respectively, with irregular number in cases injected on later days.

The increase in the total number of paralyzes since the beginning of antitoxin treatment is due largely to the fact that cases which formerly would have died in the acute stage now survive and suffer those palsies which before would have been found in the less severe grades. For the prevention of even these, Rolleston concludes that, in addition to the early administration of antitoxin, massive primary doses should be used. As figures conclusively show that the liability to paralysis is in direct proportion to the severity of the attack.

In his hospital, primary doses of from 18,000 to 24,000 units are given in the severest cases, down to 3,000 units in the mild cases. Except in unusual cases these doses do not have to be repeated.

Another interesting clinical feature of paralysis emphasized by Rolleston, but which was more or less well known, is that paralysis of the palate is by far the most common, the earliest appearing and of longer average duration than all other forms of palsy.

Older writers have accounted for this on the ground of the actual damage done by the local inflammation; but it is far more probable that the nerves, terminating at the site of infection, absorb the toxin earlier and in larger amounts than the terminals of other nerves after its passage into the circulating blood.

Thus palatal paralysis is comparable to the so-called local tetanus which, as I¹⁵ have shown elsewhere, is a comparatively common symptom in that disease, and which is likewise due to the early absorption of tetanus toxin by nerves terminating at the site of infection.

These clinical observations would seem to warrant the conclusion that the two distressing complications of diphtheria, namely, the cardiac disturbances frequently leading to heart failure, and paralysis in its various manifestations, can only

⁷Passler and Rolly; *Munchener Medicinische Wochenschrift* 1902, 49, 1737.

⁸Romberg, Passler, Bruhn and Müller: *Deutsches Archiv für Klinische Medizin*, Vol. 64, p. 652.

⁹Ritter von Stejskal: *Zeitschrift für Klinische Medizin*, 1902, 44, 367; 1903, 51, 129.

¹⁰Eppinger: *Deutsche Medicinische Wochenschrift*, 1903, 29, pp. 257, 285.

¹¹Meyer: *Bulletin Johns Hopkins Hospital*, 1905, 16, 35.

¹²Meyer and Ransom: *Archiv für Experimentelle Pathologie und Pharmakologie*, 1903, 49, 369.

¹³Marie and Morax: *Annales de L'Institut Pasteur*, 1903, 17, 335.

¹⁴Babonneix: *Ref La Presse Medicale*, June 4, 1904.

¹⁵Rolleston: *Practitioner*, 1904, 73, pp. 597, 794.

¹⁵Pease: *Medical Review of Reviews*, 1904, 10, 524.

be prevented by the earliest and most vigorous use of antitoxin.

This conclusion is also supported by the fact that whenever diphtheria develops in a person who has recently received a prophylactic injection of antitoxin, the infection is always a mild one. Thus, of 11,328 persons reported as having received immunizing injections of diphtheria antitoxin during the last four years, all of the thirty-three persons who contracted the disease within four weeks had mild attacks, and all recovered without serious complications.

For the treatment of paralysis, antitoxin has been both recommended and condemned. Comby¹⁶ strongly recommends its use and reports five severe cases in which it was successful. However, he quotes Sevestre as taking strong grounds against it; and Rolleston likewise is opposed to its use in severe cases with serious heart complications, on account of the possibility of the development of some of the frequently distressing disturbances which follow antitoxin injections in some persons, and which, he thinks, occur more commonly and are more severe in character in those who have already received antitoxin treatment. Rolleston advises the internal administration of the active principle of the adrenal gland in increasing doses; and he begins the treatment in severe cases as soon as the patient comes under observation. Inasmuch as the adrenal gland generally suffers severely in acute diphtheria, this plan of treatment would appear to be logical.

The skin, joint and other disturbances following the injection of antitoxin form an interesting study from the clinical standpoint. A large number of clinical observations, and many theoretical discussions, have been recently published concerning this so-called "serum sickness."¹⁷ The authors of these publications are unanimous in their opinions on several points. It is accepted that the cause of these disturbances has nothing to do with the antitoxic principle present in the serum, for all the various antitoxic sera and antisera, and normal horse serum, are capable of giving rise to them. It is also generally accepted that the massive doses of serum are more frequently followed by these disturbances than small ones, and that other conditions being favorable, the larger doses produce more severe symptoms. On the other hand it is generally noted that there is a large personal element in their incidence, and that some persons are particularly susceptible.

Finally, it is generally accepted that reinjections, made after a lapse of two weeks or more, especially after large primary injections, are likely to bring on more severe disturbances than

follow the primary injections. These disturbances at times present the most diverse clinical pictures, but in general are fairly uniform in character. The skin is the organ generally affected, although changes in pulse and respiration rates, joint pains, adenitis, diarrhea, and an increase in the diphtheric albumenuria are more or less common phenomena.

Rolleston¹⁸ gives one of the most satisfactory clinical accounts of these disturbances. In the 37,760 cases treated in the London hospitals, skin rashes occurred in up to 47 per cent. In Rolleston's personal series of 568 cases, rashes of all grades, including the mildest, occurred in up to 81 per cent. In the cases of diphtheria, the more severe the disease the less the liability to the skin disturbances.

This is a point which had forced itself on my attention in examining the reports on antitoxin treatment sent to me from various parts of the State, but the reports do not permit of any accurate statistical studies of that point. Rolleston believes this is due to the vaso-motor depression existing in such cases. In severe cases he believes the appearance of the rash is an indication of a favorable termination, inasmuch as the average time for the appearance of the so-called secondary rash is the twelfth to fourteenth day after injection, whereas the average period for a fatal heart collapse is the twelfth day.

Rolleston divides the disturbances into three groups according to the time of onset. In the first, the symptoms occur immediately or within twenty-four hours to two days after the injection. Many patients experience a lethargy or heaviness for several days, and in the majority there is hyperidrosis and oliguria. The rashes at this time are usually scarletiform in character, but urticaria is sometimes an early symptom. General heart and respiratory disturbances may also occur at this time.

The second group develops somewhat later, averaging about one week. This consists of urticarial rashes, œdemas, rigors and vomiting. These are the symptoms most likely to follow cases re-injected after an interval of a few weeks or more.

The third group develops most frequently after the tenth day; and skin disturbances are more commonly circinate erythemas, and the other troubles are pyrexia, adenitis and joint pains.

While these groups indicate the common sequence, reports coming to me show that most of these symptoms may be present at any stage.

The substance of one paragraph in a letter received by me from the Superintendent of the Utica State Hospital gives a clear clinical picture of many of the points already made. A portion of one lot of antitoxin, bottled July 6, 1904, was used to immunize the patients of several wards from September to December with no serum disturbances of any severity.

¹⁶ Comby: *Archiv de Medicine des Enfants*, 1903, 7, 411.

¹⁷ "Die Serum Krankheit." Pirquet und Schick, Franz Deuticke, Wien, 1905. This monograph contains an extensive bibliography on the subject of serum sickness.

Monti: *Archiv fur Kinderheilkunde*, 1902, 35, 390.

Hamburger and Moro: *Wiener Klinische Wochenschrift*, 1903,

16, 445.

Ritter von Rittershain: *Fahrbuch für Kinderheilkunde*, 1902,

63, 542.

Sacharoff: *Centralblatt für Bakteriologie*, Abt. 1 Originale,

1905, 39, 99.

¹⁸ Rolleston: *Practitioner*, 1905, 74, 660.

The last of February, 1905, a very severe case of diphtheria received 25,000 units with great benefit and no unpleasant symptoms, but of four well persons receiving immunizing doses of 700 units, three had nausea, vomiting and collapse with a troublesome urticaria, in two of whom it occurred soon after the injection, and in the other at the end of a week. In these cases, as in all others, the symptoms finally disappeared. Rolleston estimates the average duration of the rashes to be three to four days.

For the treatment of the disturbances at the site of injection and the joint pains, hot fomentations are recommended by both English and German writers, as is also menthol ointment, about a drachm to the ounce, for the itching skin troubles.

Much work has been done during the last five years towards the removal from horse serum of the elements which cause the skin and other disturbances.

Atkinson¹⁹ precipitated all the globulins from horse serum, including the so-called antitoxin globulin, and the solution of these globulins was used on diphtheria patients, but the skin disturbances persisted.

I have worked on this problem since 1902, as time and facilities permitted, using the methods of precipitating the globulins advocated by Pick and others, but never obtained a satisfactory product. Gibson²⁰ took up Atkinson's work and has obtained the so-called antitoxic globulins in a comparatively pure state: that is, free from serum albumen and the unessential globulins. By this method he is able also to obtain concentrated solutions of the antitoxic principle. This concentrated purified serum has been used for several months by the diphtheria inspectors in New York City with excellent results; and Dr. Park informs me that the serum disturbances have been greatly lessened. The method necessitates much artificial manipulation of the serum, and these operations must be carried on under well-regulated aseptic conditions. It would seem as if we had at last obtained a method of eliminating at least some of the undesirable elements in the various serum products.

THE SOMATIC EVIDENCES OF SYPHILIS IN PARETICS.

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THAT a dermatologist should write a paper upon a subject usually considered to be chiefly interesting to the alienist and neurologist places him in a rather anomalous position requiring the following explanation:

For the past three years I have had the honor of abstracting articles upon syphilis of the nervous system for the *Journal of Cutaneous Diseases, Including Syphilis*. The reading these abstracts required aroused my interest in the question of the syphilitic origin of paresis. My position as consulting dermatologist to the Long Island State Hospital for the Insane and the encouragement and help I received from my friend, Dr. William Mabon, President of the State Board of Lunacy, greatly facilitated the necessary research. The uniform courtesy of the superintendents and staffs of the various hospitals visited has given the necessarily disagreeable examinations the semblance of pleasant visits, and it gives me pleasure to thus avow my thanks and appreciation to Dr. Mabon, Dr. Russell, the State Inspector, and the superintendents and staffs of the hospitals visited, for their advice and aid in collecting the data which made this paper possible; and, should it prove to be of any value, it will be due to the fact that the management of the State hospitals is ever ready to assist scientific research.

To the trained observer it is not difficult to distinguish the markings and scars of cutaneous syphilis from traumatic and other cicatrices and pigmentations. On inspection the outlines, the slight depressed area, the tissue-paper like lustrous covering of the typical syphilitic scar is readily recognized. The circular, the letter s, and the figure 8, shaped scars of the tubercular syphilide are well known to all. The markings seen after gummatous infiltrations, the typical scars and tophi upon the scalp and about the scapulæ are all easily enough recognized to make the somatic evidences of syphilis apparent to any one familiar with the cutaneous typography of this disease.

The typical cutaneous markings and cicatrices produced by the degenerations and ulcerations of syphilis were found on all parts of the bodies of the patients examined and were distributed as follows:

Forty-six had scars on the penis. Some of these scars were so extensive that they were undoubtedly the results of mixed infection. On one there was the remains of a recent chancre.

Seventy-seven had scars and pigmentations on the legs and thighs; 73 showed various markings over the trunk, of these 25 were about the scapulæ and 5 were about the buttocks and coccyx; 18 had scars on the arms and hands; 14 had inguinal scars (bubonic); 30 had general syphilitic adinitis; 3 had mucous patches on the scrotum; there were 7 with scars and tophi on the scalp; 1 gumma was in the ulcerative stage; 4 patients showed scars and destruction of the lips, nose and palate; 20 had syphilitic nodes along the tibia; there were 5 cases of ptosis, 4 of blindness from optic neuritis, and 2 showed the stigmata of congenital syphilis.

Among those examined only 75 were of foreign birth, and most of these were in the metro-

¹⁹ Hiss and Atkinson: *Journal of Experimental Medicine*, 1900,

5, 147.
²⁰ Gibson: *American Medicine*, 1905, 10, 915.

politan hospitals. A large majority of the American born were of foreign parentage.

Of those of foreign birth, the greatest number were Germans, 31; next Ireland, with 17; Russia, 8; Italy, 5; England, 4; Austria, Hungary and Sweden, 2 each; and France, Roumania, Finland and Holland, 1 each.

The low percentage of foreign-born paretics is interesting in view of the fact that a large proportion of the inmates of the New York State hospitals are foreigners. One might venture to explain the above by arguing that the quiet, restricted life of the foreigner, often isolated and circumscribed, and less liable to syphilitic infection than the more luxurious-living American, to whom all things may be possible, who works and lives at high pressure, and to whom, in our large cities at least, liberty can so easily degenerate into license, might account for the large proportion of American-born paretics; and suggests the brief and trenchant saying of Krafft-Ebing, "civilization and syphilization."

The various occupations of the paretics were mostly those that required some mental effort. Only about 12 per cent. were laborers.

The professions were represented by 3 physicians, 6 lawyers and one clergyman. The number of brokers was low, probably because most of them go to private sanatoria.

The ages ranged from 18 to 68 years; 6 were under 30, including one 18-year-old patient; 83 were under 40; 111 were under 50; 35 were under 60; and 2 were under 70; the ages of 4 were unknown.

There were 241 paretics examined in the 6 hospitals visited: Hudson River State Hospital (Poughkeepsie), 45; Willard, 30; Matteawan (Hospital for the Criminal Insane), 9; Long Island (Brooklyn), 22; Islip, 53; Manhattan (Ward's Island), 83.

All but 6 were males; the reason more females were not examined was because the cutaneous evidences of syphilis in women are not, as a rule, as well marked as in men; consequently it was thought better not to subject the females to the rigid examination necessary, because it excited them and caused trouble for the attendants.

The patients were stripped and the parts of the body where syphilitic scars were apt to be found were carefully examined.

Care was taken to exclude any scar or pigmentation that might have come from traumatism. All were examined for external evidences of syphilis irrespective of any history of this disease, and it was found that 165 or 68.48 per cent. had various scars and markings that were typical of cutaneous syphilis, and 76 showed no external evidences whatsoever.

On looking up the hospital history of the paretics it was found, however, that 28 of the 76 negatives gave an undoubted history of syphilis. If we add these 28 to the 165 exhibiting evidences of cutaneous syphilis. We have 193 out

of 241, or about 80 per cent. that had had syphilis.

Eight of those examined at the Matteawan Hospital had undeniable evidences of having had cutaneous syphilis; the one negative gave a history of having had lues about 5 years before commitment.

Of the 45 examined at Poughkeepsie, 32 showed specific evidences; 13 were negative, but from 4 of them a history of syphilis was obtained.

In Willard there were 30 patients examined; 28 had typical external evidences of having had syphilis; 2 were negative, but one of these gave an undoubted history.

There was less external evidence of syphilis among the paretics in the metropolitan hospitals, that is, Long Island, Islip and Manhattan.

Of 22 patients at Long Island, 11 showed evidences, but 4 of the 11 negatives gave a syphilitic history.

From 53 at Islip, only 35 appeared to have had syphilis, but a history was obtained in 3 of the 18 negatives.

Of the 83 at Manhattan, 52 had had syphilis; and of the 31 negatives, 15 gave a syphilitic history.

Broadly speaking, the parietic belongs to a rather intelligent class, and consequently would listen to medical advice regarding syphilis; this coupled with the ease of obtaining treatment at the free hospitals and dispensaries of our large cities renders the systemic disease more easily controlled and cured, lessening and often eliminating all of the cutaneous phenomena. Unfortunately, the absence of late syphilitic skin lesions does not prevent the insidious advance of the specific disease upon the more delicate organs, as the brain, spinal cord, etc.

The above seems to explain satisfactorily the comparatively low percentage of external evidences of syphilis found among the paretics in the metropolitan hospitals; for the city patient can get the advice of the best specialists at the hospitals and dispensaries if he has not the necessary money to pay for private advice. He is also more apt to continue the treatment longer and has a better understanding of what symptoms to look for, and consequently the late, tertiary, cutaneous lesions are often altogether absent, or so slight that they leave no evidence upon the skin.

In the country, if the patient is aware that he has syphilis it often happens that he is afraid to consult the family physician, because of the imaginary danger of his misfortune becoming common gossip.

He is apt to neglect the advice or treatment he does get, because he thinks that the insignificant character of the early stages of syphilis could not lead to any serious malady later, consequently, he follows up the treatment in a desultory manner, and as soon as the early stages are past, ceases troubling himself any more about it.

The paretics in the rural hospitals were, almost without exception, men who had used their brains; they gave a history of being alcoholics, or were known to have been excessive sexualists; this would seem to be a fair explanation of the higher percentage of patients showing somatic evidences of syphilis in the rural hospitals.

The high percentage seen in the hospital for the criminal insane is, also, of easy explanation. As a rule the criminal is a degenerate, and all of the paretics at Matteawan showed signs of degeneracy.

The degenerate criminal rarely cares anything about a disease that is so simple in its onset as syphilis; in fact, it is the common experience of syphilographers to have patients, whose moral intuition is below par, laugh at the idea that the insignificant primary sore, which is followed by a perfectly painless eruption can ever result in anything serious. Consequently, they either receive no treatment, or disregard advice and do not carry out systematic medication when it is instituted.

While making the examinations I was often asked the question, why, if syphilis was the cause of paresis, did not all syphilitics develop this or other nervous disease due to the luetic poison? One might as reasonably ask, why do not all syphilitics exhibit the tertiary signs and symptoms upon the skin or any other organ?

The answer is that syphilitic poison is apt to manifest itself in the part most in use.

The well-known rule that syphilis affects the part that is subject to traumatism or irritation might explain why this systemic disease affects the central nervous system and does not produce general paralysis.

Alcohol, sexual excesses, worry, anxiety and business care all keep the cerebral system in a constant state of irritation that gives the dormant systemic poison the necessary impetus to attack the organ already weakened by this irritation or over-use.

It would seem that alienists differ regarding the syphilitic etiology of paresis.

One author claims that 90 per cent. of paretics observed and studied by him gave a positive history and evidences of specific infection prior to the mental disease, while another reliable authority asserts that in only about 25 per cent. of the cases he observed was syphilis found.

Recently a number of writers upon insanity are discounting the syphilitic origin of this disease; in fact, some claim that it is not a late manifestation of nerve syphilis at all, and that in those cases where evidences of specific infection are observed they are only an accidental accompaniment and have nothing to do with the mental condition, but that general paralysis is a distinct disease *per se*, or perhaps a condition of mental pre-senility.

It is not the object of this paper to discuss the merits of these claims, but simply to state the facts as they appear after an examination by

one in an entirely different branch of medicine and, therefore, unprejudiced on this question.

From the evidence deduced from the examination of these patients from various parts of the State, whose previous mode of living, habits and environment were entirely different, it would seem from the large percentage of those having had syphilis, and remembering that there is nothing to prove that the negative minority had not had specific infection, the weight of evidence would prove that syphilis is the determining cause of general paralysis, and not merely an accidental or concomitant accompaniment.

THE TREATMENT OF HYPEREMESIS GRAVIDARUM.*

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IT is planned on this occasion to consider some of the more practical aspects of this subject, although thoroughly appreciating the difficulties and risk that always attend an early application of theories that are as yet incompletely worked out. The writer's study, however, of hyperemesis gravidarum has been made so extensively from cases in private practice that he has ventured to make a few practical suggestions in order to discover if we are in any better position than formerly to treat this distressing and frequently dangerous complication of pregnancy.

One is immediately confronted in making this attempt with the widespread notion, handed down to us by the various text-books upon obstetrics, that a pregnant woman has a right to be disturbed by many annoying symptoms, and which, if not present to such an extent as to threaten life, are termed and described as physiological. Such is the case particularly with the complication under consideration.

All cases with definite lesions of the brain, stomach, pelvis, etc., are excluded from this paper because such lesions, if present during pregnancy, must naturally be regarded and treated the same as under other circumstances. The etiological and pathological relations will also be excluded, except so far as it is necessary to elucidate the principles upon which our treatment is based.

The neurotic and hysterical elements are mentioned because mental disturbances oftentimes form such a prominent part of the clinical picture, to which several authorities ascribe so much importance in the etiology of the disease. The writer's position, that they are a result of the condition, will exclude them from further consideration, although he believes them to be of the greatest importance and must be reckoned with in prognosis and treatment.

*Read before the Twenty-second Annual Meeting of the New York State Medical Association, October, 1905.

Through the experiments of Hahl¹ and others, it is certain that a disturbance of metabolism normally occurs during pregnancy, particularly in the retention of a larger amount of nitrogen. This occurs, according to Jägeroos, whether the nutriment is high or low in nitrogen. In view of these experiments, then, it does not seem too much to inquire if the so-called physiological vomiting of pregnancy may not be one of the early clinical manifestations of such a disturbed metabolism.

The treatment presented in this paper, therefore, is based upon the assumption that the essential etiological factor is a toxemia, manifested by more or less severe metabolic disturbances, in which the liver, in the severest cases at least, shows pathological changes that are readily demonstrable and are known to be lesions in other diseases of well-recognized toxic origin. This assumption is applied to both the mild and the severe types.

Any consideration of a plan of treatment, based upon this conception of the disease, must naturally first review the present methods that are in vogue for treating toxic processes in general. Such methods are: 1. Attempts to cut off the supply of toxins, or of material suitable for their development. 2. To stimulate those organs largely employed in maintaining normal metabolism. 3. To aid the excretion of the toxins. 4. To dilute whatever poisonous material may be circulating in the blood. These objects are attained partially at least, by altering the kind and amount of nourishment, by catharsis with calomel and salines, by the administrations of large quantities of water, by colonic irrigations, and the injection of saline solutions into the rectum beneath the skin and directly into the veins.

Before considering the results of these methods when applied to the vomiting of pregnancy, the writer wishes to call attention to the possibilities in the way of prophylaxis, which in all other problems of modern medicine forms such a large part of our work, and which to the obstetric specialist is of far greater importance, I believe, than, for example, the worm-eaten debate as to version versus forceps. The present time, too, is especially favorable for a consideration of this part of the subject when the research workers are devoting so much time to the study of metabolism. The obstetrician by furnishing clinical material has the opportunity to direct some of this work to a more profound consideration of the metabolic processes incident to menstruation and pregnancy, so that our knowledge in this line will be at least equal to that which has been attained in some other diseases, as diabetes mellitus, for example. The assertion that pregnancy is a physiological process would be more often correct if from the study of the works of Van Noorden, Folin, Chittenden and a host of others, we could more correctly and completely teach proper

dietetics and hygiene before pregnancy occurs. The writer firmly believes that these disturbances often get their start in the few years immediately following puberty, and he already has considerable clinical evidence to show that the frequent association of chlorosis and poor development of the genital organs have a definite relation to the subsequent appearance of the disturbances under consideration. He also, from a few recent observations, believes that certain menstrual disturbances may be the manifestation of similar metabolic errors. In view of these facts, then, why should it be such a far cry to assume that a patient, who, perhaps, has previously been indiscreet in regard to her diet and hygiene without apparent harm, should first show the detrimental results of such indiscretions at a time when the changed metabolism incident to her pregnancy begins?

The obstetrician's practical work, however, usually begins with the pregnancy, and a certain measure of success that the writer has attained with the treatment of the milder types of vomiting has offered him some encouragement. He must confess that previously to some recent experiences he has not considered his efforts to have been very successful.

One of the chief difficulties in the treatment is the very widespread impression that it is better for them to eat and drink whatever they please, even if vomiting does occur, and that all morbid cravings for different kinds of food should be satisfied so far as possible. These practical difficulties may be illustrated by the history of the following case: A woman, 20 years of age, suffered such long-continued and excessive vomiting in a previous pregnancy that the writer felt obliged to empty the uterus in order to save her life. Advice as to diet, etc., was disregarded, and a second pregnancy following a few months later, was ushered in by this same distressing symptom. Efforts to stop the vomiting by means of rest in bed, a milk diet, and calomel and saline catharsis, were rewarded by a rapid amelioration of the condition, but interference on the part of the mother, who herself had always vomited in several pregnancies, and who did not believe in rest in bed and a fluid diet for such a condition, was quickly followed by a recurrence. The writer was permitted a week later, however, to begin treatment again, which was similar to the first except that it was carried out more energetically and colonic irrigations were added to the measures previously prescribed. Response to this treatment was not very prompt, partly due, however, to frequent and secret interference of the mother. I was much surprised and discouraged on the third day to find present at the bedside the mother and three other women, who had had a similar condition. Each was giving advice and enjoying, I believe, the suffering of the patient. Before I had an opportunity to really appreciate the situation, the large and well-fed mother stepped forward and asked me just what I

¹ Beitrag zur Kenntniss des Stoffwechsels während der Schwangerschaft *Arch. f. Gyn.*, Bd. 75, 31.

claimed for my method of treatment. The appearance of the patient, who had been vomiting persistently for several hours, and my own feeling of insecurity prevented me from making any extravagant claims. I managed to tell her, however, that I thought if she and the other women would go and remain away, I might possibly save her daughter's life. On account of the patient's strenuous objections to the saline irrigations they were discontinued, as well as all nourishment by mouth. Water, however, in practically the amount desired by the patient was given at frequent intervals. Nutrient enemata were then given every six hours, alternating with an injection of a pint of normal saline solution. Laudanum was added to the enemata at night. A marked improvement followed in three days, and in five days she was able to sit up. Vomiting has not recurred, and now at the end of the sixth month she is perfectly well. It is important to compare the two weeks' duration of the illness in this pregnancy when treatment was begun early with seven weeks' duration and final premature termination of the previous pregnancy when treatment was begun late.

Another patient upon whom the writer had performed the Dudley operation for sterility came to the office on account of the persistent vomiting in an early pregnancy. A plan of treatment was outlined, which the patient faithfully and successfully carried out without subsequent advice. Three other similar experiences have encouraged the writer to urge an early resort to this plan of treatment before alarming clinical symptoms arise, and before the urine shows that serious disturbances of metabolism are present.

This treatment, considered specifically, should consist of: 1. Rest in bed, absolute in most instances, at least for a few days. 2. Exclusion of all visitors, even members of the family in severe cases. 3. A milk or broth diet, or absolute withdrawal of all food by stomach in the severe cases, but a liberal allowance of water. 4. Catharsis at the beginning of treatment with calomel and salines, the salines sometimes to be repeated. 5. Colonic irrigations with normal saline solution, or rectal injections of the same. 6. Intravenous infusions in the severest types. 7. Nutrient enemata. 7. Administrations of a few doses of opium, well selected as to time, either hypodermically or by rectum. The writer considers the opium a valuable adjunct and does not think that the beneficial results following its use offer any more argument against the toxic origin of the disease than do the good results of its use in other toxic conditions.

It may be truthfully urged that a nurse is required for the proper administration of such treatment, which financial considerations may render impossible. A more general teaching, however, that the early treatment of this complication is necessary, will soon bring to the hospitals a large number of such cases, by means of which not only immediate advantage will result

for the patients, but also a greater opportunity and responsibility will be furnished for the hospitals to pursue some scientific investigations in the metabolism of pregnancy, a provision for which is not made by any maternity hospital in New York City at the present time.

In the treatment of the severe cases, particularly those of the acute or fulminating type, the additional evidence furnished by a complete chemical examination of the urine, will give the most accurate knowledge of the gravity of the condition, although as yet the appearance of no single pathological constituent can be said to furnish an infallible guide. The writer believes, however, it will be possible to decide in a larger number of cases than formerly, whether the treatment as outlined above shall be continued, or whether pregnancy shall be terminated.

In the presence of urinary changes that denote a serious disturbance or metabolism it is the writer's own opinion that pregnancy should be terminated at a much earlier period than any text-book has so far suggested.

The choice of method in terminating the pregnancy may also be of the greatest importance. Rapid dilatation and emptying the uterus under a general anesthetic is a serious operation in these cases, and should not always be attempted, because the shock may be the determining factor in a fatal result. No one can tell, either, when the uterus is completely emptied, because it is practically impossible to introduce a finger into the uterus, unless more time is taken for dilatation than is usually considered desirable. An experience of the writer in a previously reported case, in which the vomiting did not cease until after the removal of some portions of the placenta that had been overlooked at the first operation, illustrates the importance of this point. If it does seem necessary to use anesthesia, the writer would advise the use of ether instead of chloroform, because the evidence is accumulating that chloroform is particularly dangerous in the presence of marked disturbances of metabolism.

It must be confessed that a perfectly safe and efficient method of accomplishing this without anesthesia has not been found. Sinclair² gives a recent review and commentary of the discussion in the congress of the German Gynecological Society, held at Kiel in June, 1905, upon the methods of artificially dilating the pregnant and parturient uterus. In this discussion Leopold recommends the use, in the early month, of laminaria tents when the completely intact uterus, in the absence of pains and hemorrhage, has to be emptied. Sinclair in his comments also very earnestly advocates their use, stating that they may be rendered aseptic more easily than steel instruments. At the risk of criticism, the present writer would suggest that their use in the class of cases under discussion might be an ideal method of interrupting the pregnancy. This

²The *Journal of Obstetrics and Gynecology of the British Empire*, August, 1905.

suggestion is made with a keen appreciation that their use has practically been discarded by the best men in this country, but, as suggested recently by a friend, it may be that at the time they were in general use they might have been the scapegoat for the technical errors in asepsis that were then more frequent than at the present time.

THE NOSOLOGICAL STATUS OF PARANOIA.

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PERHAPS no disease concept has changed more in the past few years than that of paranoia. I can well remember, less than fifteen years ago, that a certain State hospital in the West had classified in its annual report approximately fifty per cent. of its patients as paranoiacs. To-day we are all, I think, prepared to admit that the "old-fashioned" paranoiac is rarely met with, and that the great majority of the cases we see presenting paranoid symptoms are classified under some other caption than that of paranoia.

On the one hand, then, we see that paranoia as a disease entity, if disease entity it really is, is acknowledged to be of rare occurrence, and on the other hand we see the great majority of conditions which we now call paranoid or paranoiac, and which were formerly classed as paranoia, are now classified under other heads. Thus is paranoia being encroached upon from both sides and the question naturally arises, Is there, after all, a true paranoia?

The disease which has encroached most upon the territory of paranoia and absorbed the greater number of the paranoid states is, of course, dementia præcox. From the tendency which existed a few years ago, when paranoia was prominently in vogue, to make everything paranoia, the pendulum has swung to the opposite extreme, and now there is no paranoia.

The principal reason for the tendency to include more and more of the paranoid states under dementia præcox is because the element of dementia is being more generally recognized in these cases. The reason, in fact, why paranoia has maintained for so long such a distinct individuality in the domain of mental disease, is that one of the fundamental conceptions of the nature of paranoia has been all along that it did not, even after a course of many years, lead to mental deterioration, to dementia. As a result of this conception it was quite natural that a disease presenting no evidences of dementia should not be included as a variety of dementia præcox, the fundamental and characteristic symptom of which is dementia.

A sort of middle course has grown out of this state of affairs and a true paranoia is by some acknowledged to exist, though it is conceded that it is not met with frequently in clinical experience, while under the caption of dementia præcox is included a type which presents paranoid symptoms erected, however, upon a background of well-marked dementia.

This conception of paranoia, however, seems to me to be essentially erroneous. In the first place I cannot conceive of paranoia except as a deterioration psychosis. Even in those cases which have a long duration and which have been especially responsible for the idea that dementia does not supervene in the course of the disease, I cannot escape from the conviction that there are marked evidences of deterioration. These cases might be called, following the terminology of paresis, "classical paranoia."

And in the second place I fully believe that every intermediate stage between "classical paranoia," on the one hand, and the most pronounced case of the paranoid variety of dementia præcox on the other, showing every gradation from a hardly appreciable to a pronounced dementia, may be found clinically.

The evidences of deterioration in paranoia are twofold. They are evidences both of disorder of mind and of disorder of conduct. The woman who, on getting up in the morning, looks out upon a snow-clad street and sees footprints going by or leading into the house and reasons from this that some paramour of her husband's has been to the house during the night to keep an illicit engagement with him; the man who, because he recalls several whispered conversations of his parents, concludes that he is not their son but the descendant of some noted person, or perhaps monarch, and these conversations were about him, is certainly suffering from a disorder of judgment. The paranoiac who parades the streets clad in some outlandish costume and addresses the crowds that gather around him on his persecutions, or the man who shoots some prominent person to attract attention to himself and thereby to his wrongs, that he hopes to get righted, is as surely suffering from a disorder of conduct.

The disorders of judgment and of conduct exemplified in the cases set forth are in each instance disorders in the nature of defect. The reasoning is defective, based upon insufficient grounds, and the conduct is ill-directed to the ends sought, in fact more apt to issue in results not at all intended. Being disorders due to defect, and that defect being permanent, brings them, I think, within the conception of dementia which may be said to be a permanent mental deterioration.

This conception of paranoia brings it into the same general class, at least, as dementia præcox, both being deterioration psychoses. Whether it shall or shall not be included as a subdivision of dementia præcox seems to be debatable.

The chief difficulty, to my mind, of maintaining a separate place in the classification for paranoia is the extreme difficulty of deciding whether certain cases should go in this class or, because of a greater degree of dementia, be classed as dementia præcox. This, of course, is the difficulty common to all classifications that deal with differences of degree, of more or less, rather than of kind, and the solution must, to some extent at least, be a solution of expediency.

I am accustomed, in illustrating the development of the mind, to compare the mind to the trajectory of a bullet. The extent of the flight of the bullet is dependent upon two factors—the charge of powder that starts it on its course and the resistance that may be interposed in that course. If the charge is the usual amount of powder and the resistance only gravity and the atmosphere, the bullet will reach its goal. If the powder is deficient or the resistance great, it will fall short of that goal. The powder, in this figure, represents the developmental force, the resistance represents stress, two factors which vary independently of each other. The greater the stress the less strong does predisposition have to be; and the stronger the predisposition, the weaker the stress which will be required to bring about defect.

Now, where there is marked defect of developmental force the ordinary changes incident to the physiological crises of life are sufficient to constitute stresses, and so we find the mind failing to reach its ultimate goal of development, breaking down all along the line from youth to old age, but especially at the physiological periods of life—puberty, the climacteric, and the senium—the period being determined by the reciprocal action of the two independent variables, hereditary defect and stress.

Now, paranoia, and by that term I mean the "classical paranoia" with the minimum of evidences of deterioration, is a disease of adult life, a disease of the mind at the very culmination of its efficiency. In fact, it is a trite saying that it takes an educated man, one accustomed to the use of his reasoning faculties, to be a paranoiac, to develop an elaborate highly organized system of delusions. Such a result could hardly be expected of a youth with little or no mental training.

As a deteriorating psychosis, therefore, paranoia would take its place between the dementia of puberty and adolescence, on the one hand, and the psychoses of involution and the senium, on the other.

If we arrange the deterioration psychoses in accordance with the period of life in which they occur, from puberty at the one extreme to senility at the other, it matters little whether paranoia is or is not included under the sub-head of dementia præcox, so long as the proper conception of its relation to the other psychoses is obtained.

One of the objections to classifying it under this head is the expressed opinion that dementia

præcox has become the "waste-basket" of psychiatry, and threatens to absorb any psychosis that gets near. It may be that this is a real danger, but the pendulum usually has to travel to extremes on both sides, and extreme views certainly have a distinct advantage in creating discussion, out of which finally issues truth. It may be said, however, that the most extreme advocates of extending the limits of dementia præcox never contemplate that it will be anywhere near as inclusive as the erstwhile conception of "terminal dementia," from which we have just escaped, thanks largely to dementia præcox itself.

Following the ideas thus far developed as to the nature and nosological status of paranoia, we may set them forth in a scheme of classification somewhat as follows:

Deterioration Psychoses.	{	Period of Life.	Form of Psychoses.	Type of Psychoses
		Senile.	Senile Psychoses.	
		Involution.	Involution Psychoses.	
		Maturity.	Classical Paranoia.	{Expansive, Persecutory.
		Adolescence and Puberty.	Dementia Præcox.	Paranoid Forms.

This table is not intended to include all the deterioration psychoses—for example, general paresis is not included—but only those presenting bonds of organic unity and dependent for their occurrence largely on the stress of the physiological periods of life, and for their particular type upon the time of life when they develop. The classification, too, is not completed but only carried out sufficiently to illustrate the points in this paper, particularly the close relationship between paranoia and the paranoid forms of dementia præcox. This table shows very well the relation in which paranoia stands to dementia præcox, the difference between it and the paranoid forms of the latter being merely differences of degree of deterioration. If the dementia is marked the case is dementia præcox, if very slight it is paranoia. It is because of these reasons that it has been included under the more comprehensive concept of dementia præcox, but whether it should be or not is, at present at least, largely a matter of point of view or of expediency. My contention is for conceptions, not for names.

SIMULTANEOUS EXTRAUTERINE AND INTRAUTERINE GESTATION,*

By JOHN E. W. WHITBECK, M.D.,

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SIMULTANEOUS extrauterine and intrauterine gestation is not infrequent, but the course, treatment, and termination are extremely interesting and important. The case presented to us occurred in a healthful robust woman

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in middle menstrual life without previous pelvic disorder. The menstrual epoch had been retarded about eight weeks, there were changes in the mammæ, the vaginal mucosa was blue, and there had been some nausea. The evening of the eventful night, sudden and severe paroxysmal pelvic pain was quickly followed by faintness and other symptoms of shock.

The patient was speedily transported from the country by rail to the city and hospital. Examination showed abdomen slightly distended and sensitive, the uterus corresponding in size and feel to the second month of normal pregnancy, and a mass in the left fallopian tube about as large as half of a man's fist.

The face of the patient was pallid, but not so white as when much hemorrhage has taken place. The countenance was anxious, the skin cool, and the pulse rapid. The diagnosis was a concurrent ectopic and uterine gestation of eight weeks' standing. Under the conviction that there had been a hemorrhage which might continue or recur, that, though there had been shock from which the patient was rallying, and as the present condition was better than fairly favorable, and as the patient was in a safe and suitable place for surgical interference, an operation was strongly advised and accepted. After due preparation a free abdominal incision was made, the diagnosis confirmed and the usual technique carefully observed. The pregnant uterus was in normal condition and position. The distended tube was movable and was quickly removed after distal and proximal ligation of the vessels.

There was no free intraperitoneal blood, but the tubal sac had apparently suffered a partial rupture downwards into the broad ligament. While it may be quite speculative as to the manner in which the concurrent gestation occurred, it seems reasonable to suppose that there had been a simultaneous impregnation of two ova, the one ovum passing on into the uterine cavity while the other ovum lodged midway in the tube. Or an ovum may have been fertilized at some earlier epoch, and lodged and developed slowly until the day of rupture and shock, and the more fortunate ovum on the sound side had been subsequently fecundated and wafted into the safe harbor where it grew and flourished for the allotted time, awaiting "a consummation so devoutly to be wished for."

There was no obtainable evidence or information that there had ever been a previous hemorrhage or paroxysm of pain.

The laparotomy was well borne; there was absolutely no further shock, and the repair and recovery were uninterrupted and uneventful. At the end of the fourth week the patient returned to her home in the country, and seven months afterwards gave birth to a large, well-developed and healthy male child. The happy mother is perfectly well, active, vigorous.

In the opinion of the reader, this case instruc-

tively illustrates in a marked degree the tolerance of the nervous system and of the various organs of the body of a very serious surgical procedure. Minor operations do sometimes cause grave and even dangerous consequences. In this instance an immediate miscarriage would not have been surprising.

Ectopic pregnancies, according to Thomas, observe this order: of shortest duration are the interstitial; next, the tubal; next, the ovarian; and the longest, the abdominal. Of 88 cases of tubal pregnancy—

The duration in	3 cases was	4 to 5 weeks.
" " "	17 " "	4 " 6 "
" " "	9 " "	6 " 7 "
" " "	13 " "	6 " 8 "
" " "	4 " "	2 months.
" " "	17 " "	3 " "
" " "	11 " "	4 " "
" " "	4 " "	5 " "
" " "	2 " "	6 " "
" " "	2 " "	7 " "
" " "	6 " "	9 " "

THE DETECTION OF OCCULT BLOOD IN THE FECES—A MODIFICATION OF THE BOAS TEST.*

By A. L. BENEDICT, M.D.,

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and Attending Physician to the Mercy Hospital.

A. Conan Doyle, M.D., in one of his fascinating novels, writes of the discovery of a satisfactory test for hemoglobin by one of his medical heroes. Unfortunately, he does not describe the test, and the profession as yet has had nothing better than the time-honored but somewhat uncertain reaction with guaiac and an oxidizing agent. Few realize how lacking in delicacy this test is—1:8 or 1:10 being the ordinary limit of detection expressed in the proportion of blood detectable in feces. In urine, the test is often negative when red blood cells are easily found microscopically, and it may even fail when the color of a previously blood-free and watery urine is perceptibly but slightly altered by the deliberate addition of a few drops of blood.

In the case of feces, the microscopic detection of blood cells is difficult unless present in considerable number and relatively unchanged by digestion or bacterial action; and, especially if bismuth, charcoal or fruit have already caused discoloration, the microscopic warning is absent. Thus a chemic test is urgently needed. While it is to be hoped that a much more delicate test

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than the present one will, sometime, be discovered, it is obvious that too high a degree of refinement is not desirable. Boas has adapted the guaiac and oxidizant test to feces by a process of extraction. He cautions that meat and fish, cooked or raw, should be absent from the diet for several days. However, it is rather unusual for moderate quantities of blood-containing foods to cause a positive reaction. Bovine and similar blood-containing preparations may cause a fallacious reaction.

In Boas's test, the hemoglobin must be dissolved out of the fecal mass, to obviate the concealment of the reaction by various fecal pigments and solids. For chemic reasons that need not be considered in detail, this is best done by changing the hemoglobin into hematin, in which latter form it is soluble in ether. But, as ether also dissolves fats, which adventitiously interfere with the delicacy of the test, it is advisable, though not always strictly necessary, to make a preliminary extraction with ether alone, to decant the fat-containing ether layer, and then to extract the residue with acetic acid and ether. This ethereal extract of hematin is then tested either with tincture of guaiac plus ozonized oil of turpentine or plus hydrogen peroxid, yielding a blue color, or with fresh tincture of aloin plus either of the oxidizing agents, yielding a red color, which becomes plainer if extracted with chloroform. The guaiac tincture must be made up every few days; the aloin tincture will turn red on standing even for an hour or so. The aloin test is not so delicate nor so reliable as the guaiac test.

Boas's test is not particularly difficult, expensive nor troublesome, requiring only about 30 c. c. of ether for a test, and the delay during the extractions can be filled in with other tests. Still, for a clinician, especially with no laboratory but his office, every delay counts and the ether is liable to spurt, to evaporate, or to rise slowly; and the test is liable to prove annoying and dirty.

Several years ago the writer hit upon gasoline as a convenient extractive of urinary indican, and, acting on this hint, the following modification of the guaiac test has been developed:

Any convenient quantity of feces is used, say 2 to 5 c. c. of liquid feces or of more or less solid feces reduced to a diarrheal consistency with water. (Distilled water is not a necessity.) For every 5 parts of liquid feces, about one part each of fresh tincture of guaiac and old oil of turpentine is used, and from one to five parts of gasoline. Upon shaking, the blue tint of the positive reaction—or it may be a greenish blue—is communicated to the gasoline. Fats do not interfere with the test, so that no preliminary extraction is necessary. It seems to make no difference in what order the ingredients are added. Ordinarily, to conceal the fecal odor, gasoline is added immediately to the feces, then the guaiac and, finally, the oil of turpentine are poured in and the whole is shaken. The test

may be performed perfectly well in an ordinary bottle, even at the house of the patient. Unless several suspicious cases are under observation, the tincture of guaiac is best made fresh, by adding alcohol or wood alcohol to a few whittlings of gum guaiac, so as to produce a yellow solution.

The writer has not found it necessary to make up the solution in exact strength (4 per cent. in absolute alcohol is advised by J. Dutton Steele). The outside of the lump of guaiac should be scraped off to avoid the oxidizing effect of the air. The writer is using a lump about 20 years old, with good results. Old oil of turpentine gives better results than hydrogen peroxid. The chemically pure oil should be used, and should be exposed to light and air for about two months, with a plug of cotton to keep out dirt. When sufficiently ozonized it has a faint greenish tint. It may then be kept in a glass-stoppered bottle, with plenty of air space in the bottle.

Boas and, in this country, J. Dutton Steele have written so extensively of the value and limitations of the test that it is not necessary to enter into this discussion. The test, as modified, is extremely simple, cheap, easy and rapid. After it has been performed a few times—two or three minutes suffice—there is almost no danger of soiling the environment, and there is little odor aside from that of the gasoline and turpentine.

The practice of medicine will be very much as you make it—to one a worry, a care, a perpetual annoyance; to another, a daily joy and a life of as much happiness and usefulness as can well fall to the lot of man.—*Osler*.

It is one of the greatest tragedies of life that every truth has to struggle to acceptance against honest but mind-blind students.—*Osler*.

A bookish man may never succeed; deep-versed in books, he may not be able to use his knowledge to practical effect; or, more likely, his failure is not because he has read too much, but observed too little.—*Osler*.

Early learn to appreciate the differences between the descriptions of disease and the manifestations of that disease in an individual—the difference between the composite portrait and one of the component pictures.—*Osler*.

It is a common error to think that the more a doctor sees the greater his experience and the more he knows.—*Osler*.

VENEREAL DISEASES IN THE NAVY AND THEIR PROPHYLAXIS.*

BY GEORGE E. H. HARMON, M.D.,

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AT the request of your Society, the Surgeon-General of the Navy has designated me to represent the Medical Corps of the Navy at your meeting and to express to you his warm interest in the subject under discussion and his keen appreciation of its strong bearing upon the physical and moral welfare of the Naval personnel.

The soldiers and sailors of our own country, so largely made up of young men of robust health and physical vigor, bereft of the restraining influences of home life and, by the nature of their calling, deprived of the opportunity of marriage, appear to be set apart as a class above others to suffer most from sexual unrest. That they do fall in the presence of urgent and insistent temptation is only too true. Is it not recorded in history, almost from the beginning of the world up to two centuries ago, that sexual licentiousness always follows the armies; that often, indeed, the promise of the sack of a city and the delivery of the women to the soldiers incited the latter to deeds of prowess and bravery invincible? In these later times, when other manners forbid the sacking of captured cities, the same imperious demand is met by the shoals of "dames de plaisir," who, flocking to garrison towns and naval stations, find the soldier and sailor an easy prey.

And an added danger lies in the fact that these same women, having to content themselves with small profits and quick returns, are the worst of their class and, in the absence of legal or moral control or supervision over them, they become almost universally infected with venereal diseases and their patrons suffer accordingly.

It is a fact well known to naval observers of venereal diseases that certain military and naval sea posts throughout the world are notoriously dangerous to visiting ships. Portsmouth and Plymouth in England, Gibraltar and Malta, Naples, Rio de Janeiro and Hongkong have this evil reputation and deserve it. New York and Norfolk, among our own seaports, are almost as bad. French ports are much less dangerous, owing to the system of medical inspection of licensed houses of prostitution there in vogue. I know this law, as enforced in France, has not proved to be satisfactory, but it has been productive of some good in just this direction, the bettering of the condition of the class of houses habitually visited by sailors.

From the foregoing remarks you will infer that venereal disease abounds in the Navy. Such is the sorrowful fact. From the annual report

of the Surgeon-General of the Navy for the four years, 1901, '02, '03, and '04, I gather the following statistics:

STATISTICS OF VENEREAL DISEASE IN THE NAVY FOR THE PAST FOUR YEARS.

Year.	A.	B.	C.	D.	E.	
	Average strength of Navy.	Total admissions for Disease, exclusive of Injuries.	Total admissions for Venereal Disease.	Percentage of admissions for Venereal Disease.	Total number of Sick Days from all causes.	Percentage of Sick Days from Venereal Disease.
1901.....	26,101	17,043	2,914	17.0	323,831	24.8
1902.....	30,249	18,882	3,353	17.7	374,466	24.5
1903.....	36,535	24,545	4,560	18.5	470,406	24.3
1904.....	39,450	24,270	5,523	22.7	452,361	27.3
Avg. for 4 years	33,084	21,185	4,088	19.2	405,289	25.2

During the past four years 949 men have been discharged from service for venereal disease.

This result seems startling and scarcely credible, but I believe it is nearly correct. As a check I have prepared a similar table from the records of the Naval Hospital in Brooklyn for four years, which gives even a larger percentage of venereals to the whole number admitted, exclusive of injuries.

STATISTICS OF VENEREAL DISEASES FOR THE NAVAL HOSPITAL, NEW YORK, DURING THE PAST FOUR YEARS.

	A.	B.	C.	D.	E.
1902.....	953	214	22.4	41,894	28.6
1903.....	1,302	277	21.2	48,235	27.9
1904.....	1,019	313	30.7	40,614	34.8
1905.....	707	232	32.8	34,600	33.9
Average for 4 years.....	995	259	26.8	41,336	31.3

I regret to say that the published medical statistics of the Navy are not as full and complete in the matter of venereal diseases as they ought to be. The subject is certainly deserving of special investigation and research, particularly on this very point of devising some practical scheme of instruction to be given to the men of the Navy in regard to the nature and method of communication of venereal diseases and in the elementary knowledge of sexual physiology and hygiene. The subject is full of difficulties in civil life, and is, as you know, approached most reluctantly by clean-minded people. It is an abhorrent canker-spot upon our social body to be covered up and hidden out of sight; and yet this is the very treatment most conducive to its spread. Fathers dread and hesitate to mention the subject of sexual physiology to their young sons for fear of teaching them too much. And I fear that practically all of the young daughters of the land are allowed to grow up to womanhood in ignorance of the duties and functions they are to assume as wives and mothers. That this should be done with delicacy, propriety and best

* Read before the Society of Social and Moral Prophylaxis, February, 1906.

effect presupposes wise and discreet fathers and mothers; but these I fear will not be altogether available for some generations to come, even with every educational advantage your Society can offer.

That good results would come from such instruction to the men of the Army and Navy I fully believe. Something in this direction has been done for the midshipmen at the Naval Academy.

About 1886-1889 Medical Director Thomas C. Walton of the Navy, then Senior Medical Officer at the Naval Academy, in the development of the course of instruction in elementary physiology and hygiene established by an act of Congress some years before, delivered to the graduating class towards the end of the academic year three or four lectures upon the structure and functions of the procreative organs, together with a brief history of venereal diseases, their method of communication, course and effects.

These lectures were full of valuable instruction and were listened to with close attention by the midshipmen. They were appealed to to live a life of chastity, to place high their moral standard and live up to it, "to harness their chariot to a star," as Acton, I believe, expresses it. But knowing that not all his auditors would be saved from the burning, Dr. Walton gave also good, sound advice to those who were destined to fall into trouble under temptation; especially were they to avoid advertising quacks and self-treatment, but to report promptly and frankly to the medical officer, who would prove to be their best friend in time of trouble.

The instruction of the enlisted men would present some difficulties. Lectures to the men on board ship would, doubtless, be eagerly listened to by the whole ship's company; but morbid curiosity on the one hand and perhaps scoffing and derision by the older and hardened sinners on the other must be expected; although, doubtless, some good would arise.

Such instruction could be given, I believe, with good results to classes of boys and apprentice seamen at the training stations, preferably by their own medical officers. They would take it more seriously and in better part from their own doctor than from a stranger coming in their midst: these gentry are rather shy of missionaries.

There has long been a regulation in force which requires the medical officers of ships, particularly in the beginning of a cruise, to instruct the whole ship's company in "Aid to Wounded."

This is now done by means of practical drills combined with simple, explanatory, oral lectures, and an extension or amplification of this regulation to include our subject under discussion appears to me to be the obvious method of introducing it, experimentally at least, into the Navy. All that is necessary is the incorporation of a General Order to this effect into our book of Instructions to Medical Officers, with, perhaps,

a small manual to be prepared somewhat on the lines of Dr. Walton's lectures at the Naval Academy, in order to secure uniformity and greater completeness than if left to the individual instructor. The field seems to me a promising one for the introduction of this work.

There is no difficulty in the way. We have no social prejudices to be shocked; and, while we may not hope for surprising reformation in sexual evils to greater extent than you have effected in civil life, yet we may at least—in the words of the President of your Society—"turn on the searchlight of knowledge and dissipate the fog of ignorance which is the chief barrier to progress."

One word, in closing, upon the "Prophylaxis by Treatment," which is carried out at the Naval Hospital in Brooklyn.

Thirty years ago, when at Kiel, in Germany, I had the pleasure to be conducted through the Military Hospital by the Chief Surgeon, the eminent Professor Von Esmarch. Ascending the stairs to the third story, we were confronted at the landing by an iron gate, securely locked. Behind these bars were all the venereal cases in the hospital. This, I was informed, was the custom in the German Military Hospitals at that time.

Neither naval discipline nor public sentiment allows us to resort to this very effective measure in this country; but at the Naval Hospital in Brooklyn all venereal patients presenting open or contagious lesions are quartered together in one part of the building, messed separately with their own table utensils, baths and closets. They are allowed no liberty whatever to visit the city during the contagious period, their blue uniform is taken away from them, and they are dressed conspicuously in white to discourage frenching over the walls, which is, moreover, severely punished. This plan works quite satisfactorily in a Naval Hospital, but it would, perhaps, be impracticable in a civil establishment.

VENEREAL DISEASES IN THE ARMY AND THEIR PROPHYLAXIS.*

By COLONEL VALERY HAVARD,

Assistant Surgeon-General, United States Army,

ARE venereal diseases a serious evil in the Army? A glance at statistics will enable us to answer this question. It is well known that statistics of this class of diseases are, as a general rule, unreliable and deceptive; but it may be stated that, in the United States Army, venereal diseases, like all others, are carefully collected and tabulated, patients seldom failing to report to the surgeon for treatment, so that our figures can be held to be substantially correct,

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rather understating than overstating the reality. From the medical point of view, venereal diseases are by far the most serious evil in our Army, as well as in all other armies. It is true they cause no mortality so far as military records show, the affected soldiers leaving the Army by expiration of term of service or discharge before any constitutional taint has begun to threaten life. In these modern days of peace and applied hygiene, the mortality from all diseases in the Army is so low, 4 or 5 per 1,000, that it can almost be dismissed from consideration. Venereal diseases are an evil in this way, that they unfit men for duty, fill up our hospitals, and during military movements, in peace or war, cumber our means of transportation.

According to the latest report of the Surgeon-General, that for the year 1904, out of each 1,000 soldiers in the United States, there were 107.05 cases of gonorrhoea, 27.90 of chancroids and 28.47 of syphilis, including all complications and sequels, making a total venereal rate of 163.43. Let us note, by way of comparison, that during the same year, the ratio of admissions for alcoholism was only 25.42. For each 1,000 soldiers, 9.83, or practically one per cent., were constantly non-effective during the year from venereal diseases, that is to say, not only useless as soldiers but, like all other patients, requiring treatment and therefore a source of expense to the Government. For each 1,000 soldiers, 5.10 becoming seriously disabled and a source of danger to their comrades, had to be discharged from the service.

How do venereal diseases compare in frequency with the other most common diseases in the Army? It is a sad fact that they far exceed any other ailment, their ratio being more than double that of the next most prevalent disease, tonsillitis, in the proportion of 163 to 78, while the ratio of diarrhoea, bronchitis and influenza is still much lower. In the same manner, more men are discharged from the military service from venereal than from any other disease; tuberculosis, which comes next, causing only the discharge of 2.46 per 1,000.

But if the showing for the United States is bad, that for our colonies is far more deplorable, as can be seen by a glance at these figures. For 163 cases in the United States, there are 297 in the Philippines. There they also exceed in frequency any other class of diseases, even malarial fevers, always so prevalent in the tropics, in the proportion of 297 to 220. In the Philippines there are 22 soldiers, out of each 1,000, constantly non-effective from venereal diseases, that is to say, four times as many as from any other disease. Nor can we argue that our soldiers were the victims of a previous widespread infection among the natives. It is a notorious fact that these diseases were practically confined to seaports and seldom extended to interior towns under the Spanish domination, but that since the American occupation, they have increased and become more widespread, so that they are now

common where they were entirely unknown a few years ago. What a commentary on our civilization! We may ask, what can be our moral influence in a country where we open schools and, at the same time, debauch and infect the natives!

Are these high rates among our soldiers, characteristic of the United States Army, a special stigma of our service? No; it is well known that the same condition prevails in all armies, that there is, in all, a preponderance of venereal diseases, although it may not always so appear on statistical tables. The figures reported in foreign armies are much smaller than ours; thus 20 per 1,000 in Germany and 26 in France, for the year 1902; but, as before stated, statistics of these affections, unless we know the manner in which they are collected and computed, are particularly untrustworthy. In our service, all venereal patients, whether treated in quarters or admitted to hospital, are entered on the sick report, so that our statistics are doubtless much more complete than in foreign armies where, generally, only hospital cases are recorded. But when all is said in explanation and extenuation, it is difficult to resist the conviction that the rates in our Army are much higher than in any European army, the English army being next in order, and the German army last. An explanation of the low rates in France and Germany is that, in those countries, prostitution, at least that part of it with which the soldier is mostly concerned, is subject to regulation, that is to say, registration and compulsory examination, whereby all women found diseased are segregated and treated. Another explanation is that the men themselves are periodically examined and kept in hospital when found to be in an infective state.

Another question now suggests itself: How does the ratio of venereal diseases in the Army compare with that of young men of about the same age in civil life? Are soldiers more dissolute than men of the corresponding class outside the Army? There are no statistics for comparison, but such data as are furnished by a few specialists will enable us to form a reasonable conjecture. Thus, according to Blaschko, there is in Berlin about 10 per cent., and, according to Erbs, 12.02 per cent. of syphilis among adult males. This would imply from 40 to 50 per cent. of venereal diseases of all kinds. It is well known that in the German army the highest figure is reached in October, month of the incorporation of recruits. The lowest estimate for the adult male population of Paris admits 13 to 16 per cent. of syphilis, which, according to Fournier, is much below the reality. If we assume that venereal rates in our towns and cities, where most of our soldiers are recruited, are only one-half those of European capitals, we would still have a ratio of at least 25 per cent. for adult males, which would correspond to at least 35 per cent. for males between 20 and 30 years, therefore far exceeding the Army rate in the United States and even in

the Philippines. We may then safely state that venereal diseases in the Army are not more frequent than in civil life; that, on the contrary, military restraint and discipline tend to develop better moral habits, although doubtless less so in the United States than in European countries.

We have seen the extent of the venereal peril in the Army and realized that it is an important problem, one demanding serious consideration, for the evil tends to increase rather than to diminish, and, if there be any virtue in figures, we must face the reproach of having the most dissolute army in the world. How is it to be combated? How is sanitary and moral prophylaxis applicable to the soldier?

Moral prophylaxis, applied to this or any other evil propensity of human nature, is a necessary part of education properly understood, that is, the education which begins in the conscience of the young man and helps to develop all those qualities of character which make the honest man and upright citizen. But the Army is not a school for boys, intended for the molding of the young mind and heart. The soldier, when he enlists, has his character more or less developed and habits formed. He is, as a rule, a well-meaning man and still susceptible to moral influences, but his will-power is not great; he seldom makes a strong effort to resist temptation and is easily carried astray by debauched comrades. In a Christian land, religion is the basis of all morality; religious influences, therefore, should not be neglected. In that respect I doubt whether the Government could do much more. It provides chapels and chaplains and gives the soldier opportunities to go to church where he may listen to excellent spiritual advice. But, as in matters of faith and worship there can be no compulsion, he does not often avail himself of these advantages. Perhaps the chaplains are somewhat responsible for this state of religious indifference.

There is one influence which is directly and strongly felt by the soldier; it is that exercised by his officers. There is no question that the influence of a colonel over his regiment, but more especially that of a captain over his company, is great, and that he can make it distinctly felt by example and precept, blended with judicious disciplinary measures or simply the curtailing of privileges. But officers, as a rule, do not bother about moral prophylaxis, and too often fail to realize their responsibility in the matter. The Secretary of War, in March, 1902, brought the subject to their attention in an admirable circular of which I can only quote a few lines:

"It is the duty of regimental and particularly of company officers to try by precept and example to point out to the men under their control, and particularly to the younger men, the inevitable misery and disaster which follow upon intemperance and upon moral uncleanness and vicious living. The officers should, of course, remember always that the effect of what they say must largely depend upon the lives they themselves

lead. It is in the highest degree necessary that each officer should be an example to his men in the way of temperate and cleanly living. He should point out, using the utmost tact, discretion, and good sense, to the men that venereal disease is almost sure to follow licentious living; that it is never a trivial affair, and that it is criminal folly to believe that sexual indulgence is necessary to health."

There is also another way in which the officer's authority can be exerted, without harshness, in behalf of morality. It is by providing plenty of clean, healthy literature for the instruction, entertainment and amusement of the men, and the strict exclusion from barracks of all indecent books, periodicals and pictures, a prolific cause of the demoralization of young soldiers.

Idleness is well named the mother of vices. The soldier should be kept occupied, by drill and work made as varied and interesting as possible, so as to combine pleasure and instruction. He should also be encouraged and required to take part in all kinds of outdoor games and sports. The Government has done much in providing healthy amusements for the soldier, so as to make his post attractive and dissuade him from seeking illicit pleasures outside. Each large post has a well-equipped gymnasium, and nearly all garrisons have a so-called post-exchange, with billiard tables and other games, as well as a luncheon counter. The larger the post, the more comfortable and attractive it can be made to the soldier; unfortunately, it has been thought necessary, for reasons that I am unable to appreciate, to scatter our troops into a large number of small isolated garrisons where life is dull and discouraging and the soldier sees but little of the imposing military functions which develop the martial spirit and attach to the service.

It is also assumed, strange to say, that the soldier is more perfect than other men; that he is, or should be, a teetotaler and that, accordingly, all alcoholic drinks must be banished from military reservations; hence the abolition of the canteen. Upon what basis of experience or by what process of logic such conclusion was arrived at, I am unable to understand. But the elimination of the canteen, to be effective, should be accompanied by an absolute prohibition for the soldier to leave his barracks, for it generally happens that just beyond the military boundaries are found sundry haunts and taverns where alcoholism and prostitution go hand in hand, and whose business would be ruined should the canteen be re-established. In the canteen, as formerly conducted, beer and light wines were allowed, but no spirits. Those men, and they form a good proportion of all garrisons, who have been in the habit of drinking are not going to reform and become strictly temperate because they enlist. They will have the same occasional thirst for alcoholic beverages and seek to gratify

it. Were they able to get beer or wine at the post-exchange they might be satisfied with it, and, under the regulations of the institution, would or could seldom be guilty of any excess. But under the present régime they are obliged to go outside, where they are more likely to drink whiskey than beer, and without any restraint. From the saloon to the brothel it is but one step. I do not wish to go on record as advocating the use of stimulants. I believe we are all much better off without them, but would not impose my views on anyone. So far as the soldier is concerned, it is the opinion of the great majority of officers that regulation would give much better results than abolition.

That quite a number of soldiers sin through ignorance, without knowing the nature and gravity of venereal infection, is certain; and there is no valid reason why they should not be enlightened on the subject, so that they may understand not only the moral debasement of sexual debauchery, but also its peril, appealing to their mind and conscience, but at the same time developing a wholesome sense of fear. In 1903, the Secretary of War, upon the recommendation of the Surgeon-General, caused a small booklet to be prepared by a member of the medical corps for distribution among regiments and companies throughout the Army. This booklet, entitled "The Venereal Peril," contains in clear, direct language, without omission or exaggeration, all that a soldier should know on the subject. I would like to believe that it has done some good, but the evidence is not at all convincing. Its presence in the company library does not insure its being read; probably few men are aware of its existence. Instruction to the soldier must be conveyed in some other manner; the best way, I believe, is by short, plain talks by qualified persons in whom the men have confidence. This oral instruction, now too much neglected, could easily be imparted by medical officers; one or two talks a year to each company would suffice and doubtless prove very beneficial.

In the way of direct sanitary prophylaxis something can also be accomplished. In the first place, how can military discipline be used and what is its value in combating the venereal evil? Its limitations are but too manifest, yet in the hands of a prudent colonel or company commander it can be made to bear much fruit. There is no warrant of law, at least no precedent, for court-martialing a soldier who remains non-effective for a long period of time, through his own carelessness or immorality. An incorrigible offender can be discharged without honor, either summarily by the Secretary of War or upon a surgeon's certificate of disability, but it is probable that a greater deterrent effect would be produced were he discharged by sentence of court-martial. However, if he cannot be judicially punished, it is

quite possible to make him regret his transgressions by curtailing his privileges, cutting off passes or furloughs. It would be a mistake, however, to treat all venereal patients with equal severity. Our soldiers are advised to report to a medical officer as soon as symptoms of any venereal disease appear. This is in order that they may receive early treatment and be kept in hospital during the most infective period of the disease. The result is indeed a large ratio of admissions and also a large ratio of complete cures. Were all patients thus reporting to the surgeon liable to military discipline, many of them, perhaps a majority, would conceal their condition, treat themselves or seek help at the hands of advertising quacks. Therefore, although discipline is always an important factor in all that concerns the prevention of disease, in this class of patients it must be tempered with leniency and discretion, reserving severe measures for exceptional cases.

The relementation of prostitution, as understood in Europe, need not be discussed here; as a general rule it is inadmissible in this country, but there may be circumstances, in war time, the result of large agglomerations of soldiers in or near cities, when it may be considered a measure of military necessity, as was done during the Civil War, at Nashville in 1863, and Memphis in 1864, by the military and civil authorities acting in concert. It seems very likely that, as the public becomes more enlightened regarding the reality and seriousness of the venereal evil and a wholesome apprehension has been awakened, direct or indirect pressure will be brought to bear upon prostitutes, causing them, if only from self-interest, to submit voluntarily to a periodical examination, or at least compelling them to seek treatment when diseased. A state of public mind should be evolved which will require that venereal diseases, like all infectious diseases, be subject to the intervention of the sanitary authorities.

Another practical means of sanitary prophylaxis is the regular periodic examination of the soldier as done in France and Germany, those found diseased being kept in hospital or confined to the limits of the garrison. This examination should, of course, be carried out with judgment, all men of well known correct habits being exempted from it. There is no question of the efficacy of this sanitary measure. It was carried out in some of our regiments in Cuba with immediate beneficial results, and I also understand that it has been found very useful in the Philippines. Whether it is desirable to introduce such a measure as a permanent regulation in our service is doubtful, but there are times and places when it will be found one of the most efficient weapons with which to combat the venereal enemy.

THE MEDICAL TEACHING OF TO-DAY AND THE PRIVATE QUIZ.*

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IN an address before the Academy of Medicine, delivered by Professor William Osler, December 4, 1902, attention is called to the large percentage of rejections by the Army Examining Boards of candidates for the position of Assistant Surgeon in the United States Army. In a recent report of the Surgeon-General it had been stated that of 87 candidates 21 were found to be physically disqualified, 48 withdrew or were rejected and 18 (or slightly over one in 5 of those applying) were accepted. The report of the examinations for the year 1901-1902 states that of 333 candidates 101 were physically disqualified, 165 withdrew or were rejected (96 rejected) and only 67 or 20 per cent. were accepted. It should be understood that of those withdrawing probably 90 per cent. did so from fear of rejection, or because advised to do so by the examiners, the candidate having already shown his incompetence.

Professor Osler proceeds: "From the standpoint of practical medicine and surgery, the examiners for the Army and Navy constitute the only independent boards of judges of the quality of our work as teachers. The examination is largely practical and I am told that the failure is chiefly in this part of the test. . . . The examinations of the State Boards are still theoretical and the results cannot be taken as a safe indication of the character of our work."

Professor Osler proceeds: "The last quarter of the last century saw many remarkable changes and reformations, among which in far-reaching general importance not one is to be compared with the reform, or rather revolution, in the teaching of the science and art of medicine. Whether the conscience of the professors at last awoke, felt the pricking of remorse, or whether the change, as is most likely, was only part of that larger movement toward larger events in the midst of which we are to-day, need not be here discussed. . . ."

Professor Osler added: "We expect too much of the student and we try to teach him too much." He also said that ordinarily systematic lectures were, in his opinion, no longer necessary. His plan of a quiet talk between the professor and students had worked well and had served to lessen the distance between the students and the teachers, which was, after all, a very important matter.

In the discussion of this paper Dr. Burrell said that the more nearly personal the instruction was the better. Professor McPhedran thought that it would be better if fewer lectures

were given, but he was not prepared to admit that they should be entirely abolished. Professor Cragin was heartily in accord with those who favored the recitation plan.

President Eliot, of Harvard, said once that the good doctors under the old method of teaching "were made by a kind of a miracle and not in the lecture room."

I quote from an editorial in *American Medicine*, February 10, 1906, p. 189: "Advances in knowledge are so rapidly widening the medical horizon that the construction of a properly advanced curriculum is to those in charge of medical colleges a most serious problem. The head of each department attempts to make of the students under him specialists in that branch; at least if such an attempt be not consciously made, the teaching imparted tends mightily in this direction. As a consequence one or both of two results is almost inevitable. First, the importance of a branch is exaggerated and its relation to other branches is correspondingly minimized. Each subject is thus presented in an isolated and somewhat overdrawn manner and the student must needs compare and correlate them, a task which the exceptional man may accomplish, but for which the average medical undergraduate is entirely unfitted by previous training, and for which he has neither the time nor the inclination. Second, the practical side of the subject is subordinated to the scientific aspect. Concretely learned discussions that would be appropriate for teachers of the branch are given to the higher classes or even to sophomores and freshmen as lectures. Enthusiasm leads to lack of balance, the teaching specialist being as prone to this condition as is the practicing specialist."

The relations between the various branches, their interdependence, and, above all, the way in which the principles of each explain and clarify the facts in the others, are of prime importance. And these must be taught to the student just as the primary facts are taught, or he will not grasp them. Teach him the fundamentals of each branch and help him properly to correlate one with the other, and the intricate experiments, academic discussions and latest theory pertaining to each, as so often detailed in lectures, may safely and profitably be omitted.

Locke and Cabot say (*Boston Medical and Surgical Journal*, October 26, 1905): "During the past ten years at Harvard with essentially the same teachers and the same material we have added appreciably to the acquirement of our students by the gradual development of a better system of instruction.

"Yet our system is still very unsystematic and it seems to us worth while therefore to discuss the well-worn question of the methods of medical education.

"We no longer see a great man preaching from the floor of an amphitheater to a crowd of humble and awestruck nobodies. It becomes in-

* Read before the Hospital Graduates' Club of New York City and The William Pierson Library Association, Orange, N. J.

creasingly clear that the teacher needs to keep track of *what each student knows and does not know* (italics mine) all through the year and not merely after the blue books are passed in, if he is to do his best service to the student.

"Most medical teachers do not even know the names of their students far less the strong or the weak points of each. But there are some types of medical instruction in which it is absolutely essential for him to know his pupils by name. . . . Medical teaching, like most university teaching, is greatly in need of supervision and criticism. All teaching up to and through the high school is properly visited, supervised and criticised. In collegiate and post-graduate work there is in most universities no adequate system of supervision and medical schools have to bear their part in this great evil. Should an intelligent visitor come to the Harvard Medical School, study its methods of teaching medicine and visit the classes systematically for a week or two he would know more of what is being done well or ill than any living man knows to-day. To-day no one's work is inspected, praised or corrected. Only by inquiring of the students is any idea gained of what the teachers are doing, whether they do it well or ill and *whether their courses duplicate or overlap*" (italics mine).

Winfield S. Hall, Professor of Physiology in Northwestern University Medical School, Chicago, in his address as chairman before the Section of Pathology and Physiology of the American Medical Association, at their annual meeting at Portland, Oregon, in July, 1905, presented a strong plea for the establishment of a chair in our medical schools for the teaching of Pathologic Physiology. For the instruction of the student in the art, the very highest art in medicine, or tracing the symptom to the pathologic condition back of it. Such instruction to be effective presupposes not only the most modern and thorough equipment of laboratories and clinical advantages but a very thorough groundwork in all the fundamental branches of medicine, anatomy, physiology, histology and organic chemistry.

As Professor Hall points out, the field has hitherto been entirely unoccupied; the great difficulties surrounding this high class instruction will perhaps prevent its adoption in our medical schools for some years yet. The crying need of just this form of instruction must be apparent to every one who has given the subject sufficient thought. It is significant that Professor Hall expressly stipulates that the study of diagnosis and treatment shall form no part of this course. He would guard against the pernicious habit formed all too soon, even in the medical school, of labeling a congeries of symptoms with a name and neglecting the points of difference and emphasizing the points of similarity to the textbook description of the disease of that name. This merging the particular into the general is perhaps the most deadening habit of the medical

mind. Physician and layman alike, having determined that the patient is suffering from some particular disease, lose all interest in the finer points of the pathology and the study of the etiology and the inter-relation of the individual symptoms. Consequently little or no advance is made in the knowledge of the disease itself nor of its symptoms as modified by treatment, by environment, by individual idiosyncrasy, by heredity, and many other conditions to which only such a study as that outlined by Professor Hall would teach the student to give due weight.

At the opening of the College of Physicians and Surgeons in this city last fall, the dean, Professor Samuel W. Lambert, delivered an address under the title, "Some Present Fallacies in Medical Education." He objects to a number of things in the present somewhat antiquated and inelastic method of teaching medicine. The first fallacy that he specified is the needlessly long vacation of four months intervening between the regular sessions of the college and the marked neglect of the summer courses by the candidate for a degree.

As to the first objection I am entirely of his opinion. I believe that ideally, at any rate, all departments of a university should be continuously in session, as I am told is now the custom at the Chicago University. Why any student should be debarred from effective work toward his degree for four months of every year I never could understand. The latest "Bulletin of Information of Columbia University" contains the information, however, that attendance upon the summer courses, if satisfactorily completed, will exempt students from attendance upon similar courses given during the regular academic year. In other words, these courses may become a part of the ground which must be covered for a degree, and it is a distinct advance toward an enlightened method of teaching to allow a candidate for a degree to take these studies during the summer months if he prefers. That no large body of students should take these courses in the summer, when they are obliged to go over the same ground in the winter courses, and when the former did not count toward a degree, does not seem especially wonderful. The undergraduate in medicine or in the arts has rarely got beyond the status alluded to by Professor Osler when he said, "The hardest conviction to get into the mind of a beginner is that the education upon which he is engaged is not a college course, not a medical course, but a life course, for which the work of a few years under teachers is but a preparation."

Personally, I am disposed to attribute much of the blame for this unsatisfactory state of affairs, which is surely common enough, to the faulty methods of education now in vogue, and to the cut-and-dried way in which knowledge is ladled out to the students by the professors and teachers. The want of intimate per-

sonal contact between teacher and pupil is to blame, not only for a feeling of distrust and perhaps enmity, which is apt to arise in the student's mind toward his instructor, whom he grows to look upon as a heartless taskmaster: but the want of the guidance and help of a superior and accomplished mind toward shaping the intellectual life of the student is a serious, in fact, an irreparable loss. It is inconceivable that under a proper and careful tutorial system such dullards, such superficially educated, and withal coarse-minded men, as we constantly meet amongst doctors, could hold a degree from any respectable medical college.

The second fallacy of which Professor Lambert speaks is the fallacy of "trades unionism," and for which he correctly blames the instructors. It is briefly that owing to the inelastic and fixed course of instruction, no one student is allowed to do more work than another with official sanction, or, in other words, the stupid and backward student sets the pace. As Dean Lambert observes, "to characterize such a system as a 'unionizing' of medical education is to stigmatize it as a companion only of those degenerated trades unions which have fallen into the control of the worst elements among their members. . . ." He continues: "In practice, such a curriculum lacks elasticity and adaptability to new conditions, and is almost incapable of growth and expansion." The old Procrustean method of dealing with intellectual stature and growth is an objection to most forms of didactic instruction, and should have been left behind when the student graduated from the high school.

Our author proceeds: "The true answer (to this fallacy) lies in the substitution for the inelastic high school system of a truly broad adaptable university system of organization. Such a system must be a course system in which several possible ways of doing a certain work are offered at different times of the year and at different hours of the day."

The third fallacy in Dean Lambert's list need not take up much of our time. He arraigns the average medical student for his tendency to endeavor to improve upon the prescribed course, particularly by absenting himself from his college work to substitute in hospitals. The remedy suggested that all students should be required to do a certain amount of hospital work before graduation but at the proper time and under proper supervision would be efficient if (1) the medical school controlled the hospitals, or (2) the hospitals taught medicine. As it is now, the hospitals should be prevented, if possible, from allowing any students, except those approved by the teaching authorities, to substitute in their wards. And for their part the teaching authorities should see to it that the final examinations are so exacting that no conscientious student will feel that he can afford to take the time away from his studies to substitute in a hospital.

Really, the third fallacy depends upon the second: if the pace of the medical class were not set for the dullards the bright men could not take so much time away from college as they are now able to do. No one can dispute, for a moment, the assertion that the crying need of most American schools (of medicine) "is the addition of courses in practical bedside work to their curriculum."

"The fourth fallacy is founded on the idea that a hospital appointment is of greater importance than the degree of Doctor of Medicine." "This fallacy," Professor Lambert asserts, "leads its victims into further fallacies, and acts as a disturbing element throughout the whole course of study in the schools."

Unfortunately, so long as the internships in the hospitals are supplied by the present method of competitive examination, and the examiners are prone to insist on certain points in the examinations, like "the pneumonic globule" of the late Professor Clark, which may be the expression of some pet theory or conceit of their own, there is not likely to be much change in the tendency of which Dr. Lambert complains. Admitting, for the sake of argument, his contention that the eagerness for a hospital appointment does impair the benefits that a calmer and more rational study of the regular college courses would bring, we can never admit that a hospital course is not absolutely necessary to nine men out of ten, if they are to become eminent in their profession. The hospital course they must have; the doctor's degree any fair student can have, as the professor's own strictures on the course, being set for the dullard, sufficiently acknowledge.

So long as the college course does not give the most important instruction for the proper equipment of a doctor, to wit, clinical instruction, and so long as good hospital appointments are so extremely hard to get, the ambitious student must shape his entire medical course chiefly, if not entirely, with the avowed purpose of attaining that which is not only the highest good, but the absolute prerequisite in the vast majority of cases to a successful practice—a hospital appointment. As Professor Osler has said in his address already quoted from, "The hungry sheep look up to us and are not fed upon the proper food."

For my part I think that if one reads between the lines Professor Lambert's arraignment of the inadequacy of medical teaching in New York is as severe and radical as that in the celebrated address of Professor Osler, already so largely quoted from.

The next fallacy which Dean Lambert attacks is the private quiz. His remarks under this head are open to considerable criticism. He calls attention to the fact that in the ordinary work in a literary college only the backward students, generally speaking, employ an outside tutor, whereas in the medical schools

the best men employ the outside tutor or "Quiz Master," and alleges that they do this from habit and from fear. Probably a well-grounded fear that they will be surpassed by others in the competitive examination for the hospital is a strong if not the principal motive for "taking a quiz." When, however, he says, "I am certain that I but voice the opinion of a majority of hospital examiners when I assert that the quiz is of little help to a good student to pass the necessary examinations for entrance to any New York hospital," I confess to a mild shock of surprise. To his views as expressed in the following sentence, I, however, give full credence: "And I can positively assert that the faculty of the College of Physicians and Surgeons are of an unanimous opinion that the quiz, as at present organized, is rather a drawback and a detriment to the proper development of a student of medicine than an assistance to him in his study of broad and true science." He continues: "The modern quiz takes no broad views of medicine as it has developed during the past, and as it is developing in the present. On the contrary, the modern quiz attempts to bring all medical knowledge into a system of pigeon-holes in which every possible medical combination of diagnosis, pathology and therapeutics shall have its labeled pocket. . . . The real misfortune of it lies in the fact that under such a quiz system the student at the very outset of his career and in its formative period is given a false idea of his chosen science. Such influences tend to lead the student back to the views of medicine when the various methodists and pathists were warring with each other for exclusive support and recognition."

These arguments against the private quiz, or "cram quiz," as we used to call it, have a strangely familiar sound. Thirty years ago when I was a humble medical student, and longed for a hospital appointment, I heard similar strictures made upon the only means that I knew of getting such an appointment.

Dr. Lambert's final fallacy, he says, is "due to the general spirit of discontent with the existing order of things—the feeling that everything that is, is wrong." "Such a spirit is felt to-day in every walk and relation of civilized life, and it has invaded the field of medical education; at least here in New York."

If one may be allowed to draw a conclusion from the professor's own remarks, as set forth in the foregoing quotations, it is high time that discontent and criticism invaded a system which he himself designates as an "inelastic, fixed high-school system," as savoring of "trades unionism" of the baser sort, as standardized on the mental powers of the dullest and worst prepared students in the class, and particularly as devoid of the most essential element in all medical teaching, viz., clinical instruction. Were I a lawyer, arguing that the medical schools of New York City should be deprived of their charters because they have

grossly failed in carrying out the object for which such charters were granted, viz., the imparting of a sound medical education to their students. I should feel disposed to rest my case on the representations of the dean of the oldest and most influential of these schools. He has assuredly made out a strong case against the medical schools, and the worst of it is that his charges are true. The system is wrong, the instruction is inadequate, and the whole matter needs immediate and thorough reformation.

I, for one, regret that he has impaired the strength of his argument by inveighing against the one redeeming feature in the situation, namely, that part of modern medical instruction which goes a good way toward supplying the deficiencies which friend and foe alike see in our present medical school instruction, at least in this city.

I can remember a movement to prevent students from graduating at the College of Physicians and Surgeons who had been guilty of taking a private quiz. I believe that the faculty has always been hostile to these quizzes and have done whatever they could to suppress them.

What has been the result? The necessity for the quiz has been made more and more apparent, and the percentage of students availing themselves of this aid in their studies, I have no doubt, has steadily increased. And it will continue to increase under the present conditions. And in so far as the faculty put themselves on record as irrevocably opposed to this potent means of securing a medical education, they, in my opinion, weaken their hold on their students and, to some extent, at least, alienate the sympathy of the better men in the profession; nearly all of whom are, I dare say, "cram quiz men."

When Dr. Lambert speaks of the systematizing of the student's knowledge, and putting it, so to speak, in pigeon-holes where it can be available, as an evil, one would think that he is jesting. That this is the effect of the cram quiz everyone who has been through the mill knows, and I believe that every one of us blesses the day when he put himself under the tutelage of a man who *made* him study until he systematized his knowledge and got it into the proper pigeon-hole. Who of us ever had his anatomy systematized and properly labeled until he had got through his quiz? As Bacon said, "Conference maketh the ready man"; and this is one of the chief characteristics of a good physician—he is a "ready man."

How the cram quiz gives the student "a false idea of his chosen science" and "leads him back to the views of medicine when the various methodists and pathists were warring with each other," etc., I confess myself to be totally unable to conjecture.

A position supported by such a flimsy and far-fetched argument as this is weak, indeed.

The necessity for a private or a personal tutor in a university course has been recognized for many years abroad, and the system has recently

been adopted at Princeton University in this country, and, I might add, in a modified way at Harvard, also. It was copied from Balliol College at Oxford, where it is said to have been so successful that within three years after its adoption the Balliol men took every available prize at Oxford. I am sure that much of my own time at college, I mean when an undergraduate in the baccalaureate course, was wasted for want of the friendly oversight and advice of a competent tutor, and afterwards, in the much more difficult and complex course in the Medical School, unless I had enjoyed the instruction of a private "quiz master," I never should have gotten a hospital appointment; and I believe that without this quiz the foundation upon which my medical knowledge has been built up, would have been so hazy and indefinite that I should even now be the sufferer from it. Nor could I by any possibility have passed the Army Board unless my knowledge had been properly systematized and labeled and put in the right pigeon-holes by the quiz.

It strikes one as futile and as decidedly detrimental to the cause of sound medical education for members of the faculties of the medical schools to emit these periodical condemnations against what hundreds of men have found so essential to their medical education. It may be that men could get hospital appointments without private quizzes, and I believe that men have done so from time to time, but they are so few in number relatively, that I fail to see how the hospital examiners are able to formulate any such expression of opinion in the matter as the one with which Dr. Lambert credits them.

The present methods of teaching medicine are faulty, according to the testimony of members of the medical school faculties in New York, Chicago, and at Harvard, if not at Johns Hopkins, as the quotations in the beginning of this paper show—What is the remedy?

To abolish the private quiz were that possible? By no means. On the contrary, the universities should adopt these powerful allies, and should bring this potent means of advancing medical education into their own curricula, by adopting a system similar to the privat-docent system in Germany. Let anyone who is competent, who has a good moral character and can satisfy the faculty of any university upon those points, be appointed a privat-docent of the institution, and let him conduct his quizzes or lectures in his own way under the supervision of the faculty and charge each student a stipulated fee, and from the most successful of these private tutors let the professors be appointed, and not as now from family influence or from any other reason than because they have proved themselves to be the best available teachers. The faculty of teaching is to a great extent born in a man and yet, so far as I know, a man's proved success as a teacher has little or no influence on his appointment to a professorship in a medical school. Dull, dry, didactic lectures, way above the heads of ordinary

students, in stuffy, ill-ventilated lecture rooms, highly conducive to slumber, little or no personal contact with the professors (unless a student paid one of them an extra \$100 a year to be his preceptor), no laboratory facilities except some dissecting, and a perfunctory examination at the end of three years, that scarcely any one could help passing, such was the course in the old institution at the corner of Fourth Avenue and Twenty-third Street, thirty years ago. And many of these abuses have not been eradicated yet.

It is customary to jeer at examinations. Professor Lambert, in the address from which I have so freely quoted, says, in speaking of hospital appointments and the degree of doctor of medicine: "It is unfortunate that neither of these main objects of the work of the student of medicine can be secured by him, except upon the successful test of an examination." Perhaps it is unfortunate that scarcely anything good in life can be secured until a man proves that he is competent to enjoy and use the privileges and to face the responsibilities of the position, but it is a fact nevertheless. If students could be put under X-ray machines and their brains photographed, so that the accumulation of knowledge could be determined without such a crude and unsatisfactory method as an examination, it might be well. But situated as we are, the only way to find out what a student knows is to ask him, and to ask him enough questions so that both his ignorance and his knowledge shall appear.

The ideal examining board should sit all the time. Its members should have no affiliation or connection with any teaching body. When a student gets ready to go before this board let him pay his fee and take his examination, whether he has studied in the summer or the winter, after 4 o'clock P. M. or before that hour, and whether he has had a private tutor or not, and has studied three years or seven. In fact, beyond assuring itself that the applicant is sufficiently advanced so that his examination will not be a sheer waste of the examining board's time, I see no reason why the examiners should exact any especial conditions from the candidate, and then let them take a week or two for the examination, or as many days as may be necessary, examining, of course, as many men at one time as they choose. If the doctorates and hospital appointments were given out by such an examining board as this, there is no doubt that instead of there being fewer private quiz masters than now, there would be a great many more.

We ought to be thankful that the dean of a medical school has talked as frankly as Dean Lambert has of the evils and weaknesses of medical teaching to-day. When the faculties become sufficiently enlightened to cease their periodic attacks upon the men who are really doing the medical teaching in New York at the present moment, steps unquestionably will be taken to-

ward the proper, systematic and thorough education of medical students in this city.

The private tutor, in my opinion, is absolutely necessary for the average medical student. The study of medicine is too complex, too difficult and too varied to be acquired without the aid of a competent teacher, who shall weigh each student individually, gauge his shortcomings, make due allowance for his peculiarities, both mental and physical, stimulate him where he is weak and restrain him, if need be, from too great absorption in some branches of study to the exclusion of others. This talk of medical students specializing or electing certain courses when still undergraduates, I have no patience with. If the average student at the end of four years is a fair anatomist and physiologist, a good physical and general diagnostician, a good observer and correct reasoner, and has a fair knowledge of therapeutics, materia-medica, surgery, physiological chemistry and the practice of physics—in short, if he is well grounded in the essentials of medicine he has done very well and deserves success in the practice of our art.

As I intimated above, I believe that it is only in the private quiz that the complicated array of information, the more or less ill-assorted collection of facts which are pushed into one's mind, as it were, in the medical school curriculum, can be sorted out and labeled and put where they can be used. Dean Lambert's objection to the quiz, that it tends to do this has ever seemed to me its highest merit. The very thing of all others that makes it valuable and useful. Of what use is our knowledge to us if we cannot put our hands on just the article we want at the time we want it? And that is precisely what the "cram quiz" aims at, and what in most cases it succeeds in accomplishing. Professor Osler has said, "The dilettante is abroad in the land, the man who is always venturing upon tasks for which he is imperfectly equipped, a habit of mind fostered by the multiplicity of subjects in the curriculum of the schools and colleges, in which many things are studied and few are studied thoroughly."

It is extremely probable that the quiz might be improved upon if the quiz master were privat-docent and were part of the teaching-force of the universities, and if the examinations for the hospitals and for the doctorates were taken before a board of official examiners who knew nothing of the students previous to their appearing before them, such a body could examine for the Army, Navy and Hospital Marine service as well as for hospitals and for degrees.

Of course I know that such a proposition will be looked upon as revolutionary. It would perhaps seriously detract from the prestige of the College of Physicians and Surgeons, for instance, if it were reduced to the position of a teaching body merely. I will guarantee, however, that the teaching would be far better done if the education of every graduate of the institution were

to be passed upon by a competent and impartial board of examiners, in the same way that Professor Osler says the Army and Navy boards now pass upon the work of the medical schools in the cases in which they examine.

It is not to be supposed that only one man in five would be able to pass the examination for the degree of doctor of medicine; as only one in five can now pass the Army board for the position of Assistant Surgeon in the Army. Instead, however, of the professors in the medical schools endeavoring to shut out the private tutors, they then would rush to engage as many as possible, in order that those students who should come up from their schools should pass as well as the students from any other school.

Laboratory work, dissections, clinical instruction, minor surgery, bandaging, in short, every practical thing would be far better taught, and the professor, instead of scarcely knowing his pupil's name, would have an intimate acquaintance with his store of medical knowledge and an accurate gauge of his short-comings before he would allow him to jeopardize the good name of the medical school by going before a strict and impartial examining board.

Of course, it is within the range of possibilities that the State Examining Boards will eventually become such examining boards as I have outlined, but this seems now to be a remote contingency.

As the case stands it would seem that if the profession will insist upon the making of the course of study in the medical schools far less rigid than it is now, the removal of the time restriction, the providing of clinical instruction for all undergraduates in medicine, the adoption of a system of examinations which shall take the time and the pains necessary to find out what a candidate knows and *does not know*, and the appointment of a staff of privat-docents in every medical school, and the systematizing, correcting and inspecting every branch of study in the school, a great advance will have been made toward a reasonable and sufficient medical education in the great city of New York.

That, however, in any scheme which may be adopted, the private quiz can be eliminated, I do not for a moment believe. It grows in strength and popularity every year and has amply demonstrated its right to exist and its usefulness to every student who cares to avail himself of it.

Popes and potentates may issue bulls against comets and reformers. The medical faculties of New York may show, if they please, the same spirit of bigotry which that of Paris did when they banished Boussat, "not because he had failed to bleed a patient, nor because he had ever questioned the universal applicability of the lancet, but because he had had the audacity to propose a new method of bleeding." But this feature of medical education which has proved its utility and demonstrated the fact that the students must and will have

it, for nearly a half century, cannot be put down because once in a while at stated intervals some professor goes through the solemn form of asserting (mind you, so far it has always been assertion, not proof) that it would be far better to abolish the quiz.

Is there not at the bottom of these attacks on the private quiz a little of that pricking of the conscience to which Professor Osler referred? Do these professors not feel somewhat ashamed that they do not or cannot provide the education that a student needs to get the highest reward for faithful study, viz., a hospital appointment? If they are not ashamed of the inadequacy of their work, and of the insufficient equivalent they render the student in return for the fees and attendance which they exact from him, they assuredly ought to be.

The medical school should provide *all* the facilities for the best medical education. That it does not do so Dean Lambert freely acknowledged. The professors should control the entire course of the student—his down-sitting and his up-rising—until he has completed his *hospital* course. This the medical schools cannot do until they employ a sufficient number of private tutors, make their courses both as to the required periods and methods of study more elastic, get control of a sufficient number of good hospitals and provide an examination which shall demonstrate what the applicant for a degree or a hospital position really knows and does not know.

As said above, Dean Lambert's frankness in acknowledging some of the evils of the present system is very encouraging; and when he acknowledges them all, not in a perfunctory way but with a real desire to remedy them, the first step toward a thorough medical education for the average student in New York City will have been taken.

NOTE.—Since this paper has been written, my friend, Dr. Joseph B. Bissell, attending surgeon at Bellevue and St. Vincent's Hospitals, has proposed a plan for affording clinical instruction to all the students in our medical schools previous to their graduation.

The suggestion is briefly this: Each undergraduate in medicine should be required to "walk the hospitals" for a certain minimum period before he can present himself for his final examination, and this might be accomplished as follows: Allow each student to select as his clinical teacher any one of the visiting staff of any hospital, in or near the city, of, say, a specific number of beds, always insisting, however, that no visiting physician or surgeon should take more than a specified number of students at one time. The work should be laid out in courses of, say, six weeks and at the end of each course some satisfactory evidence should be given by the student that he has faithfully used the clinical advantages. Not only should his instructor furnish a certificate to this effect, but there should be a clinical report of the work done, submitted by the student, who should be required to "defend it" before his fellows, requiring them to criticize and quiz the reporter.

Were this or some similar plan adopted, not the upper quarter or third of a medical class alone would be equipped with a hospital experience before beginning practice; but the humblest graduate would go forth into the world with at least a moderate degree of skill in the

diagnosis and treatment of disease. To the enormous gain of the sick people who might be his early patients.

Not the least advantage of such a change in the teaching of medicine would be the great improvement in the hospital service. If every visiting were a potential teacher and were on the lookout for clinical material even the "chronic hospital bum" would probably have his case carefully studied with a view to a correct diagnosis and the most modern and improved treatment.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By JAMES J. WALSH, M.D., Ph D.,

NEW YORK.

(Continued.)

CHAPTER VI.

Though this act of the Legislature of April 4, 1806, formally created medical societies with legal sanction in the State of New York, there had been at least one important medical society fully organized, for over half a century before this, of the proceedings of which we have only some hints until towards the end of the century when, for more than a decade, the full minutes are extant. There is at the New York Academy of Medicine a manuscript note book belonging to Dr. John Bard, of New York, bearing the date 1749, the first paper in which has the title, "An Essay on the Nature of Ye Malignant Pleurisy that Proved so Remarkably Fatal to the Inhabitants of Huntington, L. I., and some other places on Long Island, in the winter of the year 1749, drawn up at the request of a Weekly Society of Gentlemen in New York, and addressed to them at one of their meetings." This Medical Society seems to have held regular meetings or at least to have continued its existence more or less continuously down to the last decade of the century, when it was merged in another society called the New York State Medical Society, of which we shall have much to say presently.

Twenty years after Dr. Bard's paper was read before it, Dr. Peter Middleton, in his introductory lecture, at the opening of the medical school in King's College, November, 1769, notices, as one of the advantages of the medical profession, the institution of societies, or well-regulated associations of gentlemen, for promoting the honor of the profession, and adds, "And permit me to add, as one of the many instances of the utility of these societies, that whatever merit there is in the present institution, it was first planned and concluded upon in a medical society now subsisting in this place, and may it long subsist."

Dr. Bard's first paper shows that the scientific character of the proceedings of this medical society of old New York City, was well up to the standard that might be expected in a wide-awake community. The closing sentences of his paper are indeed, not unlike those which might

be found, if not in quite the same words, certainly expressing the same ideas, even in our own times. The touch with regard to the possibility of drugs and other remedial measures proving rather harmful than helpful, in spite of confidence and much observation, is indeed quite modern. Dr. Bard seems to have realized quite well the limitation of the art that he was practicing, and must have counted on having many sympathetic auditors who also appreciated the many possibilities of error, in the medical empiricism of the day.

Dr. Bard said:

"From this account, Gentlemen, of acute Diseases, what sagacity and caution appear to be necessary in the Physical Management of them? Where a mistake as to the real nature of a disorder, the true intention of the cure, or application of Remedies, must infallibly pervert the order and oeconomy of Nature, in digesting and expelling the Disease, and very much endanger the Patient. It was this happy Sagacity, joined with a Natural Physical Genius, which (more than his learning) gave Dr. Radclif his Fame, and made his Practice so remarkably successful.

It was from these Reflections, Dr. Sydenham used to say, He thought it as much incumbent upon a Physician to Read Nature as Books. And Sir. William Temple, convinced of these truths, queried whether the General Practice of Physick, as it was in all hands, had done more good or harm to mankind. From the whole, Gentlemen, I think it Necessarily follows, That tho' the Arts of Physick and Surgery under a Judicious Direction, must derive great Advantages to Society, Yet these Arts, in the hands of the rash or unskillful, too often occasion the most fatal mischief, as errors of this kind are errors of the most dangerous consequence."

Twenty-five years after Dr. Peter Middleton's mention of the medical society as still existing in New York, and proving the inspiration for the medical school of King's College, there seems to have come a reawakening of interest in medical organization among the members of the profession in New York City. As a consequence, a special meeting was called and a society organized which received the ambitious name of the "Medical Society of the State of New York," though there is no record of any member of the medical profession from outside New York City ever having belonged to it. Fortunately the records of this society have been preserved, and the original minute book was presented to the Academy of Medicine by Dr. Samuel Francis, of Newport, the son of the late Dr. John R. Francis, of New York, to whose interest in medical historical matters is doubtless due the preservation of this precious record of old-time medical society meetings in New York City.

The title of this book is "Minutes of the Medical Society of the State of New York, from November 14, 1794, to July 8, 1806." In the minutes of the first meeting it is recorded that "A Number of medical gentlemen, wishing to associate for the purpose of promoting friendly professional intercourse, determined to meet at the City Hall on the evening of November 14, 1794, where there appeared Drs. John Charlton,

Thos. Jones, Samuel Bard, Malachi Treat, Richard Bayley, Louis Faugeres, James Tillary, Samuel Nicoll, Ab. Bainbridge, David Brooks, Wm. P. Smith, John Gamage, Wm. Hammersley, John Onderdonk, George Anthon, J. R. B. Rodgers, Wm. Post, Wm. Lawrence. Dr. Charlton was appointed chairman.

The minutes of the first meeting then proceed:

"After some conversation on the subject of the meeting, it was unanimously resolved, that the present associates will on the dissolution of the Society, known by the name of the Medical Society, form themselves into a Society by the name and style of the Medical Society of the State of New York, and that they will use the seal of the same."

From this it seems evident that the medical society mentioned by Dr. Bard, and twenty years later by Dr. Middleton, still continued to exist, though perhaps there had been some lapse of interest in its meetings. Certain it is that it was still considered as so pre-empting the ground which the new medical society was to take, that the new organizers considered that they would only properly have an existence after the dissolution of the previous medical society. While there is some doubt about it, from the way the last sentence reads, it has even been suggested as possible that they had resolved to use the seal of the old society.

It is evident, even from the rather scanty account of the proceedings of this society which we possess, that it took a prominent place in the medical life of New York City at this time, and that it was appealed to with confidence on matters of public health. It is interesting, too, to find that at this early date the medical society took on itself to point out the ravages that epidemic diseases made in the city, and to suggest what means would be best suited to suppress these epidemics and minimize their dangers as far as possible. The Society had not been in existence for a year before the Governor of New York State appealed to it with regard to the epidemic prevailing in the upper part of the city, as a consequence of which commercial relations between New York and Philadelphia had been stopped for a while. The following minute shows how the matter came up:

"At a meeting of the Medical Society of the State of New York, held at the usual place, Sept. 4, 1795,

"The President read a letter from the Governor of the State to him, as President of this Society, on the subject of the present alarm in consequence of the disease in the upper part of the City for the Intercourse having been stopped between this City and Philadelphia by the Governor of Pennsylvania's proclamation. After some conversation, Dr. Bigley, Dr. Tillary, Dr. Smith, Dr. Mitchell and Dr. Bard were appointed a Committee to answer it. Adjourned to meet at this place to-morrow at 12 o'clock at noon.

There is no account of the report of this committee, but the following year there is a report of an effort made by this same committee to arouse the mayor, aldermen and commonalty of the City of New York, to a sense of the danger

of such epidemics and the methods by which they might be prevented. This report is all the more interesting because it established the fact that, 110 years ago, the medical societies of the City of New York had begun that series of complaints to the municipality with regard to the lack of cleanliness in the streets, which they have continued to make with almost unceasing regularity ever since.

The report is as follows:

"At a meeting of the Medical Society of the State of New York, Feb. 29, 1796.

On motion, resolved that a Committee be appointed to point out to the corporation of this City the ravages which the late epidemic made amongst that class of emigrants which arrived in the City during the late spring and summer seasons, and to recommend that a suitable provision be made to prevent a similar calamity in future. The Committee appointed Drs. Bayley, Tillary and Post.

Resolved that the above Committee do deliver to the President of this Society their statement, in order that it may be by him signed and presented to the Corporation.

Resolved, that the Secretary cause the late communications sent to the Corporation transcribed in their book of Minutes.

JOHN ONDERDONK, Secretary.

The Mayor, Aldermen and Commonalty of the City of New York, Gentlemen:

The Medical Society of the State of New York, having taken into their most serious consideration the dreadful effects of the late afflicting calamity with which this Metropolis has been visited, beg leave to suggest the following observations to your honourable board, as the result of their deliberations. It would be improper or at least foreign to the design of this address to enter into an enquiry whether the late epidemic was imported or was generated amongst us, their motive for addressing you at this time is a desire to engage and at the same time to assist as far as they are able, your respectable board in applying a corrective to some of the causes, which they conceive contributed to extend its influence and increase its malignity.

On this head they venture to point out the following objects, as particularly demanding the notice of the magistrates and the interposition of their authority.

1. The accumulation of filth in the streets, this being composed chiefly of dead animal and vegetable substances, is when exposed to a hot sun, a source of noxious effluvia, which have a tendency to produce the most fatal effects. That such effluvia have been the cause of fever has been confirmed by repeated observation and experience in all parts of the world. They remark further that the pernicious practice of collecting in heaps on vacant lots the above mentioned offensive matter, for the purpose of manure, as very reprehensible, and they have no doubt it has produced many instances of disease. This was the case (during the prevalence of the fever) at the head of George Street, in which neighborhood it raged with peculiar violence.

2. Obstructed water drains, by occasioning stagnant water, and collecting matter of various kinds which, undergoing decomposition, emit air of qualities extremely prejudicial to health.

3. The situation of lots in certain parts of this city where these and the houses on them are considerably below the ordinary level of the streets, in such places, the necessary consequences must be an accumulation of various substances which under the influence of heat and moisture, putrify, and thus contaminate the atmosphere, and communicate to it properties of a nature extremely deleterious.

4. The situation of many of the docks and shores

along the East River, it is observed that in many places large surfaces of mud are exposed to low water, which emit (during the heat of summer) an intolerable stench, and this evil is greatly increased by the practice of filling in docks with every species of filth collected from the streets, which prove an unfailing source of unwholesome air. Add to this the mode of erecting stores on piles, leaving a space under them, filled with stagnant water, which is also a receptacle for every species of filth. When they recollect that the malignant effects of the late epidemic were principally confined to those who resided on or in the vicinity of the new made grounds on the south side of the city, they cannot but express their appreciation.

5. That the extension of such grounds, further into the river, for the purpose of building thereon may be productive of the most serious effect on the health of the inhabitants.

To the causes above enumerated, others might with propriety be added, which endanger the health of the Citizens, such as slaughter houses, manufactories of soap and candles, sillum, leather, starch, &c. In laying this detail before you, they cannot conclude without declaring that in their opinion, the malignity and fatality of the late fever was greatly influenced by the aforementioned causes, and were it necessary, they could adduce the authority of the most eminent Physicians and Philosophers in corroboration of this opinion, and therefore with confidence they respectfully submit it to your serious consideration and hope that its importance to the health and reputation of the City will receive, as it undoubtedly claims, your early and due attention."

We might consider that perhaps the medical society of over a hundred years ago would have very little cause for complaint as to the substitution of drugs or the use of its name by some enterprising druggist for advertising purposes without due warrant. One of the minutes, however, shows that this was one of the difficulties the Society had to encounter before the end of the second year of its existence, and it is encouraging to find that the members met the issue squarely and stated that if the unwarranted practice of claiming to have their authorization were continued, they should use all possible legal measures to prevent the abuse.

"At a meeting of the Medical Society of the State of New York, held at the usual place, Nov. 10, 1796.

It having been represented to this Society that Messrs. Lawrence & Schefflin (whose store was formerly inspected by this Society) still continued to style it *Inspected Store*, the Agreement between this Body and Mr. Lawrence on that subject having long since ceased, wherefore,

Resolved that the Secretary be directed to state to Messrs. Lawrence Schefflin the impropriety of advertising their Drugs as inspected by this Society, being an injury to us, to dealers in drugs and Medicines, and to the Community, and to inform them that if it be continued, the Society will be obliged to protect themselves for any blame which may be thrown on them."

At the beginning of 1796 it is evident that there was considerable disquietude felt as to the possibility of an epidemic during the year. New York had recently had some sad experiences in this matter; and, as a consequence, the old committee on infectious diseases was reappointed as an advisory board to prepare a report for the city authorities.

"At a meeting of the Medical Society of the State of New York, January 12, 1796,—On Motion, resolved that

a Committee of three be appointed to report what precautions shall be recommended, by this Society, to the City Corporation to be taken in order to prevent the generation among ourselves, or the spread (if imported) of any malignant or infectious disease in future. Doctors Bayley, Post and Tillary were appointed."

In the springtime of 1796 a second acknowledgment of the representative status of the medical society is to be found in communication from the Governor of the State, Mr. John Jay, asking for an opinion with regard to the building of hospitals for contagious diseases. As usual, a committee was appointed for this purpose, an extra meeting having been called in order to receive the Governor's communication and take action upon it, without delay.

"Extra meeting of the Medical Society of the State of New York, 26th of April, 1796. A letter from Gov. Jay was read, requesting the opinion of the members of the Medical Society of the State of New York on a plan of a Lazaretto and observations thereon, by Dr. Saml. Bard. The Society went into the consideration of the plans and after some debate it was Resolved, That a committee of three be appointed to draw up an answer, to the Governor's communication which shall be under the signature of the President. The following gentlemen were appointed to that committee: the President, Drs. Mitchell and Bard."

In the summer of 1796, a further recognition of the Medical Society came in the shape of a communication from the recently organized committee of health, of New York City, asking for the co-operation of the Society, which was, of course, readily granted. This communication seems to have been presented at the regular quarterly meeting of the Society in July. At the same meeting, the response of the then President of the Society, Dr. John Charlton, was read and evidently approved, though there is no mention of this fact in the minutes. These early records of the relations between the municipal authorities and the Medical Society of the city are considered of sufficient interest to be reproduced here, and are as follows:

At a meeting of the Medical Society of the State of New York, 12th July, 1796.

Present, Dr. Tillary in the Chair.

Drs. Bainbridge, Faugeres, Anthon, Mitchel, Hamersley, Gamage and Onderdonk.

A letter from John Murray, Chairman of the Committee of Health, directed to John Charlton, President of the Medical Society, was read, and the answer from the President of the Medical Society to John Murray. They were ordered to be recorded.

NEW YORK, 5th July, 1796.

Dr. John Charlton:

Sir:

As President of the Medical Society it is proper to inform you that Robt. Bowne, Ind. B. Coles, Wm. I. Robinson, Henry Will, Thos. Childs, John Campbell and myself, have been appointed commissioners of health for this city, and that we have formed ourselves into a board for transacting such business as may respect the duties of our appointment, and in order to be the better enabled to perform our duties, we shall at all times be happy to consult with you on such measures, as may tend to the general good and health of our fellow citizens, and I am requested to inform you that such communications as it is necessary for the physicians to make to the commissioners, may be for the present di-

rected to John Murray, No. 27 Beekman Street, who acts as Chairman of the board, and who will at all times be happy to receive communications from the Medical Society.

You will please communicate the contents of this letter to the members of the Medical Socy. in order that they may know who the commissioners of health are and where to make the communications required.

I remain, very respectfully,

Your humble servant,

JOHN MURRAY,

Chairman of the Commissioners of Health.

Then follows the President's answer:

"NEW YORK, July 6, 1796.

Dear Sir:

I have been this day favored with yours of yesterday, The Med. Socy. will meet next Tuesday, when it shall be laid before them.

I will venture to report, Sir, that the Society will at all times, cheerfully co-operate with the Commissioners of health, in their exertions to preserve the health of our fellow citizens, but I should be happy (previous to their meeting) to receive from you for their information, some more particulars, intimations of the nature of the communications, the Commissioners would wish from them. My motive for this request is that early in the last winter, the Medical Society were at the pains of pointing out to the Corporation of the City the precautions which to them appeared indispensably necessary to the prevention in the future of a Calamity similar to that we experienced last summer and autumn, not an article of which (I believe) has been attended to. If the Commissioners have, however, and wish to remove nuisances, which are the productive causes of our misfortunes, I have no doubt the Med. Socy. will afford all the aid in their power to effect so salutary a measure, or if the Commissioners wish to direct the attention of the Society to any other object, I am confident that it need only be signified to them to ensure their utmost exertions.

I am, Sir,

Most respectfully your very humble servt.,

JOHN CHARLTON,
Pres. of Medical Socy.,
State of New York.

MR WILLIAM MURRAY,
Chairman of the Com-
missioners of Health, N. York."

A curious feature of the proceedings of all the medical societies of this time, which we find frequently exemplified in the early transactions of the Medical Society of the State of New York later on, is the evident interest of the members in all the natural sciences, and the manifest feeling that a physician must know something about geology and mineralogy, as well as botany and zoölogy, and the other sciences more closely allied to medicine. One does not often find this interest extending also to astronomy, but there is a minute in the proceedings of the meeting of the Society for November 5, 1796, which shows that this also was considered to be within the sphere of physicians' interest.

"A letter from Doctor Joseph Young, directed to the President of the Medical Society, enclosing his proposals for printing a new physical system of Astronomy. On motion, it was resolved to subscribe for two copies for the Medl. Society."

Efforts were evidently making from time to time to secure the passage of a law regulating

the practice of medicine in New York State. Those who know how difficult it is to procure medical legislation can readily appreciate that there were a number of disappointments before the enactment of the law. Nearly ten years before the first law for the regulation of the practice of medicine did actually come, an extra meeting of this first medical society of the State of New York was held for the purpose of discussing a law then said to be before the Legislature, and a committee was appointed to consider it, and draft a memorial with regard to it. The minutes of this extra meeting are interesting, because they also contain the first reference to the proposed union of the Library of the Medical Society with that of the New York Hospital. There evidently had been difficulty in properly housing and caring for the books, and it was thought this could be obviated by uniting their Library with that already proving so serviceable at the Hospital.

"Extra meeting of the Medical Society of the State of New York, February 14, 1797.

Present: The President and Vice-President, Drs. Faugeres, Anthon, Hammersley, Gamage, Bayley and Mitchel.

The Society was informed by the President that this meeting was called in consequence of a law now being before the Legislature to regulate the practice of Physic and Surgery. After some debate, it was Resolved that a committee of three be appointed to draft a memorial to the Legislature on the subject of the practice of Physic, and that the said memorial be signed by the President and countersigned by the Secretary. The committee appointed was Drs. Bard, Bayley and Mitchel.

On motion of Dr. Jones, seconded by Dr. Hosack, Resolved, that at our next regular meeting, the Society do take into consideration the propriety of uniting their Library with that of the Hospital."

Two months after this extra meeting at a regular meeting of the Society, the question of the union of the libraries was further considered, and eventually a union was arranged for. Nearly a century later the Library of the New York Hospital was given to the New York Academy of Medicine, so that the original contribution of volumes from the profession which for many years was practically so placed as not to be of general use, found their way to a library where the New York physicians could use them very readily.

"At a meeting of the Medical Society of the State of New York, 11th, April, 1797.

Present, the President and Vice-President; Drs. Anthon, Tillary, Rodgers, Faugeres, Gamage, Bainbridge and Hammersley.

On motion of Dr. Rodgers, seconded by Dr. Anthon, Resolved, that a committee of three be appointed to confer with the Governors of New York Hospital on the subject of uniting the Library of this Society with that of the Hospital, and report at our next meeting. The following members were appointed to that committee, Vice-President, Drs. Tillary and Hammersley."

It is rather interesting to find that, even at this early date and with the limited number of members in the Society, there was still some

difficulty with regard to the payment of fees. Finally there seems to have been an open rupture between the Society and one prominent member, and most of the minutes of one regular meeting are taken up with the consideration of his declaration that he would pay neither fines, annual subscriptions nor initiation fee.

"April 9, 1799.—The Treasurer reported that a Committee had effected a settlement with all the members except Drs. Mitchel and Gamage, who are still delinquent. The Treasurer further reported that Dr. Mitchel had declared in positive terms that he would not pay any monies to the Medical Society either for fines, annual subscriptions or initiation fee, for which he stands indebted to this Society as appears by the books of the Treasurer.

In consequence of which the Society entered into the following resolution.

Dr. Samuel L. Mitchel having for several years attended as a member of this Society (on regular application being made to him), refused to pay his dues.

Therefore, Resolved, that he be no longer considered as a member of this Society."

Not many of the meetings contain reports of the scientific proceedings. It is probable that this was mainly due to the fact that the secretary could not find the time to make such a report, and accordingly it was neglected. Occasionally, however, when a matter of more moment than usual in scientific matters came up for discussion, a note with regard to it is to be found. These notes are all the more interesting from their rarity. One of these notes at the meeting in April, 1799, shows that another cure for tetanus had been communicated to the Society, and as the successful remedy is given, we of the modern time are able to conclude that in the course of subsequent experience the members of the medical society found the new prescription no more effective in cases of acute tetanus, at least, than any other of the many recommendations that have been made before for this disease, from time immemorial down to our own day.

"Apl. 9, 1799. Dr. Hosack communicated two cases of Tetanus cured by the free use of wine, under some observations of the causes and cure of Tetanus by Drs. Bayley, Rodgers, Hammersley and Hosack."

Just at the end of the century the Society put itself on record with regard to the recommendation of young medical men to act as assistant surgeons in the army and navy. There was evidently a high spirit of professional dignity in the matter, and it was considered that no one would be recommended for this purpose unless his qualifications were such as to deserve such recommendation, and unless the Society had good reason to know definitely the existence of such qualifications. The minute in this matter is interesting, because it states the attitude of the Society so clearly.

"At a meeting of the Medical Society of the State of New York, 14th of January, 1800,

The members of this Society having been frequently applied to for the purpose of recommending young men as proper persons to assist as surgeons in the Navy and Army of the United States; it was Resolved, that

the members of this Society will not recommend any person as qualified to act in the aforesaid capacity, unless he shall have received a medical diploma from some college or university, or produce a certificate of his having been regularly examined by three of the members of this Society.

"And further, Resolved, that the members of this Society will not recommend any person as a practitioner of Physic unless he shall possess the testimonials expressed in the preceding resolution."

The midsummer meeting of 1800 is noteworthy as containing the first proposal for honorary membership. The man proposed, Dr. Letsom, was one of the most distinguished of living English medical men at the time, and there seems no doubt that the Society considered it was honoring itself rather than him in proposing him for membership. The same minute contains a note with regard to the library, which shows the interest taken in this subject.

"At a meeting of the Medical Society of the State of New York, held in the City Hall, New York, 8th day of July, 1800, at 8 o'clock P. M.

The censors reported that they had appointed Dr. N. Romaine to purchase books in London to the amount of Fifty dollars for the Medical Society.

Dr. Hosack proposed Dr. Letsom, of London, as an honorary member of this Society."

At the beginning of the new century the Society determined to procure a new meeting place. The report of the committee appointed for this purpose is quaintly interesting in these modern times, because of the details it contains. A room, with fire and candle light in a hotel on Broad Way for two dollars each meeting represents a state of affairs that is eminently desirable, perhaps, from the standpoint of the financial committee, but quite impossible except under the primitive circumstances of the time. At the same meeting the question of the engrossing of the certificate of honorary membership upon vellum, and handsomely, was discussed; and it was decided that the Society should have the right of inspecting it before it was sent to the new honorary member.

"At a meeting of the Medical Society of the State of New York, held at South Hotel, in Broad Way, 14th day of April, 1801.

The committee appointed to procure a room for the accommodation of this Society reported that Mr. Lovet would furnish a room at his hotel in Broad Way, together with fire and candle light for the sum of Two dollars each meeting.

Resolved, that this Society accept Mr. Lovet's proposal, and that the future meetings be held at his house.

The committee appointed to revise the By Laws reported progress and requested leave to set again.

The Secretary was requested to have the certificate for Dr. Letsom handsomely written upon Vellum and present it at the next quarterly meeting for inspection."

Just about the beginning of the century, the members of the Society established a code of charges for professional services. Knowing something about the purchasing power of money at the time, one might expect that these charges would be ridiculously low, according to our modern standard. This proves, however, to be by no

means the case. The physicians of the time had very properly a high appreciation of the value of their professional services. A hall for a meeting in a Broad Way hotel, with fire and candles, might cost only two dollars a month, but the prices asked for visits were nearly as high as the average of the modern time. It is to be presumed that these were considered the highest charges that would ordinarily be made, and that while many physicians might accept less, no one would be expected to ask more. It is interesting to find that the list begins with the two items "Verbal Advice," and "A Letter of Advice," for which respectively, five dollars and ten dollars are charged, showing that the physicians of that period did not consider that the principal item of value in their services was the writing of a prescription, but rather the giving of advice.

In those days, of course, most of the physicians carried their own drugs with them, and it might be expected that most of the drugs were thrown in for the charge for the visit. This was far from being the case, however. In fact, a reading of the list of charges for drugs will serve to show that they were quite as high as are the modern druggists' charges, if indeed not much higher. Twelve cents for each powder given, and twelve cents for each pill or dose of pills, one might say was quite as much as the tariff would stand. A single dose of medicine dispensed without a visit at sixty-two cents, is considerably dearer than the opportunity to renew a prescription at the drug store afforded by modern custom.

Consultations were not appreciated at as high a value in the olden times. The first visit in consultation, five dollars, and subsequent visits, two dollars, cannot but seem very small. It is rather interesting to find that mileage was charged at a dollar a mile, a price which obtains at the present moment, we believe, in many towns much larger than New York at the present time. A visit to Brooklyn was only three dollars. One to Staten Island was ten dollars, and this charge was doubled in the winter time. The scale of charges for infectious fevers where personal danger was incurred, were higher than ordinary visits, and remind us that these were the days when smallpox and typhus fever raged virulently, and when yellow fever, then considered to be an extremely contagious disease, often ravaged New York. The charges for the venereal diseases are made in lump sums for the whole course of treatment, a practice which early New York physicians doubtless found advisable from the capriciousness of such patients.

With regard to the operations, the list given shows that there was much more operating in New York at the beginning of the nineteenth century than might be expected. It is to be presumed that charges were not set down in the list for operations that were not likely to be performed, or had not actually been performed. Bronchotomy (tracheotomy) is found in the list of operations. The charges in midwifery cases

can scarcely but be considered high, considering that money at that time was worth at least three times as much as now, and had, indeed, for ordinary living expenses, at least five times the purchasing power of our present currency.

The following is the rate bill for professional charges agreed upon:

We, the subscribers, practitioners of physic and surgery in the State of New York, do agree upon the following rate of charges for our professional services from and after the first day of July, 1798, agreeably to which rates we do recommend our bills to be presented every six months or oftener, if circumstances permit.

Verbal advice	\$5.00
A letter of advice	10.00
An ordinary visit	1.00
A visit with a single dose of medicine.....	1.25

MEDICINE TO BE PRICED AS FOLLOWS:

For powders, each .....	.12
Pills, each dose .....	.12
Boluses, each .....	.25
Electuary, per ounce .....	.50
Mixtures, per ounce .....	.12
Decoctions, \$1.50—2.00 lb., or per ounce.....	.12
Infusions, \$1.50—2.00 lb., or per ounce.....	.12
Lotions, per pound	1.25
Tinctures, per ounce .....	.25
Vol. Spt., per ounce .....	.50
Ointment and cerate, per ounce.....	.25
Blistering plasters, according to their size, from \$1.25 to	2.00
Other plasters, from 50 cents to.....	2.50
For a single dose of medicine dispensed without a visit .....	.62

CONSULTATIONS.

The first visit in consultation	5.00
Each subsequent visit in consultation	2.00
A night visit	5.00
Visit at a distance from town, per mile.....	1.00
A Visit to Brooklyn	3.00
A visit to Pawles Hook	5.00
A visit to Staten Island	10.00
The last two charges to be doubled in winter or in tempestuous weather.	
The first visit in epidemic fevers, or in other cases where personal danger is incurred	5.00
Each subsequent visit under these conditions.....	2.00

CHARGES.

For curing a simple or virulent Gonorrhœa, from \$10.00 to	20.00
For curing confirmed Syphilis, from \$25.00 to.....	100.00
For dressing a blister, from 50 cents to.....	1.00
For dressing wounds, from \$1.00 to.....	2.00
For applying cupping glasses	4.00
For bleeding in the arm	1.00
For bleeding in the foot	2.00
For bleeding jugular vein	2.00
For opening an artery	5.00
For attending in smallpox, from \$5.00 to.....	10.00
Scarrifications of the eye.....	5.00
Punctures in the Oedematous Swellings	2.00
Inserting a Spue	2.00
Inserting a Seton	5.00
Introducing a Catheter first time	5.00
Introducing a Catheter each subsequent time.....	2.00
Extracting a Calculus from the Urethra.....	10.00
Reducing a simple fracture, from \$10.00 to.....	20.00
Reducing a compound fracture	30.00
Setting dislocations, from \$5.00 to	20.00
For reducing a Polypus ani	5.00
For reducing Hernia	25.00
Opening an abscess, from \$1.00 to.....	5.00
Amputating the breast	50.00
Amputating the arm or leg	50.00

Amputating the joint	100.00
Amputating the finger	10.00
Amputating the penis	20.00
Extirpating the eye	100.00
Extirpating the tonsil	25.00
Extirpating the testicle	50.00
Extirpating a polypus	25.00
Perforating the rectum, nostril or urethra.....	10.00
Paracentesis of the abdomen	10.00
Paracentesis of the thorax	50.00
Operation for an aneurism	100.00
Operation for harelip	25.00
Operation for hydrocele	25.00
Operation for hernia	125.00
Operation for fistula in ano	50.00
Operation for fistula in erindo.....	25.00
Operation for Phymosis	10.00
Operation for Paraphymosis	10.00
Fistula Lachrymalis	25.00
Wry Neck'	25.00
Cataract	125.00
For operation of Lithotomy	125.00
For operation of Bronchotomy	25.00
For operation of Trepanning	100.00

MIDWIFERY.

For a common case, from \$15.00 to	25.00
For tedious or difficult cases, from \$25.00 to.....	40.00

The Medical Society did not continue without a rival in New York City. It is interesting to find, however, that not only was their rivalry not bitter, but that there seems to have been rather kindly relations between the two societies. It is rather hard to understand just why the other Society was founded, though it is possible from its name, the Physical Society, that its membership was limited to those who practiced physic only, in contradistinction to those who practiced also surgery. The minute of the Society with regard to this new medical organization shows kindly courtesy, and at the same meeting the president of the Physical Society, Dr. James S. Stringham, was made a candidate for membership in the Medical Society. Dr. Stringham was not only admitted as a member, but he became the secretary of the society a year or two later.

In 1803 interest in the question of a law for the regulation of the practice of medicine became once more acute, and a committee was appointed to report on the matter.

"At a meeting of the Medical Society of the State of New York, held at Lovet's Hotel, 12th day of July, 1803.

Resolved, that a committee of five members be appointed to take into consideration the propriety for applying to the Legislature of this State for a law, regulating the practice of Physic and Surgery, or a law of incorporation, and report at the next meeting.

Resolved, that Drs. Anthon, Rodgers, Hammersley and Gamage be the Committee."

(To be continued.)

There are country practitioners among my friends with whom I would rather change places than with any in our ranks, men whose stability of character and devotion to study make one proud of the profession.—Osler.

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Editorials.

THE DIFFERENTIAL LEUCOCYTE COUNT IN ACUTE SURGICAL DISEASES.

THE study of the pathology of inflammation led up to the examination of the structure of the blood in this condition, with the result that the anatomical changes, incident to inflammation, were discovered to involve not only the so-called, inflamed tissue, but also the circulating blood, which may properly be regarded as the seat of inflammation when inflammation exists in any of its contiguous structures. As all of the tissues of the body are contiguous to the blood, it is the one anatomical structure which is involved in all inflammations. It was a matter of much pathological moment when the changes in the blood, caused by inflammation, were first understood; but the importance of this knowledge has become magnified many times since its diagnostic significance has been appreciated.

An estimation of the gross increase in white blood-cells served as a most important diagnostic aid for many years in the beginning of these studies. However, there were many discrepancies and disappointments in the employment of this diagnostic sign; yet on the whole it has proven of incalculable value. A high leucocytosis has been almost a sure sign for the determination of the presence of pus.

The last two years have witnessed great advances in hematology, and none has been of more immediate and practical importance than the new understanding of the diagnostic significance of

the polynuclear leucocyte. The researches which have been going on for the past three years have shown that this particular variety of white blood-cell is the key to the virulence of the inflammation. This has been put upon so practical a basis that the proportion of polynuclear leucocytosis to the total leucocytosis is the most accurate and positive sign which we have for the determination of infective inflammation. These problems have been worked out with much care by Sondern, who points out the relative disproportion between the polynuclear percentage and the total leucocytosis as a guide of mathematical accuracy. (*Medical Record*, March 25, 1906.) Gibson (*Annals of Surgery*, April, 1906) has made a table or chart by which the various degrees of disproportion between these two counts can be shown. The special point shown by this chart is the differential count. Thus, there may be an actual increase in the number of leucocytes, but the percentage of polynuclear cells may not increase with the same ratio of increase as the total leucocytosis. He found in all fatal cases of appendicitis a rising line connecting these two counts, that is, the polynuclear increase was greater in proportion than the increase of other white cells. This applies not only to acute suppurations but to cases of appendicitis with gangrene. It is just in this latter class of cases that this differential count seems to be of startling significance, for here the old determination of leucocytosis has failed. Thus, in a case of moderate leucocytosis and 85 per cent. of polynuclear cells, if the leucocytosis remains stationary while the percentage of polynuclear cells shows an increase, we may be sure that the condition is growing worse, and that the resistance of the patient to the inflammation is diminishing.

Gibson has confirmed his conclusions by blood examinations in a large number of cases of appendicitis, both acute and chronic. In pyosalpinx the differential count was absolutely consistent. He has been able to show that there is a generally rising percentage of polynuclear cells in tuberculosis. The same is true of inflammations of the biliary tract, and the genito-urinary tract. His observations show that the greater the disproportion in this differential count the surer are the findings.

Enough data have been accumulated in this branch of hematology to warrant discarding gross leucocytosis as a diagnostic sign, and basing diagnostic prognosis upon the proportion of polynuclear cells.

THE INTERNATIONAL STUDY OF CARCINOMA.

THE etiology of carcinoma is still unknown. The more we hear of the parasitic theory the less tenable does it become. And while we have not yet arrived at the etiology of carcinoma, we have arrived at the knowledge that the disease is increasing with a persistent fatality. Another thing we know is that the majority of persons afflicted with carcinoma perish of the disease within from two to four years, and that the best hope for cure lies in the early and complete removal of the disease by the use of the knife.

That carcinoma is a local disease in the beginning is a well-settled fact. At this time its complete removal means that the patient is cured. Later, when it has invaded the lymphatics and other organs, the possibility of cure is immeasurably difficult.

In the oration for the United States, delivered before the International Medical Congress, at Lisbon, last month, Nicholas Senn offered a plea for the co-operation of all nations in the study of this disease. (*Jour. Am. Med. Assoc.*, April 28, 1906). He believes that only in such concerted action can the solution of the true nature of this strange disease be reached.

This eminent surgeon reviewed the subject from all sides, and showed how much in the dark we still are with regard to this disease. He considered its etiological factors, and its relation to age, racial and social influences, diet, habits, trauma, prolonged irritation, chronic inflammation, scar tissue and benign tumors. He hoped to see this congress take the initiative for the international study of carcinoma in all its phases, but with special reference to its etiology as influenced by the agencies enumerated. For this purpose he recommended that a committee be appointed, representing all nations, and this committee should report the results of their investigations to the next congress. Such a movement as this should contribute much towards a solution of the etiology of the disease. The cause of cancer must be known before its prevention can be attempted with hope of success.

We can see that such a concerted action would be productive of much good; but still the real work must be done by the independent observer, be he a member of an international committee or an isolated student. The committee can do much in the gathering of statistics. They can

arouse public interest in the importance of the subject, and secure national aid for the prosecution of investigations, but the solution of the cancer problem remains for the trained scientific investigator. A division of labor might be accomplished by this committee, by assigning certain lines of work to certain countries or laboratories, and thus prevent duplication of work and secure a complete covering of the whole field of study.

AMERICAN MEDICAL ASSOCIATION MEETING.

THE next annual session of the American Medical Association, which will be held in Boston, June 5 to 8, will mark an epoch in medical history in New York State, for the reason that on that occasion the Medical Society of this State will be represented in the councils of the national association. It is hoped that the profession of New York will attend this meeting, and testify by their presence and interest that unity is an accomplished fact.

This meeting will bring together the foremost medical men of the country; and we may be assured that the papers and discussions will be of such a character that the continuously increasing prestige of American medicine will be more than maintained. There is no better index of the development of medicine in the United States for the last half century than the transactions of this Association; and it behooves us to contribute the best that we can to its success.

MEDICAL LIBRARY AND HISTORICAL JOURNAL.

The Medical Library and Historical Journal has placed medicine under an obligation for the service which it is performing for its literature and history. It is, so far as we know, the only publication in the English language devoted to the history of medicine, the biographies of medical men and the portrayal of the times in which they live. Its function has been to present a narration of the successive halting steps which have led up to the final wonderful achievements of the medicine of to-day.

This journal appeals more to the cultured than to the practical side of medicine. That the art of medicine is sufficiently old to have culture, the success of this journal testifies. "The foundation stones of the whole modern structure of human wisdom have all been laid by the archi-

fects of yesterday. Thrice wise is he who knows the quarries and builders of bygone ages and is able to differentiate the stones which have been rejected from those which have been utilized."

Observations.

The highest form of service which the medical profession can perform for mankind is in the prevention of diseases. This is a field which is entirely its own. In the other departments of medicine we come within the realm of the other sciences, such as biology, chemistry and botany, but prophylaxis is distinctly the function of medicine. Medicine can never hope to be of as much value in the treatment of diseases as it can in their prevention. Cholera, small-pox, puerperal septicæmia, yellow fever—it is here that humanity owes its greatest debt to medicine. But curiously, treatment must precede prophylaxis; for it is in the long and futile period of treatment that an intimacy and a familiarity with the disease is bred, out of which grows the knowledge of the disease which makes possible successful prophylactic measures.



It is in the study of the prevention of disease that medicine has no rivals and is the least apt to be misunderstood. This realm is not invaded by the charlatan or the pseudo-scientific sect. The "schools" of medicine have not to do with prophylaxis. They are not interested here. Intelligent and scientific effort in the prevention of disease is tangible and can be measured, and is freer from confusion than is therapeutics. In the treatment of diseases the forces of nature are just as kind to the mercenary quack, with his "incomparable elixir," as they are to the conscientious homeopath, with his harmless waters, who hopes only for the health of his patient. The patients of both will recover; and so, too, will the patient who is given some drug according to the most approved and rational indications. The first two will be done no damage; the last may be either harmed or helped; but misunderstanding and credit misplaced have been always the accompaniments of the art of treatment.



What has been done with cholera can be done with typhoid fever. The fifteen hundred persons who died of this latter disease in this State during the past year are a needless sacrifice, for medicine has developed the knowledge which, if applied, would make typhoid fever an obsolete disease. Politics alone stands in the way. If the medical profession were given *carte blanc* power to eliminate typhoid, it would be done. Medicine has perfected the knowledge of this disease and the means for its prevention, and the people want the disease stopped, but the legis-

lative representatives of the people are busy with mergers and tariffs and appropriations and jobs, while the pale faces of those fifteen hundred, dying of a preventable disease, are seen only by the profession of medicine. When some community is awakened by an awful epidemic, it arouses itself, and some petty local measures are applied, always successfully, to prevent the disease; but what is done for a country village should be done for the State, for the country and ultimately for the world—and the disease would end.



This will be done—it should be done now, but it will not—and then typhoid will pass into history, a conquered disease. In the meantime, *your* son, on the threshold of life's work; and *your* daughter, with the roses of health in her cheeks; and *your* wife, the mother of the laughing babe; and *you*, to whom these observations are addressed, shall return in the autumn, and lie down on your bed and die, for the mergers must be put through, and the tariff must be tinkered, and the appropriations must be passed round, and the jobs are meat and drink.

Items.

STATE BOARD OF CHARITIES.—On April 12th Dr. Enoch V. Stoddard, of Rochester, was re-elected as President and Dr. Stephen Smith, of New York, as Vice-President for the ensuing year.

COUNCIL IN MEDICAL EDUCATION OF THE AMERICAN MEDICAL ASSOCIATION.—The second annual conference of the Council will be held at Chicago on May 12th. Dr. Wm. Warren Potter, of Buffalo, has been appointed delegate by Gov. Higgins to represent the State of New York.

HOSPITAL SATURDAY AND SUNDAY ASSOCIATION.—On April 12th the distributing committee apportioned the undesignated fund of 1905, which amounted to \$81,000. Allotments were made to thirty-nine hospitals. The Mt. Sinai Hospital received the largest share—\$8,100.

THE NEW YORK CITY TUBERCULOSIS SANATORIUM, now in course of construction at Otisville, will soon be in readiness to care for 100 patients in temporary quarters. Patients are selected from those attending the Board of Health Dispensary, at Sixth Avenue and Fifty-fifth Street.

CRAIG COLONY FOR EPILEPTICS.—Dr. T. F. Munson has recently been appointed resident pathologist to the "Colony." Dr. Munson was formerly associated with the University of Michigan, where he was an assistant to Dr. Victor C. Vaughn.

SKENE MEMORIAL.—On Saturday, May 5th, at the Prospect Park Plaza, in Brooklyn, New York, were held the unveiling ceremonies of the

monument which has recently been erected to the memory of Dr. A. J. C. Skene, the eminent gynecologist.

RELIEF FUND FOR PHYSICIANS.—A separate fund is being raised by the physicians of Kings County to aid members of the medical profession who suffered in the recent calamity at San Francisco. Dr. L. A. W. Alleman is chairman of the committee appointed for soliciting subscriptions.

NEW JEWISH HOSPITAL IN BROOKLYN.—This hospital, which now occupies the site which was formerly known as the Memorial Hospital for Women and Children, opened its Dispensary on May 3d. Extensive changes have been made and a large wing has been added, so that the institution will be able to care for over 200 patients. The entire hospital will be ready for occupancy about October 1st. Patients will be treated without regard to creed or color. The annual cost of maintenance will be about \$100,000. The dispensary will have a staff of 30 physicians.

SMALL-POX.—Several cases of small-pox have recently developed in Middletown, N. Y.

SALE OF POISONS.—The Health Commissioner of Buffalo appeared before the Aldermanic Committee on Ordinances on April 12th and argued in favor of restricting the sale of such drugs as carbolic acid and cocaine. The promiscuous sale of these drugs in the city of Buffalo has been an evil which has been difficult to cope with.

NEW YORK ACADEMY OF MEDICINE.—At a meeting, held April 5th, Dr. Wendell C. Phillips was elected Vice-President to succeed Dr. George Ryerson Fowler, deceased.

MOSQUITO EXTERMINATION.—The annual convention of the American Society for the Extermination of Mosquitoes was held at the New York Aquarium on April 11th. Following a discussion of the subject a statement for distribution was adopted concerning the varieties and habits of mosquitoes and the best means of preventing their multiplication.

AN EPIDEMIC OF TYPHOID FEVER has been reported in Pittsburg and Allegheny. At this time there are over 400 cases, most of them in Allegheny.

ANTITOXIN FOR TUBERCULOSIS.—Dr. Ishigami, a Japanese bacteriologist, is reported to have succeeded in obtaining an antitoxin serum which gives good results in incipient cases.

STUDY OF ALCOHOLISM.—At the University of Berlin a course of lectures will be given on every phase of this subject, including the influence of alcoholism on the intellect; on the development of the young; its relation to insurance and State hygiene, and the relation of alcoholism to the Penal Code.

VACCINATION ACCIDENT.—It has been reported that a physician in Great Britain, while

making preparations to vaccinate a patient, was struck in the eye by a fragment of glass from the capillary tube which contained the virus. Though he immediately washed out the eye, the virus "took," and a typical pustule formed on the conjunctiva. It is said that his sight will not be affected.

DEATH RATE IN THE CITIES OF THE STATE OF NEW YORK.

The following table has been compiled from the New York State Reports and the Bulletin of the State Department of Health:

	1905	1904	1903	1902	Average 1905-02
State of N. Y.	18.2	18.2	17.6	17.	17.7
New York City	18.3	20.2	18.1	18.7	18.8
Buffalo	15.	15.	15.3	14.5	14.9
Rochester	15.4	16.2	15.1	13.6	15.
Syracuse	15.4	15.9	14.9	14.	15.
Albany	18.4	18.4	18.	17.2	18.
Troy	21.2	20.9	19.3	19.	20.
Utica	18.1	21.3	17.1	17.3	18.4
Yonkers	16.5	20.	16.8	18.1	17.8
Schenectady	13.6	15.8	16.7	14.	15.
Binghamton	16.1	19.	13.3	15.7	16.
Elmira	16.	15.7	14.2	13.6	14.9
Auburn	16.6	14.2	14.8	15.4	15.2
Hempstead	15.	16.1	...	...	...
Niagara Falls	16.	16.6	19.1	19.1	17.7
Newburgh	18.9	20.9	19.	19.	19.4
Jamestown	12.3	14.2	13.4	11.2	12.7
Kingston	19.	18.4	17.4	16.4	17.8
Watertown	15.1	19.	15.6	14.6	16.
Poughkeepsie	16.6	21.7	19.2	17.5	18.7
Mt. Vernon	13.2	16.1	13.9	15.1	14.6
Cohoes	21.5	19.1	19.3	18.4	19.6
Amsterdam	15.3	12.3	19.1	16.7	15.8
Oswego	18.	17.6	14.6	14.6	16.
Gloversville	12.6	...	15.7	13.2	...

Current Medical Literature.

PRACTICE OF MEDICINE.

CONCEALED HEMORRHAGE FROM HEMORRHOIDS. C. A. EWALD, of Berlin, calls attention to a source of anemia which is often overlooked. He has found cases in which there was a continuous bleeding from piles, situated high up, which the patient was not aware of. The patient presents only the subjective symptoms, complaining of nervousness, dyspepsia, headache, palpitation, dizziness, faintness, sleeplessness, cold feet and hands, and grows constantly paler and weaker. A diagnosis of pernicious anemia may be made, or of some cachexia. The stools appear normal upon gross inspection, or a faint suggestion of blood may be seen. But if the stools are examined with the microscopic and chemical diagnostic aids, more or less blood is found. A rectoscopic examination shows hemorrhoid nodules high up within the sphincter. The proper surgical treatment brought to bear cures the constitutional disease.—*Berliner Klin. Wochenschrift*, No. 10, 1906.

MECHANICAL TREATMENT OF ACUTE JOINT RHEUMATISM. A. LAQUEUR, of Berlin, says that since salicylic acid has become the sovereign remedy for rheumatism, the old-fashioned local applications have been discarded, even immobilization, iodine applications, ichthyol dressings, etc. Hydrotherapy has been used continuously by Winternitz, and Moritz has always employed hot compresses in connection with small doses of salicylates. Hanffe reported 233 cases treated by Bier's method of artificial hyperemia without

using any salicylate, with most gratifying results. Laqueur recommends the method of Winternitz, which regards the disease as an acute infectious process and treats it by local measures. A half bath at 27° to 22° C. is used. After this, wet packs are applied to produce a gradual hyperemia of the skin. In place of the bath a careful rubbing may be given the affected part, or a cold brushing. The procedure should be practiced two or three times daily. For the pain, cold applications are most effective. This may often be combined with seven minutes' faradization of the joint.

Hyperpyrexia is best treated by cold applications in the form of packs.

Bier's method is a most effective treatment. In ten reported acute cases it caused a rapid subsidence of pain, and a marked betterment in the local condition. Many others report good results from this treatment. Laqueur has had good results in gonorrhoeal rheumatism with Bier's treatment.—*Berliner Klin. Wochenschrift*, No. 11, 1906.

MENINGOCOCCUS PHARYNGITIS AS THE BASIS OF EPIDEMIC MENINGITIS. A. OSTERMANN, of Breslau, reports the investigations carried on in the University laboratory, showing the source of epidemic meningitis infection to be the naso-pharynx. Many observations have been made pointing to this connection. The examination of the fifty-six children in a district school showed that four of these had meningococci in their naso-pharynxes, and that these four children came from houses where there were or had been cases of epidemic cerebro-spinal meningitis.

In six families, as soon as a case of the disease had developed, Ostermann immediately made cultures from the pharynxes of all the healthy members of the family. In every one of these families he thus found the specific cocci. Among twenty-four persons thus examined, seventeen gave positive results. These persons were actually suffering with chronic meningococcus pharyngitis, and they were to be regarded as sources and spreaders of the disease.—*Deutsche Med. Wochenschr.*, No. 11, 1906.

THE VASOMOTOR FACTOR IN ASTHMA. FRANCIS HARE says that the meaning and mechanism of many asthmatic paroxysms may be summarized as follows:

1. Hyperpyrexia.
2. Widespread vasoconstriction, compensated for by bronchial vasodilatation, or the converse.
3. Vascular distention of the mucosa of the bronchioles.
4. Obstructive dyspnoea.
5. Exaggerated combustion (catabolic expenditure).
6. Gradual dispersion of hyperpyrexia.
7. Cessation of the vasomotor variation.
8. Subsidence of vascular distention and asthmatic paroxysm.—*New York Medical Journal*, April 7, 1906.

WHAT CAUSES THE PYLORUS TO RELAX? A. L. BENEDICT says the objections to the acid theory of the relaxation and closure of the pylorus are as follows:

1. The local changes in reaction are physiologically inevitable.
2. The relative acidity of the chyme is not diminished by the passage onward of a small portion, yet the pylorus does not remain patulous.
3. While this failure of a continuous relaxation of the pylorus may be explained by the distal acidity, it is in close analogy with the action of other alimentary sphincters, which close without any exciting reflex that can be ascribed to differences in chemical reaction.
4. Fully half the stomach contents normally escape before it is conceivable that any great proportion of hydrochloric acid is present.
5. Clinical experience with dietaries shows that, other things being equal, meals that call for considerable hydrochloric acid secretion usually remain in the stomach longer than those which do not.
6. Clinical experience with stomach contents proves conclusively that deviation from the normal standard of hydrochloric acid secretion produces just the

opposite effect to what would be expected if this were the cause of pyloric relaxation. Even in achylia gastrica, there is no necessary abnormality of pyloric function, certainly not in the direction of retention.—*New York Med. Jour.*, Apr. 7, 1906.

FUNCTIONAL HEART MURMURS. RICHARD ELLIS makes certain observations under the headings, special points, thoughts for examiners, and mistakes observed.

Special Points—1. Always examine every heart in this sequence: Condition at apex; muscular tone; vessels and pulse, mitral area, aortic area, and pulmonary area.

2. Consider aortic area to be the entire middle sternum, as well as the second right space and left sternal line.

3. A man's voice may be heard in every room of an apartment, but the important acoustic question is: In which room is the voice, and into which other room is the voice best carried; so the first thought after noting the time of a murmur is "where is the maximum intensity and the best transmission?"—especially since many functional murmurs are widely diffused.

4. An aortic systolic is usually an accidental murmur and very rarely a true stenosis. Few ears have ever heard true uncomplicated aortic stenosis.

5. An aortic systolic may be due to an open foramen ovale or open ductus arteriosus, or to a pulmonic stenosis, or roughening of aortic valves, or abnormal vessels, or to a true stenosis.

6. When compensation fails, and the patient suffers his first attack of severe dyspnoea, he brings with him to his doctor some or all of the attending signs of his valvular murmur.

7. The insurance examiner sees this same patient years earlier, when the heart presents a murmur with no concomitant signs of valvular disease. A trained ear may decide at once the true character of the murmur. An untrained ear may require several examinations to decide the maximum intensity, pitch, quality, time and muscular condition.

8. After reviewing scores of examinations, the author repeatedly finds a carefully diagnosticated mitral regurgitation which proves to be a functional murmur. Almost never do we find a "functional murmur" proving to be an organic murmur on subsequent examination.

9. Every one should be able to hear a hemic murmur over the pulmonic, but no one on first examination can tell whether certain apex systolic murmurs are organic or hemic. Such doubtful murmurs are always hemic, but they may require several examinations for a correct diagnosis.

10. No one can always judge the true condition of an over-acting heart, associated with a murmur; therefore, every examiner should study the heart under fair conditions. Almost every excited heart under the right conditions will show some kind of a murmur somewhere.

11. After watching scores of physicians at work examining the living body, the following facts have been observed: The majority train themselves to examine with and without the stethoscope. The majority prefer, when possible, the ear for the lungs and the stethoscope for the heart. Most cardiac murmurs are heard best with the stethoscope; a few feeble and diffused murmurs are best heard by the naked ear. A careful ear, aided by the stethoscope, may fail to hear a few scattered rales. The stethoscope almost never fails to hear a cardiac murmur heard by the naked ear.

Mistakes Observed—1. A loud systolic over pulmonic called a mitral regurgitation at apex, because apex region alone was examined.

2. An aortic regurgitation called a systolic pulmonic through ignorance. Many cannot recognize systolic time from diastolic.

3. Seizing the spot where the murmur is first heard, and not hunting for the maximum intensity and best transmission.

4. A fitting systolic superficial cardiorespiratory called a mitral leak.
 5. An inconstant systolic hemic at apex called a mitral leak.
 6. Long faint systolic over aortic area called "aortic stenosis."
 7. Observing a superficial flitting cardiorespiratory, but missing a clear diastolic underneath.
 8. Missing the typical quick grinding systolic "thump" of a mitral stenosis at apex, because no clear presystolic is heard.
 9. Forgetting to hunt for the concomitant signs of an organic murmur.
 10. Calling organic murmurs "hemic" or functional.
 11. Heaving systole, tense vessels, apex two inches outside nipple line, increased aortic second, bad family history, faint systolic murmur, called a "normal heart," although presenting five signs of arteriosclerosis.
 12. Stopping all murmur vibrations by pressing too hard against chest, especially in mitral stenosis.
- Thoughts for Examiners—I. Every examiner should first know the normal heart from its deep rumbling bass to its quick tenor.
2. One should then study typical valvular leaks until one is able to recognize at once mitral and aortic lesions.
 3. Having mastered the normal heart and typical mitral and aortic lesions, one is ready to agree that some murmurs are organic, but most of them are functional.
 4. Every careful examiner should recognize at once a cardiorespiratory murmur; he may not always hear, nor always distinguish between the murmurs that are organic to one ear and functional to another, especially if the murmur is apex systolic, constant or inconstant, and varying in intensity, pitch and quality.
 5. It is known that a large number of murmurs are functional systolic over the pulmonic.—*New York Med. Jour.*, Apr. 7, 1906.

SURGERY.

A CONSIDERATION OF THE GUN-SHOT WOUNDS INFLICTED WITH THE JAPANESE SMALL-CALIBRE MANTLE BULLET. COLONEL ROMAN ROMANOVITCH DE WREDEN, of St. Petersburg, Russia, says that while the modern small-calibre bullet was intended to mercifully wound and temporarily incapacitate a large number of the enemy without causing maiming and destructive wounds, the expectation in this direction has not been reached. In the Anglo-Boer War there was much disappointment and surprise over the destructiveness of this projectile; and the Japanese-Russian War has conclusively determined its capacity to maim. It tears and comminutes and becomes deformed relatively to the distance and the qualities of the obstacle which it meets. The new mantle bullets in certain conditions comminute bones with greater power than did the old leaden ones, entirely similar to which can be considered the modern shrapnel bullet. In the Russian army there was one amputation to every two hundred fractures, a low percentage, due to the advances of surgery, and not to the harmlessness of the modern bullet.

The damage done by the Japanese bullets was very variable, and depended upon the distance and the character of the tissues struck. The shorter the distance and the richer the injured region in fluid, the greater was the destructive effect of the bullet. All wounds of the brain inflicted at an approximate distance of 200 steps or less were fatal. At a distance of 100 steps the greater part of the roof of the skull is carried off. When the distance of 1,200 steps is reached the wound becomes a hole puncture and recovery often takes place. Wounds of the abdomen, when there is much fluid in the bowel or bladder, are very destructive at short range. He also found that these bullets glanced from stones, the frozen ground or ice, and did terrible destruction.

When asked if the modern small arm mantle bullet

is humane, the author replies that it would be if war were carried on under the following conditions: That fighting be confined to the warm season, before frost sets in, in a dry district, with soft, stoneless ground, remote from rocks and stone buildings; that the intestines and the bladder be carefully emptied before battle; that the combatants when firing approach each other no nearer than 250 steps, and that all aiming at the head be strictly forbidden.—*Jour. of the Assoc. of Military Surgeons*, May, 1906.

MEDICAL AND SURGICAL OBSERVATIONS IN THE PHILIPPINES. MAJOR JOHN MONROE BANNISTER, of the United States Army, reports that tetanus is a disease of considerable prevalence in this country. The results secured in the military hospital in ninety-six cases of hernia operated upon by the Bassini method were uniformly good, there having been primary union in all, and not a single instance of recurrence. Fifty-five operations were done for appendicitis, with one death. Abscess of the liver very frequently calls for operation, and is generally due to amœbic infection. The author expresses himself as opposed to the use of the aspirating needle in these cases, insisting that exploratory incision or laparotomy is not one whit more dangerous.—*Jour. of the Assoc. of Military Surgeons*, May, 1906.

DISCUSSION OF THE PLEURA IN THE TREATMENT OF CHRONIC EMPYEMA. JOSEPH RANSOHOFF, of Cincinnati, Ohio, says that it was not till 1893 that the fact was elucidated that the power to expand of lung tissue, long buried in fibrous adhesions, is not lost, and that freed from its fetters the lung will again expand. Fowler first performed the operation of decortication in such a case, removing the scar tissue from the diaphragm, pericardium and lung. Ransohoff has practiced the operation in a number of chronic cases, and reaches the following conclusions:

1. Every operation on the thorax for plural effusions of any kind should be done with the patient on his back or slightly resting on the sound side.
2. An incision should be made above the fistulous opening and a piece of one or two ribs removed in order that the cavity may be subjected to inspection and to touch.
3. According to the size of the cavity thus determined, multiple subperiosteal rib resections are to be made either through a number of parallel incisions, through the V-shaped Schede incision, or through a trap-door incision, a method favored by the French surgeons. It matters little which of these methods be followed, provided that the resections be ample, and that the thickened parietal plura be excised.
4. Attention should then be given to the diaphragm and the pulmonary plura. Incisions here should be made after the manner described. If the thickened pleura can be removed by decortication easily, it is perhaps preferable. If ample expansion of the lung does not ensue, an incision in the groove of reflection of the costal and pulmonary plura must be made.
5. The condition of the patient should be carefully watched, lest too much be done at one sitting. When the cavities are large, repeated operations are necessary for the safety of the patient. In one case eight operations were necessary to effect a cure.—*Annals of Surgery*, April, 1906.

THE MOVEMENTS OF THE STOMACH AND INTESTINES IN SOME SURGICAL CONDITIONS. WALTER B. CANNON and FRED T. MURPHY, of Boston, have carried out a series of experiments in the Laboratory of Physiology in the Harvard Medical School, which throw some light upon peristalsis in surgical conditions. Their researches show how the stomach and intestines move, and how the food is treated by the motor activities of these organs under various surgical conditions in comparison with the normal state. These investigators also studied the effects of end-to-end and lateral anastomosis and the effects of intestinal obstruction, and the question of post-operative paralysis

of the intestine. Animals were etherized, operated upon, and subsequently fed food mixed with subnitrate of bismuth. Fluoroscopic observations of the changes in the contents of the alimentary canal were then made. They found that after high intestinal section and suture, gastric peristalsis is not interfered with. But for almost six hours after recovery from the ether the pylorus remains tightly closed against the peristaltic pressure and does not permit the food to pass into the injured gut. There is a striking coincidence between the duration of the delay of the discharge from the stomach and the period of primary cementing of intestinal wounds.

After end-to-end suture of the severed intestine no inefficiency of the gut in the region of suture was observed. But after lateral anastomosis there was always an accumulation of food in the chamber formed by the opposed loops. The cutting of the circular fibres in this operation destroys efficient peristalsis at the junction unless the circular muscles of both loops work in co-ordination. As they do not so act, at least for days and probably for weeks, following operation, lateral anastomosis is not so ideal an operation as the end-to-end union.

In the case of intestinal obstruction, food leaves the stomach without delay. As it accumulates above the obstruction violent peristalsis repeatedly occurs, tending to force the food past the obstacle. The peristalsis alternates with vigorous squeezing movements. After such turbulent treatment the food has been observed moving swiftly backward toward the stomach along the course traversed in its passage from the stomach to the region of obstruction.

After thrombosis and embolism there is usually no movement of stomach or intestine; the food lies quietly in the stomach until discharged by vomiting. In one case gastric peristalsis was observed for some hours and a slight amount of food was discharged into the intestine, but it gathered above the infarcted region and was not advanced further.

Handling the alimentary canal had a decided inhibitory effect upon peristalsis. Even after the most gentle handling, within the peritoneal cavity or under warm solution, no gastric peristalsis was seen and no food left the stomach for three hours. Fingering gently in the air caused still greater retardation of the movement of the food; and with rough handling in the air no food passed from the stomach for four hours, and then it emerged very slowly and was moved onward with every evidence of extreme sluggishness of the intestine.—*Annals of Surgery*, April, 1906.

TREATMENT OF TYPHOID FEVER BY APPENDICOSTOMY. C. B. KEETLEY, of London, says that for some years the question has presented itself to his mind that typhoid fever patients should be operated upon before and not after bleeding and perforation occur. Most of the typhoid ulcers occur within a yard of the ileo-cecal valve. To cleanse this portion of the canal is indicated. This can in a few cases be done by high enemata, but usually the ileo-cecal valve does not easily allow fluid to pass through. Or the ileum could be opened a yard above the valve and continuous irrigation instituted. Better still than these he thinks is appendicostomy, whereby the appendix is brought up, dilated and fixed in the wound, and the colon washed out and feces allowed immediate exit. This allows a catheter to be passed through the valve into the ileum which can be washed out at frequent intervals. The value of this operation is that it allows the whole large intestine to be kept emptied of feces, that it permits irrigation of the ileum, and that the gut can be left filled with salt solution instead of infective and irritating fecal matter.—*The Lancet*, April 14, 1906.

SCOPOLAMINE MORPHINE-CHLOROFORM ANESTHESIA. H. J. WHITACRE comes to the conclusion that narcosis by scopolamine morphine is not devoid of danger. The use of scopolamine and morphine alone for surgical narcosis is not justifiable and in his experience not practicable. A single dose two

hours before operation lessens the discomforts attendant upon operative procedure to a high degree, and may obtain a definite place in surgical practice. Four deaths have occurred in a series of 2,400 cases, which have been so definitely related to the use of this method of narcosis that they may be called scopolamine deaths. This, however, was in the absence of autopsy demonstration. These deaths have been reported as occurring with a type picture of alkaloid poisoning, and heart failure has been given as a direct cause of death. A fatty degeneration of the liver and kidney has been produced by the use of repeated doses of scopolamine alone and of scopolamine in combination with morphine in animals. This method of producing or assisting narcosis cannot yet be recommended for use in general practice in spite of the great advantage it seems to offer.—*New York Med. Jour.*, March 31, 1906.

THE PROGNOSIS OF POST-OPERATIVE FEMORAL PHLEBITIS. B. R. SCHENCK cites twenty-nine cases which may be divided into three groups: 1. Those having symptoms for a period of four months or less and subsequently no trouble, of which there were eight. 2. Those having symptoms for about a year and thereafter no disturbance, of which there were two. 3. Those who have had symptoms ever since the attack, of which there were nineteen.

Concerning the prognosis of post-operative phlebitis, the author goes on to say: 1. That all patients have symptoms for a period varying from two to four months. 2. That, if the symptoms persist longer than six months (by which time the collateral circulation is probably as completely established as it ever will be) there is small chance that they ever will disappear. 3. That in about 65 per cent. of all cases there is never complete freedom from attacks of pain and swelling.—*New York Med. Jour.*, March 31, 1906.

TREATMENT OF APPENDICITIS IN ITS VARIOUS STAGES AS IT COMES TO THE SURGEON. C. H. WALLACE believes, with the mind open for conviction, that appendicitis is always a surgical disease. That every patient should have and is entitled to operative measures within the first forty-eight hours. That the rapidly progressing stage is the stage of applicability of the Ochsner treatment, and this offers the lowest mortality. Cases coming to the surgeon with evidence of gradually subsiding symptoms, should be deferred to a more favorable operative period. Operation should be urged in every interval or chronic case. In abscess cases two safe rather than one hazardous operation should be done. In diffuse peritonitis all dependent cavities should be carefully incised and drained and not flushed; and, secondarily, the offending organ should be removed.—*Jour. Am. Med. Assoc.*, March 31, 1906.

THERAPEUTICS.

FORMIC ACID AS A THERAPEUTIC AGENT. HEINRICH STERN, of New York, reviews the literature of formic acid, and reports his experience, extending over a period of sixteen years, with this drug. It is employed the same as cantharides as a sexual excitant, and in atomic conditions of the urinary system. Externally it is a rubefacient. Internally it is given in doses of from 0.5 to 2.0 c. c. several times daily. It is still employed chiefly as an epispastic. Stern believes that internally in cancer it has postponed the progress of the disease. Before the time of antitoxin he used this acid in diphtheria with pronounced success. He finds it a valuable agent in intestinal toxicosis. In the secondary and tertiary stages of syphilis, the iodine-formic acid solution (0.5 gm. iodine in 60 c. c. formic acid) has served better than iodide of potash. Stern also reports positive results with this solution in the treatment of pulmonary phthisis.—*Jour. Am. Med. Assoc.*, Apr. 28, 1906.

THE VALUE OF DRUGS IN THERAPEUTICS.
 F. C. SHATTUCK, of Boston, says: 1. They do no harm. This is well meant by the homeopath who does no harm in so far as he misses doing any good with his infinitesimal dose. 2. Try to see as clearly as possible just why a drug is given, your purpose in giving it, either as a specific, curative, palliative or placebo. 3. As far as you can, give a drug uncombined. 4. In using an efficient drug, be as positive as you can of a good preparation, and then give it until something happens, either the desired effect, or evidence appears that the limit of toleration has been reached, what is called by the author the toxic effect. Disregard of this law is responsible for many therapeutic failures. Our knowledge of drugs is purely empirical, and in drawing conclusions we must be keenly alive to the myriad sources of error.—*Boston Med. and Surg. Jour.*, Mar. 29, 1906.

OBSTETRICS.

RUPTURE OF THE UTERUS, WITH ESCAPE OF THE CHILD INTO THE ABDOMINAL CAVITY: DELIVERY PER VIAS NATURALES: RECOVERY. THOMAS HUNTER reports the case of an Hindu of a laboring caste, about 24 years old. Four previous labors normal. Labor came on at full term at 11 P. M., Nov. 27, 1905. Pains were ordinary until about 3 A. M. Then waters burst and bearing down began. After not more than four of these pains, they absolutely ceased, and about ten minutes later the placenta was delivered. Profuse bleeding now occurred and patient was taken to the hospital. At 7 A. M. on the 28th, on admission, patient was pale and collapsed, and pulse could not be felt. Temp. rose to 101.4. Pulse, 150. Seemed to have some pain. Abdomen extremely tender. Palpation revealed the fact that fetus was just under abdominal wall. Placenta was lying outside vagina attached to the cord. Hypodermic injections of digitalin, strychnine and ergotin were given at once, and external genitals thoroughly cleansed. Examination per vaginam revealed a large, irregular tear in the left post region of the uterus, beginning at the external os. The uterus was firmly contracted behind the symphysis, and the child found in the abdominal cavity. Woman was douched with hot saline solution and put under chloroform. The rent in the uterus was large enough to admit the hand and to feel the child lying with feet close to the rent. Although the best treatment in these cases is laparotomy, it was decided, on account of the collapsed condition of the mother, to abandon this procedure. The fetus was examined and the cause of the rupture found to be a hydrocephalic head. Perforation of the head was done, and fetus delivered through the vagina. The feet were drawn together through the tear, followed by the trunk and upper limbs. The head was pierced, followed by a rush of fluid. It was then easily delivered. Abdominal cavity thoroughly washed out with salt solution. A gauze drain was passed into the abdomen through the tear, a pad put on over the vagina, and a tight binder applied. Patient's condition was critical for the first two days. Temp. went to 103.4 and pulse to 150. Gauze drain was changed and hot douches given twice daily. Strychnine was given every four hours. She gradually recovered, and when discharged, three weeks later, the tear had healed all but a complete laceration through the cervix, extending to the fornix.—*The Lancet*, March 17, 1906.

PEDIATRICS.

ECZEMA AS A CAUSE OF DEATH IN CHILDREN. J. BERNHEIM-KARRER, of Zurich, cites the following case: Child, aged 5 years; mother, healthy; father of scrofulous diathesis. Had eczema when a child, also slight hip joint disease. At the age of four months patient was brought to the author for a scaly, dry scalp eczema. It was wet on the forehead. Arsenic had no effect. Diet likewise. It would improve for

a time and remain, then the skin would again crack and the serous ooze would result in crust formation again. It began to spread to the right side. Impetigo pustules were now observed. Skin was red, and scaly deposits were seen thereon. The child seemed apathetic. Tongue coated. The cervical glands on the right side were enlarged. At the age of eleven months the fontanelle was still open. The child also had no teeth at this age. Albumen was found in the urine. He prescribed an ointment and told the mother to return with the child in two days. He was advised on this day that the child had died during the night. The dissolution was rapid. It seemed the child has scratched itself very much. The itching was fearful. The face was besmeared with blood, and under the skin pus was observed. The ointment he had prescribed was:

Ichthyol	0.2
Zinci oxid	2.0
Emplast-Diachyl	
Vaselin flava	5.0
Lanolin	10.0

The condition did not abate, but seemed to increase. The nourishment in the form of milk was not retained. The child became more and more stupid. This disappeared and the child seemed a little brighter. Later it began to moan and became restless and stupid. It never lost consciousness. Bowels moved freely and with regularity. At night of the last day an enema was given, the child's bowels not having moved that day, but without result. Milk was given. It awoke; was restless; went to sleep about 11 P. M., and at 6 A. M. was found dead, although still warm. There was no spasm of the larynx and no symptom of tetanus. The autopsy showed a general purulent condition under the skin and many small cysts of the skin. The pus was loaded with diplococci, also the cerebrospinal fluid showed diplococci.—*Jahrb. fur Kinderheilkunde*, Dec. 1905.

ORTHOPEDICS.

TENDON TRANSPLANTATION IN PES CALCANEO-VALGUS. ADOLPH LORENZ, of Vienna, says that the object of tendon transplantation is the equalization of a disturbed muscular antagonism. In extensive paralysis, where only a little functioning muscle remains, such an equalization is impossible. A transplantation is irrational if it does not equalize the existing muscular disturbance. In this respect, the Nicoladoni operation for pes calcaneo-valgus (transplantation of the peronei upon the tendo Achilles) is absolutely irrational. Experience has taught that pes calcaneo-valgus is the only paralytic deformity in which the patient as a rule can walk well, so that in calcaneo-valgus transplantation is the least necessary. This operation of Nicoladoni converts a useful foot into a secondary paralytic club foot.

Lorenz advises in paralytic calcaneo-valgus, at the most, only one peroneus tendon to be attached to the os calcis or the Achilles tendon. This advice is especially important when the extensor digitorum communis is weakened.—*Wiener Medizinische Wochenschrift*, Nr. 3, 1906.

OTOLOGY.

INJURY OF THE EAR CAUSED BY LIGHTNING. WILLIAM C. BRAISLIN, of Brooklyn, New York, reports two cases of ear injury due to lightning. A bathing pavilion was struck by lightning. Five persons were killed. All the injured persons were near the base of a large flag staff, and all were wet with salt water at the time. One of the patients was unconscious for three hours. On regaining consciousness he noticed a ringing and fullness in both ears, roaring tinnitus, and impairment of hearing. On the day following the injury a bloody discharge came from one ear. Examination of the drum showed a perfectly

round perforation, its edges reddened and raw, as though there had been a loss of substance at this point. The other case was unconscious for only a few moments, but immediately noticed defective hearing and roaring tinnitus in both ears, worse in the left. Examination of this ear showed perforation of the drum membrane by a small round hole. The right ear in both cases presented no visible lesion.

Braislin explains these injuries by the fact that there was water in the ears, as both had just left the surf. Water being a conductor of electricity, it is believed that a charge of electricity followed a track of moisture in the external auditory canal, and thus in each case caused a perforation of the drum in finding its way to the Eustachian tube. Both cases healed promptly under dry dressings, with only an inconsiderable impairment of hearing.—*Brooklyn Med. Journal*, April, 1906.

TEACHING THE DEAF CHILD TO HEAR. G.

HUDSON-MAKUEN arrives at the following conclusions:
First. The hearing of the deaf child may be greatly improved by the systematic use of oral gymnastics.

Second. The speaking voice used in close approximation to the ear is the most effective form of oral gymnastics for children.

Third. The training of speech should be carried on simultaneously with the hearing exercises.

Fourth. The degree of success attained will depend largely upon the patience and skill of the teacher.—*N. Y. Med. Jour.*, March, 1906.

RHINOLOGY.

FRONTAL AND ETHMOID SINUS EMPYEMA. H. P. MOSELEY, of New York, reports a case of empyema of the frontal and ethmoid sinus, which came to him still suffering with a discharging sinus, following an old Killian operation upon the frontal sinus. He laid open the diseased track, curetted out the sinus, cut off the edges of bone and discovered openings into the ethmoid and nasal cavities. An absence of septum permitted a probe to pass into the opposite frontal sinus, from which considerable necrotic material was curetted out. The wounds were washed out and gauze was packed into the nose opening and into both sinuses, and the wound left open. Healing went on satisfactorily, a fistula still remaining three months later. This was cured by re-establishing the opening into the nose, curetting out the sinus again, leaving a drain from the nose into the sinus, and closing the skin wound.—*Annals of Surgery*, March, 1906.

Transactions of Societies.

MEDICAL SOCIETY OF THE COUNTY OF CATTARAUGUS.

REGULAR MEETING, April 3, 1906, at SALAMANCA, N. Y.

Dr. De Lancey, Rochester, President of the Eighth District Branch, was present to inspect the organization. He read a paper on the "Hygienic Treatment of Nephritis."

Dr. Clarence King was elected delegate to the Eighth District Branch Society.

MEDICAL SOCIETY OF THE COUNTY OF GENESEE.

At the regular meeting of the Medical Society of the County of Genesee, at Batavia, April 4th, the following business was transacted:

Adoption of Constitution and By-laws in accordance with recommendations of the State Society.

Dr. Alpheus Prince, of Byron, N. Y., was elected delegate to the meeting of the Eighth District Branch.

A set of resolutions was adopted, endorsing Assembly Bill No. 1715, to regulate the practice of medicine. Copies of the resolutions were sent to the Senators and

Assemblymen from this county, and to the Public Health Committee of the Assembly.

A resolution protesting against the passage of the Osteopathic Bill was adopted and a copy sent to the Public Health Committee.

A committee was appointed to draft a letter protesting against recognition of osteopathy, and urging the passage of Assembly Bill No. 1715. Copies of this letter were sent to each member of the Society, to be signed and forwarded to his Senator and Assemblyman.

Dr. A. B. Miller, of Syracuse, read a paper on "Uterine Fibroids and their Treatment."

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, April 17, 1906.

Scientific Program.

Public Meeting, Hon. Bird S. Coler, Chairman.

Address: "How Can the Physician and Layman Accomplish Most in the Fight Against Tuberculosis?" by S. A. Knopf, M.D.

Discussion by Hon. St. Clair McKelway, LL.D.; Prof. Joseph H. Raymond, M.D., Chairman of the Committee of the Bureau of Charities on the Prevention of Tuberculosis; Horace Greeley, M.D., Secretary of the Long Island Open Air Sanatorium.

MADISON COUNTY MEDICAL SOCIETY.

REGULAR ANNUAL MEETING, May 8, 1906, at ONEIDA, NEW YORK.

Program.

Paper: "The Acid Auto-Intoxications," by Dr. W. M. Gibson, Utica, N. Y.

Address: "The Progress of Therapeutics," by Dr. John L. Heffron, Syracuse, N. Y.

This meeting marks the centennial anniversary of this Society, which was celebrated in a fitting manner by the physicians of Madison County.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, April 23, 1906.

Program.

"Report of Two Cases of Appendicitis, Presenting Mild Constitutional Symptoms with Grave Internal Conditions Discovered by Operation," by Frederick Holme Wiggin, M.D.

"Some Notes on Santonin Poisoning in Relation to Epilepsy," by Smith Ely Jelliffe, M.D.

"The Vitascope: Moving Pictures Showing Certain Manifestations of Nervous Diseases and Illustrating Surgical Operations," by Cecil MacCoy, M.D.

"The Use of Moving Pictures in Teaching Diseases of the Nervous System," by Edward D. Fisher, M.D.

Discussion on the Use of Moving Pictures in Medical Teaching and in Illustrating Medical and Surgical Papers.

MEDICAL SOCIETY OF THE COUNTY OF NIAGARA.

REGULAR MEETING, April 3, 1906, at LOCKPORT, N. Y.

The principal speaker was Dr. De Lancey Rochester, of Buffalo, who first addressed the meeting with reference to the By-laws to be adopted by the Society, making several suggestions on the various sections to be adopted.

Following this he read a paper on "The Hygienic Management of Chronic Nephritis."

Dr. Palmer discussed "The Climatic Treatment of Chronic Nephritis," giving an extended report of the effects upon the disease of the climate of Porto Rico,

citing several cases which had been benefited by a sojourn there.

Dr. Palmer was elected delegate to the Eighth District Branch.

Following this the By-laws were taken up chapter by chapter and section by section, and corrected and adopted as read.

It was moved that the annual dues of the Society be three dollars, if paid after May 1st each year, and one dollar discounted from that sum if paid before May 1st.

Dr. Baker, Dr. Chapin and Dr. Griswold were nominated for the Board of Censors.

The following members were elected delegates to the State Society: Dr. Baker for two years, Dr. J. H. Miller for one year.

The following appointments were made by the President: Committee on Public Health, Dr. Helwig, Dr. Baker and Dr. Miller.

The following were elected to membership: Dr. McChesney, of Niagara Falls; Dr. McPherson, of North Tonawanda; Dr. Lyman A. Wheeler, of Lockport, under the rules of the old Society.

The following names were then confirmed as members: Drs. Horton, Wheeler and McPherson.

ONEIDA COUNTY MEDICAL SOCIETY.

REGULAR QUARTERLY MEETING, April 10, 1906, at UTICA.

Papers.

"Acetonuria in Pernicious Vomiting of Pregnancy," Dr. W. B. Roemer.

"Proteus Infection," Dr. Angeline Martine.

"Diagnosis of Incipient Tuberculosis and its Treatment," Dr. W. S. Nelson.

"Pupillary Reaction as an Aid to Diagnosis," Dr. S. C. Maxson.

"Report of Case," Dr. T. H. Farrel.

THE MEDICAL SOCIETY OF THE COUNTY OF ONONDAGA held its centennial celebration at Syracuse on May 8th. Papers were read and orations delivered by Drs. John Van Duyn, H. L. Elsner, A. Jacobi, W. W. Munson and Alfred Mercer. Brief addresses were also made by Drs. Dallas, Maxon and Cook.

MEDICAL SOCIETY OF THE COUNTY OF ORANGE.

The centennial anniversary of the founding of this society will be celebrated in July. An appropriate feature of the commemoration of this event will be historic reviews of the lives of the notable physicians who have labored in this community. Dr. John H. Thompson will present the history of Dr. Benjamin Tusten, who introduced vaccination into Orange County, served as soldier in the Revolution, and who as colonel and surgeon fell at the battle of the Minisink. This memorable battle, or massacre, for such it proved, witnessed an act of splendid heroism in Colonel Tusten. The historian says that, while the battle was raging, and before the alternative of massacre or flight had culminated in the conflict, Dr. Tusten had gathered the wounded in a sheltered place behind a cliff of rocks when the privileged retreat commenced. There were seventeen disabled men under his care at the moment, to whom he was ministering; and while thus engaged they all were attacked by the savages, and with relentless cruelty every one perished under the tomahawk and scalping knife. Though the opportunity with the others who had fled was available on the part of Dr. Tusten, nevertheless he voluntarily remained at the post of service, performing with self-sacrificing fidelity the humane offices of the ever dutiful and faithful physician. He thus died at the early age of thirty-six, protecting the wounded whom the fortunes of war had placed within his care.

SARATOGA MEDICAL SOCIETY.

REGULAR MEETING, April 6, 1906, at SARATOGA SPRINGS, N. Y.

Program.

Floating Kidney.

"Etiology, Symptoms and Diagnosis," Dr. Ledlie.

"Treatment," Dr. Comstock.

Discussion, Dr. Humphrey and Dr. Moriarta.

"Health Officer's Report."

MEDICAL SOCIETY OF THE COUNTY OF SUFFOLK.

ANNUAL MEETING, April 26, 1906, at RIVERHEAD, N. Y.

Scientific Program.

1. "President's Address," Dr. W. H. Ross, Brentwood.

2. "The Milk Problem from a Sanitary Standpoint," Dr. W. A. Baker, Islip.

3. "Procidencia Uteri," Dr. Ralph Waldo, of New York and Westhampton.

4. "Treatment of Inoperable Conditions of the Prostate," Dr. G. Morgan Muren, Brooklyn.

MEDICAL SOCIETY OF THE COUNTY OF ULSTER.

On April 6, the Common Council of the City of Kingston confirmed the Mayor's appointment of Dr. Elbert H. Loughran and Dr. Adelbert Mambert, members of the Board of Health, in place of two lay members, whose terms had expired. Dr. Loughran is treasurer and Dr. Mambert one of the censors of the Medical Society of the County of Ulster.

MEDICAL SOCIETY OF THE COUNTY OF WYOMING.

REGULAR QUARTERLY MEETING, April 10, 1906, at WARSAW, N. Y.

Dr. De Lancey Rochester, President of the Eighth District Branch, was present and assisted in the reorganization of the Society. New By-laws were adopted. Dr. F. E. Bliss was elected delegate to the Eighth District Branch, meeting in Buffalo.

After the business session a paper on "An Argument for the Early Closure of Cleft Palate" was presented by Dr. Harry R. Trick, of Buffalo.

The following resolutions were adopted:

WHEREAS, The Medical Society of the County of Wyoming has upon many occasions emphatically affirmed its positive conviction in the eminent desirability of having in the State of New York a united medical profession, united in a single State Medical Society, and united in a single County Medical Society, in each of the several counties of the State, and,

WHEREAS, The united medical profession herein contemplated does not presume uniformity of medical belief or practice or preclude the existence of special societies, State or local, for special purposes, but has in mind the more general public purposes, the elevation of medical education, the protection of public health, and such other general purposes for which general medical societies have been found useful, and,

WHEREAS, Assembly Bill No. 1715 has been read in our hearing at this meeting, and,

WHEREAS, we find the provisions of said bill No. 1715 to be in accordance with our best judgment, in harmony with the policy of the State during its entire history, in the interests of the people and of the public health, therefore,

Resolved, That the Medical Society of the County of

Wyoming hereby emphatically endorses Assembly Bill No. 1715 and heartily congratulates the Assembly Committee on Public Health, Hon. Geo. H. Whitney, Chairman, upon its courage, wisdom and foreknowledge shown in the construction and introduction of so important a measure.

Resolved, That the Medical Society of the County of Wyoming commends Assembly Bill No. 1715 to the favorable consideration of the Senators and Members of the County and requests them to use all honorable means to promote its passage.

Resolved, That copies of these resolutions be sent to the said Senators and Members of Assembly, and that copies be offered to the daily press.

New Books.

CURRENTS OF HIGH POTENTIAL. By WILLIAM BENHAM SNOW, M.D. New York, Scientific Authors' Publishing Co., 1905.

This work is devoted to the application of currents of high potential, with variations in current strength and frequency, in applied therapeutics. The point made in this work is the use of currents of great potential with low rates of frequency.

This book presents a general discussion of high currents. There are chapters on the static wave-currents and static induced currents, together with their therapeutic application. Chapters are devoted also to the descriptions and applications of disruptive discharges, convective discharges, currents with vacuum tubes, and high-frequency currents by auto-conduction and auto-condensation methods.

Among the other subjects treated of are the physical effects of the high potential currents and general principles governing their application.

Special therapy is considered under the uses of these currents in surgical conditions; in diseases of the glands and other internal diseases; in nervous diseases; in diseases of the lower bowel and genito-urinary apparatus; in gynecology; in diseases of the ear, nose, throat and eyes, and in diseases of the skin.

This work is well illustrated and gives a good working idea of the use of this form of electricity.

INTERNATIONAL CLINICS. Edited by A. O. J. Kelly, A.M., M.D. Vol. I, Sixteenth Series, 1906. Philadelphia, J. B. Lippincott Company, 1906.

This is one of the best numbers of this work that has yet appeared. To properly review it would require a notice of every article. It is divided into departments on Treatment, Medicine, Surgery, Obstetrics and Gynecology Pathology, and Progress of Medicine during 1905. Each of these departments is made up of chapters by eminent authors, who present a vast amount of practical material. The last department gives a résumé of the important things that have been added to medical knowledge during the past year.

The book is illustrated by a number of colored plates, plates and figures, and can be read with profit by the general practitioner, the student or the specialist.

FOOD AND DIET IN HEALTH AND DISEASE, By ROBERT F. WILLIAMS, M.A., M.D. New York and Philadelphia, Lea Brothers & Company, 1906.

We have many books on food in disease, but the value of this work is greatly enhanced by the first part, which is devoted to food in health. It enters into the chemistry of foods and the requirements of the body. Food values are discussed and illustrated by instructive tables.

The section on food in disease gives an excellent description of the foods for the sick, their preparation and the conditions in which they are applicable. Finally, each disease requiring special foods is taken up and its dietetics discussed.

The whole work is most practical and instructive, and should be widely circulated among practitioners of medicine.

TRANSACTIONS OF THE AMERICAN ELECTRO-THERAPEUTIC ASSOCIATION. Fourteenth Annual Meeting, 1904. New York, A. L. Chatterton & Co., 1905.

This volume contains the papers and transactions of the meeting of this association, held at St. Louis in 1904. There are some eighteen papers, including the address of the President, A. D. Rockwell, on "Electricity in Medicine." One of the most practical papers in this volume is that on "The Association of Physical Methods and Therapeutics," by Wm. Benham Snow, who calls attention to the danger of too narrow specialization, and makes a plea for the employment of the method best suited to the particular case.

X-RAYS IN GENERAL PRACTICE. By A. E. WALTER, Captain I. M. S., Superintendent of the X-Ray Institute in India. London, John Lane, The Bodley Head; New York, John Lane Company, MCMVI.

This is a very practical little book. It describes the best apparatus for the use of the general practitioner, and for the hospital. The author then goes on and gives in detail the uses and application of the X-ray. The book is well illustrated, and the material of observation is taken largely from the Indian service of the English army.

Deaths.

ADOLPH W. BERLE, M.D., died at his home in New York City, March 26; aged 45 years.

HARRY HOYLE BUTTS, M.D., died suddenly at his home in New York City on March 24; aged 41 years.

JOHN CAMPBELL, M.D., a member of the Medical Department of the U. S. Army from 1847, receiving in April, 1904, the rank of Brigadier-General, retired, a veteran of the Mexican War and of the various Indian campaigns, died at his home in Cold Spring, N. Y., December 25, 1905; aged 84 years.

THEOPHILUS R. CARTER, M.D., died at his home in Mount Vernon, N. Y., January 22; aged 42 years.

JOHN DICKENSON CURRAN, M.D., of Binghamton, N. Y., died from typhoid fever at St. Augustine, Fla., April 7; aged 32 years.

SARAH J. McCARN CRAIG, M.D., died at her home in Rochester, N. Y., March 22; aged 74 years.

ROBERT C. DAVIS, M.D., for many years an inspector in the Health Department of New York City, died April 13, of pneumonia, at Roosevelt Hospital; aged 47 years.

JAMES D. EASTON, M.D., died suddenly at his home in Elmira, N. Y., March 26; aged 53 years.

HARRY S. ELLWOOD, M.D., died at his home in Buffalo, N. Y., March 22, after a long illness; aged 67 years.

G. RAY HOFF, M.D., one of the well known young physicians of Utica, and a member of the Medical Society of the County of Oneida, died at his home; aged 39 years.

F. PARK LEWIS, M.D., formerly of Waterville, N. Y., died recently while on his way home from Tucson, Arizona, where he had lived for some time on account of poor health.

WILLIAM J. MAHON, M.D., Surgeon to the Metropolitan Nose and Throat Hospital, died March 27, at the home of his parents in Hartford, Conn.; aged 32 years.

FREDERICK A. SMART, M.D., died at his home in Cobleskill, N. Y., April 14; aged 35 years.

ANDREW B. STEVENS, M.D., the oldest practicing physician of Watertown, N. Y., died at his home in that city, April 7; aged 66 years.

JOHN H. TANNER, M.D., a former practitioner at Spencer, N. Y., died at his home in Harford, N. Y., March 12; aged 70 years.

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Original Articles.

THE THERAPEUTIC VALUE OF ANTI-THYREOIDIN IN THE TREATMENT OF EXOPHTHALMIC GOITER AND KINDRED AFFECTIONS: A PRELIMINARY REPORT.

By **HENRY L. ELSNER, M.D.**,
Professor of Medicine in Syracuse University,
and **JOSEPH R. WISEMAN**,
Medical Student in Syracuse University,
SYRACUSE, N. Y.

IT may be assumed as a result of knowledge gained experimentally and by cautious clinical observations that the functions of the thyroid and parathyroid secretions alone or together include the neutralizing of certain metabolic poisons produced within and by the activity of the organism making their appearance in the circulating blood.

It appears to the writers that in the treatment of conditions due to change in the thyroid and parathyroid bodies it is safe to consider lesions in either one of these bodies, or in both, responsible for the unique but characteristic symptoms which have interested clinicians and pathologists since the days of Parry, Basedow and Graves.

We are particularly anxious in presenting this preliminary report to call attention to the great importance recently given to the parathyroids in the production of symptoms. The experimental feeding with parathyroid has not yet been repeated a sufficient number of times to admit of discussion. Unless we mistake the results of the operative removal of the parathyroids we are justified in concluding that such removal is associated with a train of symptoms, resembling in all respects those of Graves' disease, including the characteristic widening of the palpebral fissure. The removal of these bodies is also followed by decrease in the size of the thyroid gland.

The thyreogenetic theory or that of hyperthyroidisation as represented by Gauthier and Moebius must serve as the justification for the use of the antithyroid extracts or sera for the cure or the relief of the symptoms of exophthalmic goiter and kindred affections.

If we are ready to grant any therapeutic value to antithyroid serum, our interests in all the many theories antagonistic to that of Moebius must cease.

If we ultimately prove that these remedies are curative or ameliorating agents, such results will provide the uncontrovertible proof that excessive and changed secretions of the thyroid or parathyroid bodies, or both, are the pathogenic factors in the causation of the diseased conditions under consideration.

In connection with the report which we are making at this time we wish to record an experience which would tend to prove that a thyroid gland, sufficiently overactive in its secretory function to cause all of the classical symptoms of exophthalmic goiter, may "exhaust itself," as Moebius suggests, producing in turn all of the symptoms of true myxœdema. In this case the early and late diagnoses are so well authenticated that we cannot resist the temptation to bring it to your notice at this time.

Mrs. K—aged 52, the mother of six children, with negative family history, was well until twelve years ago when she developed, in the course of several months all of the symptoms of exophthalmic goiter, including tremor, palpitation, tachycardia, exophthalmos and goiter. At that time she lived in New Jersey near the seashore and was in easy access of her physicians, including some of the best known neurologists and clinicians of New York City. All who saw her were agreed that she was suffering from Graves' disease. Under treatment, which covered a period of several years, she gradually improved, though she never felt perfectly well. After six or seven years it was noted that there was decided reduction in the size of the thyroid gland, that her general appearance was decidedly altered, that her face seemed broadened, that muscular effort was becoming more and more irksome until finally her facial expression became characteristic of fully developed myxœdema. This diagnosis was made by the Mitchells of Philadelphia. She finally found her way to London, where she consulted Professor Ord, whose name is intimately associated with the early study of the pathology and treatment of myxœdema and cretinism. He confirmed the diagnosis of the Mitchells, ordered fifteen grain doses of thyroid extract three times daily, a dose which to us appears excessive, under which treatment, however, the patient rapidly improved and was to all appearances cured. The subsequent history of the case shows that the prolonged discontinuance of thyroid extract is sure to be followed by a return of the symptoms of myxœdema. It has been found that five grain doses two or three times daily are sufficient to prevent a recurrence of symptoms and act as a food which is promptly missed when discontinued.

This case does not stand alone, for Moebius

foresaw the interesting sequence of conditions years ago and designated the transition of Graves' disease into myxœdema as a "Postulat der Vernunft." The relationship is still further discussed by Felix in his thesis, published in Paris in 1896, "On Myxœdema Associated with Basedow's Disease."

The transition of exophthalmic goiter into myxœdema has led to the report of cases by Joffero, Achard, Williams, Putnam, Baldwin, Sollier and Von Jaksch. It would appear that such experiences as I have reported argue in favor of the theory that these two affections may arise from two "vitiated functions of the thyroid gland," as Collins expresses it, differing materially from each other but co-existing in the same subject. It is unfortunate that the positive results obtained by Ballet and Enriquez of Paris by the feeding of dogs with thyroid extract during many months were overlooked or forgotten for a long time. These experimenters found that they were able by such feeding to produce tremor, exophthalmos, tachycardia, emaciation and a symptom complex corresponding exactly with that of exophthalmic goiter.

The treatment of disease by organic extracts inaugurated by Brown-Sequard, and the use of antitoxic sera in the warfare against bacterial intoxications discovered by Von Behring, particularly against diphtheria, led to the idea that exophthalmic goiter might be successfully combated by an antitoxin.

Since an excess of thyroid secretion seems to be the causative factor, a rational therapy would seem to turn itself in one of two directions; either toward a positive limitation of the secretion or a neutralization of the toxins produced. The former may be brought about by the partial resection of the gland, the ligation of nutrient arteries, the injection of destructive chemicals, etc., as practiced by the surgeon. The latter—the neutralization of the poisons secreted—we hope to secure by administering the milk or blood serum of animals which have previously been made myxœdematous by extirpation of the thyroid glands. The theory provides that in the blood of these thyroidectomized animals, the metabolic products or antibodies, normally neutralized by the thyroid secretion, are allowed to accumulate, and, when injected into an organism suffering from Graves' disease, these antibodies are expected to relieve symptoms by neutralizing, whatever excess of thyroid secretion is found present. Experiments leading to the development of these principals were performed during the year 1894 by the above mentioned investigators, Ballet and Enriquez, of Paris. The thyroid gland was removed from dogs, and when the tetany, which usually follows complete thyroidectomy, was at its height the animals were killed. The blood was drawn off, dried, and administered to patients suffering from Graves' disease. The results obtained were encouraging but for some reason the researches

were not continued. Somewhat later Lanz, of Amsterdam, as well as Burghardt and Blumenthal, without a knowledge of the labors of Ballet and Enriquez, worked along the same lines with considerable success.

At the present writing antithyroid extracts appear on the market in various forms. Merck has produced a blood serum called antithyroidin obtained from the blood of thyroidectomized sheep. It is marketed in bottles containing ten cubic centimeters with sufficient carbolic acid for preservation, and is given in doses varying from five-tenths to five grammes per day. Parke, Davis & Company manufacture thyroidectin, a reddish-brown powder, precipitated from the blood of thyroidectomized animals. From five to ten grains are given three times daily in capsules. In Germany some physicians, including Von Leyden, have used Rodagen, a substance precipitated from the milk of thyroidectomized goats, while others have administered the milk itself. These various antithyroid preparations are reported to have similar therapeutic properties, whether given subcutaneously or by mouth. The milk which is less concentrated often causes gastric disturbances when given during long periods.

The Merck antithyroidin, made after Moebius directions, is the only preparation which the writers have used. They have been led to favor this because they find that the blood serum of the sheep is not removed by venesection until a sufficient period, at least six weeks, has lapsed after the removal of the thyroids.

The results which we offer in this preliminary report are based upon the treatment of twelve cases of exophthalmic goiter and a larger number of atypical cases in which the trio of symptoms were not always present.

Growing experiences justify the conclusions that the irregular and atypical cases are more frequent than was formerly supposed, that it is not necessary for purposes of diagnosis to have tachycardia, goiter, exophthalmos, and tremor present at the same time before making the diagnosis of Graves' disease. Among twelve typical cases are two in which the antithyroidin had no appreciable effect. The symptoms were not aggravated by its use, tachycardia remained unchanged. Eight of the cases showed marked improvement. In the majority of these the amelioration of the symptoms followed within two or three days after beginning the use of the serum. In none of these cases was there failure to relieve tachycardia and improve the tone and character of the heart's action.

Two of our twelve cases were diagnosticated— one as acute, the other as an acute exacerbation of a latent Basedow's disease. The symptoms in the first of these cases were found in a woman, thirty-six years of age, unmarried, who, after deep mental emotion and a prolonged period of grief and worry, suddenly developed all of the symptoms of the fully formed disease. The

thyroid was exquisitely tender, the eyes, besides being prominent, were greatly engorged, tachycardia was associated with dyspnoea. In the second case which was seen with Dr. Jacobson, the woman, aged forty-seven, was brought to the hospital for the treatment of bursitis of both knees. While in the hospital she developed the symptoms of acute exophthalmic goiter with slight febrile movement and alarming dyspnoea which were grafted upon a latent Graves' syndrome. The air hunger in this case was painful to witness. The average pulse was usually above 150. The Græffe symptoms was positive, the thyroid exquisitely painful and tender, and there was great discomfort in the precordial region. All symptoms pointed to acute thyroidism. The symptoms of both of these cases yielded promptly to the administration of antithyroidin. In both the tachycardia was first relieved.

In all of the cases in which the use of antithyroidin is followed by improvement, the relief of tachycardia, continuous or paroxysmal, is accompanied by relief of tremor and the improvement of muscle tone.

In one case, continuous tachycardia became paroxysmal after the beginning of antithyroidin treatment and continued so for several weeks, finally yielding. The heart remained tranquil so long as the remedy was continued.

In none of our cases did the goiter entirely disappear. In one-half of the cases, improved by serum, the goiter was reduced in size.

Experiences with anomalous cases have been exceedingly interesting. In those associated with paroxysmal tachycardia this symptom was promptly relieved by the use of the remedy. The improvement, however, was not permanent. The recurrence of paroxysms was only postponed.

In both regular and irregular cases, with the exception of the two in which no improvement was noted, the general condition of the patient as well as the psychic condition was materially improved. Insomnia, a frequent attendant of Graves' disease, was improved as the general condition became more satisfactory.

Another experience, which is noteworthy, we had with an anomalous case in which, besides the symptoms of Graves' disease, there were a large number of hard nodules in the abdominal cavity following the removal of a growth of the vulvovaginal gland, reported by the pathologist to have been benign. In this case the serum treatment caused the goiter to become harder from day to day. Its size was not materially changed. Tachycardia was relieved. Discontinuing the remedy, the goiter resumed its normal consistence.

In the majority of atypical cases the size of the goiter, if present, was more or less reduced by treatment.

We have had no experience with cases associated with dementia or marked melancholia. Lomer reports a case in which there was a psychosis of over two years' duration, including

a period of melancholia and final dementia in which acute exophthalmic goiter developed. Antithyroidin was administered, and, while the patient was not cured, the author reports that the remedy proved surprisingly efficacious in relieving the symptoms of the disease.

It must not be forgotten that occasionally we have met cases in which, without well directed treatment, the disease has proven to be self-limited with ultimate disappearance of all symptoms. Thus one of the writers numbers among his cases one which he saw over twenty-five years ago in which there was no occasion to doubt the diagnosis, the picture of the disease being complete, in which, after twenty-three years, without recurrence of a single one of the former well-pronounced symptoms, the patient presented with a cancerous uterus. Similar experiences have been reported by others.

We are not justified at this time in reporting the complete cure of any one of our cases.

CONCLUSIONS.

1. In all of our cases blood pressure study proved the disease to be one in which, despite the small and thready pulse, the sphygmomanometer showed high pressure. With an improvement in the tone and character of the pulse under treatment the measure of the blood pressure showed no appreciable reduction.

2. In considering the efficacy of antithyroidin we must remember that the profession has of late years given a much more favorable prognosis than formerly in exophthalmic goiter, that both typical and atypical cases show marked tendency to remission with comparative comfort during many years, and that acute exacerbations of symptoms are not infrequent.

Dr. Willy Meyer, of New York, who has had some experience with antithyroidin, in a letter recently received, says:

"I will say this much, however, that I was greatly pleased and surprised at the results obtained with the drug. In both patients many of the symptoms were markedly improved, especially the tachycardia and the pronounced tremor. Less influenced by the treatment was the size of the gland, and still less, if at all, the exophthalmos. However, both patients were so much pleased with the effect of the treatment that they did not feel like having an operation added, that might perhaps have improved also the exophthalmos.

"Personally I shall certainly continue the use of antithyroidin and consider it clearly indicated in those seemingly almost hopeless cases with fever and such debility that prompt operation is out of the question. I am sure that many a case may be tided over by the treatment until such time that surgical help may be suggested, if necessary."

3. We are positive that antithyroidin is a remedy which can be used for the relief of the annoying and alarming symptoms of exophthalmic goiter in typical and atypical cases. The greatest improvement is found in the relief of the tachycardia, precordial distress and tremor. This improvement is hastened by rest in bed and close attention to diet. *Rest in bed and diet*

alone, without the administration of antithyroidin, will not lead to the same degree of cardiac comfort.

4. Improvement of one or more of the symptoms of the disease is likely to follow within from three to seven days after beginning the use of the remedy. If there is no improvement of symptoms after from three to four weeks of administration, the chances are against ultimate benefit from the prolonged use of the serum. In serious cases it will be necessary to continue the treatment during many months. In all cases after the disappearance of the subjective symptoms, it will be wise to administer antithyroidin during periods varying from four to eight weeks at intervals of two or three months.

5. Cases without marked goiter with slight exophthalmos, tremor and the Græffe symptom have yielded most readily to the antithyroidin treatment. The enlarged thyroid has become perceptibly smaller, but has not returned to the normal size.

6. Exophthalmos, in our experience, continues to be the most rebellious symptom, never yielding entirely to antithyroidin treatment.

7. Nervous symptoms usually yield as the heart becomes slower. The many fears which take possession of these patients are also relieved at the same time.

8. The majority of our patients have increased in weight. Patients who have taken antithyroidin during a long period feel when the serum is discontinued as if they had been robbed of a food to which they are entitled, and return to its use with confidence and pleasure. This statement I have received from a number of our patients while preparing this paper, in answer to inquiry as to their present condition. One of our typical cases has taken in the neighborhood of forty bottles of the serum.

9. In no case have we had occasion to regret the trial of antithyroidin. It has always proved itself harmless. It may be given during pregnancy without fear of injuring the mother or foetus. Hypertrophied and dilated hearts offer no counter-indication to its administration.

METHOD OF ADMINISTERING ANTITHYREOIDIN.

We have been in the habit of administering the serum night and morning in doses of from fifteen to thirty minims. In mild cases the initial dose was from ten to fifteen minims. The serum may be given in raspberry syrup, may be taken in water or the elixir of orange peel. The Germans prefer a mild wine as a vehicle for its administration. In most of our cases, after having administered the serum during several weeks, we have discontinued its use for a day or two at a time.

In patients who show no benefit from the smaller doses we have increased the dose, occasionally giving from forty to sixty minims. We have never used the remedy hypodermically.

Clinical experience argues against permanence

of cure in chronic cases at the present time. The number of cases observed is too small to justify definite statements.

Sidney Kuh, of Chicago, reports the case of a woman who has been without serum for two and one-half years and continues in excellent health.

Hempel speaks of a woman who, four months after the discontinuation of treatment, was able to take long walks and even climb mountains without experiencing palpitation.

With Leyden, Moebius, and some of the best-known clinicians of Germany, enthusiastic in their praises of the therapeutic value of antithyroidin, Dürig, speaking of its effect as "eklatant," we are justified at least in giving the serum a thorough trial, postponing our final judgment, however, until a sufficient time has lapsed to reach conclusions after a large number of cases have been treated. Let those who use the remedy publish their results and experiences.

Our own experiences and those of others included in the accompanying bibliography encourage us to look with hopeful anticipation to the future and in believing that the treatment with any of the antithyroids is not an ephemeral suggestion, and that it may ultimately prove to be a rational therapeutic method. At present we can only admit its value in relieving symptoms, and are satisfied that its administration is not followed by injurious results.

BIBLIOGRAPHY.

- Adam. Exophthalmos mit Möhusschen Antithyroidin serum behandelt; *Deutsche med. Wchnschr.*, Leipz. u. Berl., 1903, XXIX, Ver.-Beil., 252.
- Ball (M. V.). A case of exophthalmic goiter with acute symptoms and death, probably caused by the use of thyroid extract; *Jour. Am. Med. Assoc.*, Chicago, 1905, XLIV, 1448.
- Barker, Moyer, Kuh, and Mix. Symposium on Exophthalmic Goiter, joint meeting of the Chicago Neurological and Medical Societies; *N. Y. Medical News*, Apr. 29, 1905.
- Boerma. Ein Beitrag zur therapeutischen Verwendung des Antithyroidins; *Ärztliche Rundschau*, 1905, No. 1.
- Burghart and Blumenthal. Ueber die spezifische Behandlung des Morbus Basedowii. *Therap. d. Gegenw.*; Berl. u. Wien., 1903, n. F., V, 337-342.
- Cestan (E.). Goitre Basedowifé; opothérapie thyroïdienne, *Toulouse méd.*, 1904, 2. s., VI, 181-183.
- Collins (J.) and Robbins (F.). Exophthalmic goitre; with a brief historical review and resumé of the theories concerning its etiology; deductions based on observation and study of 100 consecutive cases; *Post-Graduate*, N. Y., 1905, XX, 470-509, 3 pl.
- Dürig. Ein Beitrag zur Serumbehandlung des Morbus Basedowii; *Münch. med. Wochenschr.*, 1905, No. 18.
- Fái (N.). Ueber die klimatische und organotherapeutische Behandlung des Morbus Basedowii; *Ungar. med. Presse*, Budapest, 1904, IV, 321-323.
- Hempel. Ein Beitrag zur Behandlung des Morbus Basedowii mit Antithyroidin serum (Moebius); *Münchener Medizinische Wochenschrift*, Jan. 3, 1905.
- Indemans. Het Antithyroidine (Moebius) bij de Behandeling van Morbus Basedowii; *Tijdschrift voor Geneeskunde*, 1904, II, No. 17. Ref.: *Deutsche Med. Ztg.*, 1905, No. 1.
- Josionek. Das Antithyroidin Moebius bei Morbus Basedowii; *Med. Woche*, 1904, No. 37.
- Kuhnemann (W.). Ueber die Behandlung des Morbus Basedowii mit Rodagen. *Münch. med. Wochenschr.*, 1904, LI, 438.
- Lanz (O.). Weitere Mitteilung über serotherapeutische Behandlung des Morbus Basedowii; *Münch. med. Wchnschr.*, 1903, L, 149-149.
- Lépine (J.). Séroton antithyroidien, *Lyon méd.*; 1903, CI, 809-812.
- Lomer. Antithyroidin-Moebius bei Basedowscher Krankheit mit Psychose (Aus der Provinzial Irrenanstalt bei Neustadt in Holstein); *Münch. med. Wochenschr.*, 1905, No. 18.
- MacCallum (W. G.). Parathyroid therapy and the relation of the parathyroid gland to exophthalmic goiter. On the production of specific cytolytic sera for thyroid and parathyroid, with observations on the physiology and pathology of the parathyroid gland, especially in its relation to exophthalmic goiter; *Tr. Assoc. Am. Physicians*, Phila., 1903, XVIII, 35-53. Also: *Med. News*, N. Y., 1903, LXXXIII, 820-828.

Moebius. Ueber das Antithyreoidin; *Munch. Med. Wochenschr.*, 1903, No. 4.
 Murray (G. R.). Note on the serum treatment of exophthalmic goitre; *Lancet*, Lond., 1904 II, 583.
 Payne (E. M.). Six cases of goitre, one associated with an attack of acute myxœdema and five successfully treated with thyroid extract; *Brit. Med. Jour.*, Lond., 1903, I, 660-662.
 Pineles. Zur Physiologie und Pathologie der Schilddrüse und der Epithelkörperchen beim Menschen; *Wien. klin. Wchnschr.*, 1904, XVII, 517.
 Roscnfeld. Ueber Anthyreoidinserum; *Allgem. med. Zentralztg.*, 1903, No. 8, p. 166.
 Rydel (A.). Zur Rodagen-Behandlung der Basedowschen Krankheit; *Charité-Ann.*, Berl., 1903, XXVII, 601-609.
 Schultes. Zur Antithyreoidinbehandlung der Basedowschen Krankheit; *Munch. med. Wochenschr.*, 1902, No. 20.
 Sigel (J.). Rodagen bei Morbus Basedowii; *Berl. klin. Wochenschr.*, 1904, XLI.
 Stephens (William Robert). Ueber die spezifische Therapie des Morbus Basedowii; Berlin, 1903, O. Francke, 44 p. 80.
 Thienger. Einige Beobachtungen über Moebius Antithyreoidin; *Münchener Medizinische Wochenschrift*, Jan. 3, 1905.
 Von Leyden. Ueber Organtherapie bei Morbus Basedowii; *Medizinische Klinik*, Dec. 1, 1904.
 Walsh (J. L.). Graves' disease and parathyroid therapy; *Am. Med.*, Phila., 1905, IX, 815.
 Warden (A. A.). A serum for exophthalmic goitre; *Lancet*, Lond., 1903, II, 910.

SOME OBSERVATIONS UPON THE REMOVAL OF THE PROSTATE FOR THE CURE OF PROSTATIC DYSURIA.*

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IN a paper published by me in the *Annals of Surgery* for April, 1905, I attempted to discuss somewhat fully the methods and results of prostatectomy for the relief of prostatic dysuria; and in a paper which I read before the Medical Society of Greater New York in June, 1905, I discussed the same subject, but more briefly. The conclusions which I presented may be summarized as follows:

(1) That the removal of the whole or the greater part of the enlarged prostate is a feasible and reasonably safe operation. (2) That, with rare exceptions, complete healing of the operative wound takes place without permanent fistula or stricture resulting. (3) That, in the majority of cases, normal power to retain and to avoid the urine is regained. (4) That these results have followed different methods of operative technique. (5) That the degenerations incident to advanced years and the presence of pre-existing disease of the urinary tract, and the exhaustion produced by long suffering, loss of sleep and the absorption of septic products previous to operation, in many cases, add a special gravity to operative interference in such cases, and entail a certain hazard of mortality even in the hands of the most experienced whatever the special method of operative technique employed, a mortality which at present may be estimated at from 5 to 10 per cent.

In the cases which do recover as the result of the special conditions presented by particular cases, certain disabilities more or less pronounced and continued, are not infrequent accompaniments or sequæ of these operations. These, in the order of their frequency, are: as (a) sexual

impotence; (b) epididymitis and orchitis; (c) partial urinary incontinence; (d) fistulæ.

Nevertheless, even with these occasional drawbacks, the fulfillment of the supreme indication, viz.: the removal of the urinary obstruction is a sufficient advantage to render tolerable and of but little account the lesser evils. My own experience, agreeing with the published results of many other operators during the past few years, was that, in the great majority of cases that had been subjected to total prostatectomy, the bladder had regained its ability to empty itself spontaneously; that this restoration of function had been permanent, and that the quality of the urine had become fairly normal; while, coincidentally, the general health of the patient had greatly improved.

In the remaining cases, in which the result was less perfect, in a very large proportion still a very marked lessening of the obstructive symptoms had resulted; the amount of residual urine had decreased; the intensity of the cystitis had diminished; the frequency with which a catheter was required had been lessened; while the facility of its introduction had been increased.

In consenting to bring this subject again to attention in the opening of a discussion thereon, it is not my intention to go in any detail into the phases of the subject which have been so fully discussed in the past, but simply to briefly state what added experience of another year of work in this field may have contributed to either a modification of previous views or to their corroboration.

The conclusions which I have just repeated have in no wise been shaken by the experience of another year. Of the thirty patients which formed the basis of my personal report in my last communication, 5 of whom died as the result of the operation, leaving 25 to be accounted for, I have seen or heard of most since my last report; 2 of these have since died as the result of progressive renal disease; one other had died about one year after operation, from pneumonia.

In the very nature of the case, a considerable mortality from ordinary causes must rapidly diminish the number of survivors; but up to the present time there still remains so large a proportion of men who have been restored to comfort and usefulness, which they continue to enjoy, even in their great age, that the series of operations is unquestionably properly the source of profound satisfaction from a surgical standpoint.

Of the total number operated upon only two still have to use a catheter. Thus, after the expiration of periods varying from one to four years after operation, 20 out of the 30 men who were subjected to prostatectomy remain in good health, free from urinary obstruction. Some of the most satisfactory cases have been those who were the most advanced in age.

There is an unusual feature connected with one of these cases, which is worthy of record. A

*Read before the American Therapeutic Society, May 4, 1906.

man 73 years of age, quite feeble, having been much reduced by prolonged pain and sepsis, and who six weeks before coming under my care had been temporarily relieved at another hospital by perineal cystotomy, through which a catheter was introduced into the bladder and tied in, was subjected to typical prostatectomy by me. The operation wound slowly healed, but finally closed with the exception of a small sinus, with which he was discharged from the hospital; after going home the fistula persisted, urination became more painful and was accompanied with blood, as a result of which he applied for relief at the New Haven Hospital, where the bladder was opened again through the perineum, and in the bladder was found a 4-inch-long piece of the distal end of a soft rubber catheter, heavily encrusted with phosphates. After the removal of this he rapidly improved, as I was informed at the time, but I have received no recent information as to his later condition.

Just when and where this piece of catheter got into the bladder no one knows. It is perfectly possible for it to have been in the bladder and not have been discovered by me at the time of my operation. It is not impossible that the accident may have occurred after the prostatectomy in the course of the after-cares which were conducted by the hospital internes and orderlies; and it is possible that it may have been introduced in the course of some manipulation to which he may have been subjected after leaving the hospital, for at the time of his discharge from the hospital he was entirely free from any symptoms suggesting the presence of a foreign body in his bladder. I make the record as of interest in the possible complications which may attend the after-history of a case of prostatectomy.

In all the cases which formed the basis of my previous papers, the method of approach to the prostate had been through the perineum, with but one exception. During the year which has elapsed since the close of the period included in my previous statistical report, I have had occasion to remove the prostate for dysuria in six additional instances, the patients being aged respectively, 51, 63, 66, 73, 77 and 86 years. In only one of these cases have I adopted the perineal route; in the remaining five the suprapubic transvesical route has been employed. In the perineal case, 77 years of age, who was operated upon July 3, 1905, the operation was prolonged by reason of the fibrotic character of the perineal tissues, which made exposure of the prostate difficult; and by reason of the dense fibrotic degeneration of the prostate itself, which made enucleation impossible and required excision piecemeal by the scissors. After the first week, during which the re-action seemed to be satisfactory, a progressive general *asthema* developed which was aggravated by a term of excessive heat which prevailed at that time, and death supervened on the twelfth day after the operation.

Of the five cases submitted to the suprapubic method, one, a man 73 years of age, and hemiplegic, developed a double hypostatic pneumonia on the fourth day, which terminated in death one week after the operation. The after-course in the other cases was without incident, and has resulted in a satisfactory relief of the urinary disability.

The case of the man 86 years of age is especially noteworthy. For 30 years he had obstructive symptoms, for the last four years of which he had a greatly distended bladder which relieved itself by a constant overflow stillidium; the amount of residual urine was determined to be 65 fluid ounces. He had become greatly enfeebled and emaciated. Upon July 4, 1905, the prostate was enucleated through a suprapubic incision, the entire time required for the enucleation being ten minutes. He made a slow but uneventful convalescence. At the end of three months the suprapubic fistula had closed, and the atonic bladder had contracted down to a capacity of eight ounces. He was able to empty his bladder normally. He steadily improved thereafter in his general health, has gained in weight and strength, and is now in apparent robust health at the age of 87 years.

I find that of these present year cases there is an equal division as to the nature of the over-growth of the prostate; in three of them the over-growth was of the adenomatous type, being easily enucleable; three of them were of the fibrotic type. The difficulty experienced in the extirpation of one of these through the perineum has already been referred to; the other two cases were operated upon by the suprapubic route and in each the enucleation was found to be exceedingly difficult, although, by persistence, final success crowned the effort in each case, and the subsequent progress of the healing was highly satisfactory.

In the selection of cases for prostatectomy it would seem that, in controlling the decision from the standpoint of prognosis, a very high importance must attach to the character of the tissue changes in the prostate. The massive adenomatous growths are readily reached whether through the bladder or from the perineum; they may easily and quickly be enucleated; their removal is likely to be attended with a minimum of hemorrhage, with a minimum of etherization, and hence with a minimum of shock. Cases of this kind may generally be attacked by the surgeon with every expectation of a happy outcome.

On the other hand, those cases in which the urinary obstruction is due to the presence of an indurated fibrotic prostate of dense consistence and of comparatively moderate enlargement, present an operative condition the entire opposite of the precedingly described class. The change in the prostate is simply a part of the general tendency to fibrosis which is found in the rest of the urinary tract and in which the periprostatic tissues also share. Every step of the operation is

difficult and unsatisfactory and requires extreme caution, the use of knife and scissors with great care step by step; or, in cases of the transvesical attack, slow and unsatisfactory laceration of tissue by the enucleating finger. Hemorrhage is likely to be troublesome; the amount of time required and the amount of anæsthetic is naturally increased, and the possibility of operative mischance is multiplied, while much shock is unavoidable.

On the other hand, facility of catheterization is much less frequently interfered with, I think, in these cases of fibrotic prostate, than in cases of the massive adenomatous prostate; in the latter case the urinary channel is more or less tortuous and likely to be obstructed by projecting intravesical masses. It is in these cases, especially, that the difficulties of catheterization are most frequently experienced.

The fibrotic prostate is a more rigid prostate that does not readily dilate for the ready emission of the contents of the bladder, and the expulsive force of the bladder is at the same lessened by a similar degeneration in its own walls. The dysuria may be spoken of as of adynamic origin in the latter case, while in the former case the dysuria is obstructive in its origin. I am inclined to think, also, that in these cases of fibrosis of the genito-urinary tract, there is a diminished susceptibility to ordinary infection, so that the dangers of cystitis from the use of the catheter are less than in the cases where there is an obstructive adenomatous prostate. Certainly the liability to hemorrhage and the accumulation of clots in the bladder from injury produced by a catheter is very much less. If I am correct in these observations, a surgeon may very properly be less urgent in his recommendation of an attempt to extirpate the prostate in cases of fibrosis of the prostate than in cases of adenomatous enlargement of it.

There is, however, a very considerable class in which the over-growth in the prostate partakes of both the fibrous over-growth and the adenomatous enlargement. I know of no way to distinguish them from the pure adenomatous type, of moderate development, before they have been laid bare by the operative procedure, and in dealing with this middle class of obstructions a varying degree of facility of manipulation and freedom from unpleasant complications will attend the effort, according to the preponderance of one or the other, the fibrotic or the adenomatous elements of the particular case.

The question as to the best method of reaching the prostate which has become a source of obstruction to the escape of the urine still remains, and probably will always remain, a source of difference of opinion among surgeons. The choice of method will depend not only upon a full comprehension of the nature of the growth, of the readiness with which in its different conditions it may yield to attempts at removal, and of the anatomical relations which environ it and make it more or less accessible, and of the neces-

sities for after-treatment whereby post-operative dangers may be guarded against and ultimate perfection of cure may be secured, but also by the personal familiarity with, and manipulative dexterity in, one method or the other acquired by the previous experience and training of the operator.

The problem which the surgeon has to solve is not only to thoroughly remove the obstruction, but to do it without undue prolongation of manipulation, with as little loss of blood as possible, and with a minimum amount of injury to adjacent structures.

Three methods of attack are employed by as many different groups of surgeons; (1) through the bladder by means of a suprapubic section; (2) by the perineum by a limited longitudinal median incision carried into the capsule of the prostate; in both of these methods enucleation of prostatic masses is effected by finger-tip dissection unaided by eye-sight; (3) through the perineum through a free transversely-curved incision through which the prostate is fully exposed, followed by a systematic incision into its surface and subsequent enucleation largely under the guidance of the eye.

In the first two methods named, the amount of time required in the manipulation, in favorable cases, is distinctly less, and it is conceivable that in some cases this indication of quickness of execution may determine the choice. Cases in which a suprapubic opening has already been made for the removal of calculi or clots, or for bladder drainage, will naturally invite further procedures through the bladder. Cases with massive adenomatous hypertrophy, and in which the use of a general anæsthetic is contra-indicated, as in certain renal and cardiac conditions, but in which operation may still be justifiable under spinal cocainization, may better be attacked through the bladder.

In the instances in which I have approached the prostate through the bladder, I have been well pleased with the control over the region of operation which could be secured by the introduction of the gloved finger of the left hand into the rectum, making counter-pressure against the prostate. The enucleating finger of the right hand in the bladder is able to appreciate in this way very sensibly and satisfactorily the progress which it makes in the enucleation of the prostate, while the counter pressure of the finger in the rectum both serves to steady the tissue that is being attacked and is a guide to the enucleating finger as to the depth to which the enucleation is being carried.

I must confess that I undertook this method with a decided prejudice against it; this prejudice being based largely, I think, upon fatalities which had attended earlier attacks of a partial nature upon the prostate through the bladder. But experience in the limited number of cases which I have reported has been sufficient to demonstrate to me that a very considerable ad-

vantage in the way of obtaining an intelligent direction of the work of enucleation can be secured by this method of conjoined rectal and intravesical manipulation, and I am now inclined to give a larger field for the suprapubic route than I have done in my earlier studies.

In the majority of cases, however, it is probable that some method of attack from the perineum will continue to be the method of choice. I am inclined to think that for the best fulfillment of all the operative indications when the perineal route is adopted, it is desirable that a free exposure of the gland by a suitable generous perineal incision and retraction of overlying parts should be made. The gland, after it has been exposed, should be brought down as much as possible into the superficial operative field by the use of suitable tractors, and the removal of the obstructing masses should be carefully and systematically effected, under the guidance of the eye as much as possible. This is simply an application of that tenet of general surgery which demands the adequate exposure of an affected part as the first step of any attack upon it.

The question as to whether the primary incision should be a vertical one or a transverse one is not altogether an unimportant one. It may properly be determined by the consideration of the anatomical arrangements of the perineal structures together with an appreciation of the character of the interference which the surgeon is proposing to make. A review of the relations of the bulb of the corpus spongiosum to the anterior wall of the rectum and the manner in which the membranous urethra is overlaid by and connected with these structures, through the agency particularly of the recto-urethralis muscle which not only binds the parts together but stands as a sentinel to guard the gateway of the space between the prostate and the rectum, should be sufficient to demonstrate that this recto-urethralis muscle, the deep layer of the deep perineal fascia of the English anatomists, is the anatomical key to the surgical situation, and that an approach to it can be far more surely and freely and safely secured by a transverse incision than by a longitudinal one. It is for this reason, therefore, that those methods of opening the perineum which are based upon a primary transverse incision have seemed to me to be the best.

As has well been pointed out by the French surgeons, when the recto-urethral fibres have been detached from the membranous urethra, the membranous urethra having been a guide to be closely hugged in the dissection, the anterior wall of the rectum falls away from in front of the prostate, and the recto-prostatic space is exposed, in which the lower and anterior surface of the prostate is quickly uncovered. If now the prostatic urethra be freely opened by a longitudinal incision at the apex of the prostate, and through such urethral opening there

be passed into the bladder a suitable tractor, such as the metallic branched tractor of Young, or the inflatable bulb of Syms, the prostate can be brought down fairly well to view and under control, may be made the subject of such more or less extensive removal, as the judgment of the surgeon may determine. Such a method of procedure seems to me to answer most freely and satisfactorily the various operative indications that exist in perineal prostatectomy.

TREATMENT OF INOPERABLE CONDITIONS OF THE PROSTATE.*

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IN the recent voluminous literature upon senile conditions of the prostate gland, while the several direct operative procedures upon the gland itself are carefully described and endless cases reported, but little prominence is given to those cases where removal of the gland is contraindicated.

We are told that in favorable cases the mortality rate should be low, also that results should be good after operation in selected cases; this latter advice is of little help to the patient, in a condition that is unfavorable for operation, or to his medical man. We must do something more than catheterize these cases to let them finally die of ascending infection or some constitutional condition aggravated by their urinary obstruction.

Several papers have recently appeared in the medical journals bearing title "The Non Operative Treatment of Prostatic Hypertrophy." I desire at once to distinguish this essay from that class. There can be no such thing as treatment of the enlarged prostate itself other than operative. The bladder symptoms can be palliated and some method of drainage of the bladder resorted to in certain cases, other than by the urethra, but the enlarged gland cannot be reduced in size or changed in position.

Before considering methods of procedure in cases in which operation is contraindicated, I wish to state that I am positively in favor of the removal of the gland whenever possible.

The physician who advises an elderly patient, about to begin catheter life, that this method of relief may be continued and operation postponed until a more positive obstruction is present, is giving very poor advice.

In these cases the old man, who has used a catheter a number of years, comes at last to unavoidable operation, with badly crippled bladder and kidneys, frequently unable to survive the anesthetic.

It is because of the hesitancy that has existed in past years, and exists even to-day with many

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medical men, to subject their prostatics to early operation as long as catheter life is possible, that finally makes, in many cases, any surgical intervention impossible and really shortens the patient's life.

The man, moderately advanced in years, who finds increasing difficulty in emptying his bladder, due to an enlarged prostate, and is finally unable to relieve himself, except by catheter, should be operated on at once, and not allowed to continue catheter life at all. At this stage he is at his best for operation with perhaps little or no cystitis and fairly good kidneys. At this time we can promise a good result in the majority of cases.

Any one interested in this subject by comparing the results of prostatic surgery of ten years ago with the comparatively low mortality rate of to-day must realize that it is as much due to early operation now usually advised, at a time when the patient really needs positive relief and can stand the operative shock, anesthesia, etc., as it is to improved technic.

The danger of infection is also a very great objection to the routine use of the catheter by the patient.

Admitting that all cases should be operated if possible, when about to begin catheter life, what can we do for those cases where radical operative procedures are for some reason contraindicated?

Many prostatics, from the continued annoyance during the entire twenty-four hours, of an active cystitis with the necessary loss of rest, are much relieved and finally able to stand some operation upon the gland itself if the bladder is first drained, the two stage operation as it is called.

The preliminary drainage of the bladder can be done without general anesthesia, either by the perineal or supra-pubic route, the former if there is fair chance of the later removal of the prostate.

The subsequent thorough drainage and irrigation of the bladder has quite a remarkable effect in many cases. The old man is able to get proper rest at night, and in the course of a week or ten days to come to operation with a much greater chance of a good result than would have been possible before the preliminary drainage.

In the interval between the two operations the bladder should be irrigated two or three times daily with hot boracic acid solution, followed by a 1 to 10,000 solution of silver nitrate.

Cases in which there is little hope of removing the prostate on account of the poor general health of the patient, his inability to stand an anesthetic, etc., permanent supra-pubic drainage offers much better results than any attempt at removal of the obstruction.

It has been used but little in these cases, most surgeons preferring to take the chance of the loss of their patient either by some form of prostaticectomy or by the more rapid Bottini operation. Where some form of permanent bladder drainage seems desirable the supra-pubic route has several advantages over the perineal. By the

latter some form of permanent tube is necessary to keep the wound open, and this tube, which must be of metal or hard rubber, is more or less uncomfortable to the patient, and it is difficult to prevent the constant dribbling of urine.

By the supra-pubic method the large soft rubber tube can be removed on the second day and the fistula will remain open. In many cases no obturator is necessary, the patient being able to hold his urine for two hours or longer, when he can lie on the side and pass it with little wetting of his clothing.

If there is a tendency to dribbling some form of obturator may be worn without discomfort.

This form of treatment is also applicable to cases where the bladder tone is lost from whatever cause. Courtney¹ has called attention to the many unnecessary operations that are done to relieve symptoms supposedly due to vesical calculi or enlarged prostate where the patient was later found to be suffering from locomotor ataxia. He lays particular stress upon the fact that the bladder reflex may be the first one affected in this disease and thus make the diagnosis particularly difficult.

Other conditions that may contraindicate operation upon the prostate are: Advanced disease of the kidneys, heart, or indeed any condition where shock and anesthesia would greatly endanger the patient's life.

The following cases are reported as illustrative of conditions contraindicating operation.

CASE I.—W. B., aged 74 years, May 23, 1904. Has not voided urine naturally for the past three years. Has no other bladder symptoms, and the urine is clear. Uses catheter about every three or four hours during the day and twice at night. The prostate is large and very hard, particularly the right lobe. The rubber catheter, stone searcher and cystoscope pass easily into the bladder. Urine contains small amount of albumen, pus and epithelium. Few red blood cells. Large number of hyaline casts. No typical renal epithelium could be found. Bladder capacity 450 c. c. plus. Cystoscopy showed a pale, apparently toneless bladder. There was nothing to suggest an enlarged third lobe.

The patient's general condition was poor, he had a marked mitral regurgitation, and considerable oedema of the lower extremities. He was treated with urotropin, bladder washings, tonics and saline cathartics. Although this patient came to my office for many months, and was able to make the trip alone from a distant part of the city until just prior to his death, at no time could I feel justified in advising an operation upon his prostate. It is possible that Chetwood's operation might have benefited him, but I cannot help feeling that even this rapid procedure would have shortened his life. He refused supra-pubic drainage and died of uremia January 18, 1905.

CASE II.—J. L., aged 55 years, came into my service at the Williamsburgh Hospital, September 17, 1905. Has had difficulty in emptying his bladder for a number of years. During urination the flow suddenly ceases and then continues again. Urinates three times at night and during the day about every two hours. Desire to urinate constantly present. Denies syphilis. Had gonorrhoea thirty-five years ago. Residual urine 400 c. c. Searched for stone; none found. Prostate gland about normal for his age. His reflexes were totally absent. He swayed when standing with closed eyes, and his pupils did not react to light. He was referred to a neurologist for treatment. The diagnosis was simple in

this case and yet he was told by the physician who sent him to the hospital, that he had stone in the bladder and enlarged prostate.

CASE III.—H. E. W., farmer, aged 59 years, entered Dr. W. H. Ross's sanatorium at Brentwood, L. I., Feb. 10, 1906. For the previous two weeks he had suffered from almost complete retention, voiding a few drachms of urine every fifteen to thirty minutes with great effort. His first noticeable difficulty began in October, 1905. His lower extremities, hands and penis were markedly oedematous; face and lips blue, and he suffered from almost constant dyspnoea. He drank large quantities of water. He had a very irritable, irregular heart, but Dr. Ross and his assistant, Dr. Durand, were never able to determine that any valvular lesion was present.

The urine contained a few hyaline casts, but no albumen or sugar. During the first week of treatment, which consisted of active saline catharsis and some little stimulation, there was much improvement in his general condition, but it was necessary to catheterize him several times in the twenty-four hours.

When I saw him one week later his prostate was noticeably enlarged and hard, and interfered considerably with the introduction of a gum elastic Coudé catheter, which, however, was the instrument used.

The above treatment with the addition of a urinary antiseptic, bladder washings with boracic acid and silver nitrate solution, was continued until March 23d, when his condition, having improved as much as it seemed possible to hope for, a perineal prostatectomy was attempted. Although ether was given very carefully by Dr. H. C. Anderson, the patient frequently stopped breathing and his color was constantly bad. It being impossible to proceed with the prostatectomy, perineal drainage was done, and a 30 French double-eyed rectal tube sewed in. His condition improved immediately, and he was able to get a fair amount of sleep. During the following two weeks he had more or less dyspnoea, and his extremities were water-logged one day and clear the next.

On April 6, operation was again attempted with the same result. Supra-pubic drainage was then done under cocaine and the perineal tube removed.

The new tube was removed on the second day and he was then able to retain his urine for two hours. He now voids it without difficulty through the supra-pubic fistula. He will wear a belt and obturator when the wound is completely healed, as there is occasional dribbling.

Prostatectomy may be possible after some months if his general health continues to improve.

REFERENCES.

¹ Courtney, J. W.: "Locomotor Ataxia and the Urologist." *American Journal of Urology*, November, 1905, page 41.

THE AUTOPSY AS A JUDGE OF OUR BEDSIDE CONCLUSIONS.*

Illustrated by a Case of Fatty Heart, Mistaken
for Valvular Disease.

By BOND STOW, M.D.,

Pathologist to the Metropolitan Hospital, Blackwells Island,
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NEW YORK.

THE writer has often been asked the question why American physicians feel a necessity to go abroad, particularly to Germany, to study medicine. It is primarily due to the fact that in the large general hospitals of cities like Vienna, Berlin, Munich and Dresden, in every case of death, the bedside conclusions must be verified or disproven by a rigid and scientific autopsy.

* Read before the Section on Medicine of the New York Academy of Medicine, Jan. 17, 1906.

The result of this is that clinical medicine in Germany must of necessity rest upon the firm foundation of pathological anatomy; and, as a consequence, great care and exactitude are exercised in the study of diagnosis. The student there has abundant daily opportunity of comparing the data of life and death, thus making a complete study of his cases. Such an advantage cannot be overestimated. In this country, owing to a comparative scarcity of clinical autopsies, due to an unfortunately antagonistic sentiment and prejudice on the part of the people, the clinician too often permits himself to formulate bedside conclusions more or less speculative in nature that he would hesitate to make if he knew that his work had to stand the crucial test of a relentless autopsy. It is indeed a misfortune that such a sentiment handicaps the medical profession of America. What a difference there would be if, for example, the sentiment of the people were educated to the point that they would demand an autopsy in every case of death.

How much this would stimulate our profession to even greater efforts than they are putting forth to-day. How soon the humiliating disclosures that would follow would rid society of the self-advertising quack and his obnoxious nostrums and the many varieties of those unfortunate and misguided religious fanatics through whose influence many lives are yearly sacrificed by their attempts to defy natural law and order. Only the most worthy could withstand the exposures as would be evidenced by the operation of that most inexorable of all laws, the law of the survival of the fittest.

When public sentiment is educated to such a degree who but the laity will become the beneficiary? It surely does seem reasonable and just that laws should be passed that would compel a rigid autopsy at least in all cases dying in our charity hospitals. If such were the case, I have no hesitancy in predicting that our hospital services would be much more carefully attended to, and the sick poor would receive much greater benefit than they do to-day, for the ever-present possibility of a coming autopsy to pass in critical review the bedside conclusions would necessarily effect such a reform. Certainly such a privilege granted the profession is little enough compensation for its unselfish and untiring efforts in the cause of charity.

In private practice public sentiment should be educated to the point of demanding an autopsy where death is shrouded in mystery or where the morbid phenomena in life were of such a character as to defy analysis and an explanation free from speculation. This almost seems so self-evident as to amount to a positive duty, for surely the living are entitled to the secrets of the dead when such can and would prove of lasting benefit in elucidating morbid phenomena in those who

live on, and thus point out the way that would relieve human suffering and prolong human life.

It seems strange that here in enlightened America where, in every other department of human activity thought has emancipated itself so nobly from the shackles of prejudice and ignorance, in this matter of the autopsy, which is of such vital importance to the living, it still should allow itself to be so blinded to its own best interests by a mere sentiment, both false and dangerous.

The sole object of the autopsy is the discovery of the truth, and at all times the contentions at the post-mortem table must be the impartial, impersonal, unearthing of the exact pathological processes involved, and the frank, honest study of these in conjunction with all the symptoms presented in life, critically comparing the two and evolving therefrom *ways* and *means* that in the future shall lead to more accurate bedside conclusions. Thus would posterity be benefited and our revered dead render the living its *sole* and *invaluable* service.

The following case occurred in my private course on physical diagnosis to the house staff of the Metropolitan Hospital, New York City, and well illustrates the value of the autopsy as a judge of our bedside conclusions. The writer invites a critical comparison of the clinical and post-mortem records as the error in diagnosis from a clinical standpoint would seem justifiable, yet the inexorable autopsy shows how uncertain and wrong our understanding of the best laid clinical diagnosis may prove to be:

Anamnesis:

J. D., male, admitted to Metropolitan Hospital, New York City, on October 19, 1904; U. S., age, 61; height, five feet eleven inches; weight, 245 pounds; single; occupation, laborer.

Family history: One sister died of phthisis pulmonalis. Balance of family history is negative. Birth was normal. Breast-fed baby. In childhood patient had an attack of measles, followed by no known sequelæ. Used whiskey in large amounts for past fifteen years. In last few years takes whiskey before breakfast. Chews tobacco in large quantities. No drug habits. Drinks large quantities of tea and coffee. Twenty-five years ago had an attack of gonorrhœa; no sequelæ. For the past four years has been troubled with varicose ulcers of both legs. One year ago had an attack of polyarthritis rheumatica, from which he made an apparently good recovery, though he noticed ever after he appeared more easily winded upon heavy exertion. Three weeks ago he sought the hospital for a crushed hand. A few days after entering he began to notice dyspnoea, more particularly upon reclining. Became troubled by a short, hacking, disagreeable cough, increased by reclining position. About 9th of November he noticed for first time that legs and scrotum became œdematous during day, to disappear in morning after night's reclining position.

Patient complains of occasional headache, dizziness, diarrhea and palpitation of the heart. No chills, no fever, no pain; appetite poor. Stool once a day fairly well formed and occasionally streaked with blood and mucus. Urination more frequent than usual. Obligated to urinate once during the night. Expectorates a large amount of a thin, frothy serous sputum.

Status Præsens:

General build and constitution powerful and robust. General nutrition: panniculus adiposus firm and elastic,

being about three inches thick over the abdomen. muscles powerfully developed. Skin and mucous membranes are cyanotic. Œdema of the eyelids, scrotum and both lower extremities from toes to hips. Sensorium: bright and intelligent. Position assumed is half sitting, half reclining, favoring the right side.

Pupils are both equally dilated about 3 m. m., and both react to light and accommodation. No exophthalmos. Lips, nose, and cheeks cyanotic. Tongue heavily coated with a dirty greyish brown deposit. Teeth in very bad condition. Pharynx and fauces show chronic passive congestion and are covered with a thick tenacious mucus.

No abnormalities on the skull. Sight and hearing normal. The neck is short and thick. The jugulars show a diastolic presystolic pulsation (venous pulse). No struma.

Voice is thick and husky. The chest is decidedly barrel shaped, the intercostal spaces being well filled out.

The respiration is rapid and labored, the scaleni and intercostal muscles assisting the inspiration.

Vocal fremitus is increased in upper half of both lungs. In the lower half anteriorly and posteriorly the vocal fremitus is lost.

Percussion note in the upper half of both lungs is hyperresonant, as far down as the third interspace, the note being slightly duller on the right than the left. The percussion note in lower half of both lungs decidedly dull and flat.

Coarse mucous rales heard over the entire chest anteriorly and posteriorly. Immediately above the line of absolute dullness in the sixth interspace in the axillary line and at the eighth rib posteriorly could be heard distinct amphoric breathing.

The apex beat was in the sixth interspace 1.5 c. m. to the left of the mid-sternal line. It was fully three finger tips in breadth. The area of heart's dullness reached the upper margin of the third rib to the left above and 2.5 c. m. to the right of right sternal line, and as high as the right third interspace. Epigastric pulsation was strongly marked. At the apex was heard a loud presystolic and systolic rasping rough murmur, transmitted to the left. At times the murmur was wholly presystolic.

The second pulmonic sound was very strongly accentuated. At the fifth interspace on the right sternal line was heard a soft systolic blowing murmur.

There was a distinct pulsation to be felt in the second interspace at the left sternal line and also absolute dullness on percussion at this point.

In the third interspace to the left of the sternum could be felt a distinct thrill (cat's purr). The line of absolute dullness on right side reached the fifth rib above and 2 c. m. below the margin of the ribs below. Light palpation of the edge of the liver could detect a systolic pulsation (liver venous pulse). The liver was slightly painful on manipulation.

The abdomen was distended at the sides and flat about the umbilicus. Ascites could be detected upon percussion.

The palpable arteries (radial, median, temporal, and dorsalis pedis) showed arteriosclerosis.

The pulse was soft, compressible, irregular, and intermittent about every third beat. It did not seem to improve under infusion of digitalis.

Urinalysis, November 16, 1904: color, dark amber; scanty sediment. Amount in twenty-four hours, 840 c. cm.; reaction, acid; sp. gr., 1.026. Albumen, small trace (ferrocyanide of potash test); sugar, negative; indican, slight amount; urea, .014 gms. in 1 c. m. diazo-reaction, negative.

Microscopical examination:

Small number of red blood corpuscles, hyaline casts, and a few bladder and urethral epithelium. Many amorphous urates and a few uric acid crystals.

The diagnosis drawn from all the above facts was: Mitral insufficiency and stenosis of endo-carditic origin, probably dating from his attack of polyarthritis rheumatica one year ago. Relative insufficiency of the tri-

cuspid valve and passive congestion of the liver and kidneys.

At the end stage pleural and peritoneal passive transudates and œdema of the lungs, all due to failing heart compensation. *Exitus lethalis*, November 22, 1904.

Post-mortem record of J. D., Metropolitan Hospital, November 3, 1904: *Post-mortem* rigor present. Hypostatic congestions in dependent portions of the body. Face, hands and feet deeply cyanotic. Pupils equally dilated 4 m. m. Upon both legs anteriorly are old varicose ulcers measuring about 4 cm. in diameter.

Both lower extremities, scrotum, and penis are extremely œdematous.

The abdominal cavity contained 1,500 c. c. of a pale, light, straw colored transparent fluid. Nowhere could any evidence of peritoneal inflammation be discovered. Old adhesions between both liver and diaphragm and spleen and diaphragm.

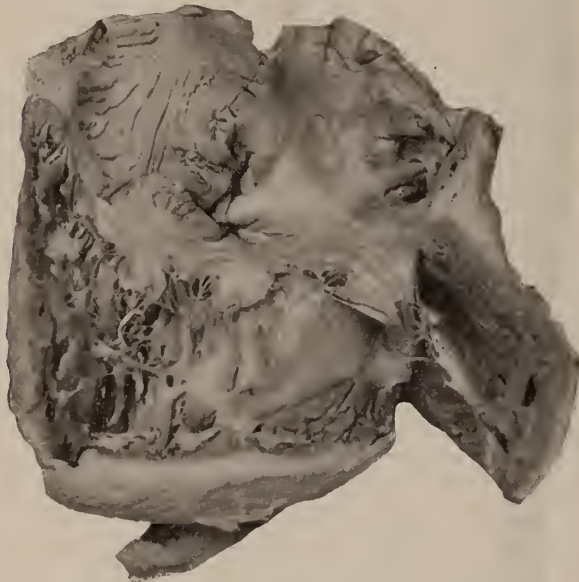
Vault of diaphragm: right side, sixth interspace; left side, sixth rib. Left pleural cavity contained 800 c. c. of a pale, light, straw-colored, transparent fluid; right pleural cavity, 1,000 c. c. of the same. There was no evidence of any pleuritic inflammation. The two layers of the pericardium were feebly united by young recently

consistency, dark brown color; externally smooth; capsule in places thickened, cut surface slightly granular, lobules plainly visible (being dark in the center and light colored in the periphery), blood vessels congested (cyanotic, indurated, fat liver).

The right kidney weighed 290 grammes, considerably larger than normal, firm in consistency, dark brown color, smooth externally, capsule non-adherent, cortex 6 m. m. in thickness, markings and malpighian bodies plainly visible, blood vessels congested. The left kidney showed the same changes.

The stomach and intestines showed passive congestion and presence of much thick, tenacious mucus.

The pancreas showed slight increase of connective tissue, blood vessels engorged. The dura mater of brain, as well as pia were normal. Pial blood vessels heavily engorged. Pial spaces filled with a clear transparent, watery fluid. The blood vessels at base of brain were arteriosclerotic. The choroid plexus and Venæ Galeni were heavily congested. Cut sections of the brain showed no abnormal changes, other than excessive œdema.



Right Ventricle, showing tricuspid valve. (Relative insufficiency.)



Left Ventricle, showing mitral valve. (Relative insufficiency.)

formed fibrous bands. Both ventricles of the heart were soft and distended by a dark bluish non-coagulable blood. The veins or external surface of the heart were heavily engorged. The coronary arteries were sclerotic.

The endocardium throughout was clear, transparent and perfectly smooth, showing no signs of any present or past inflammation. All valves of the heart were of normal thinness and smoothness and appeared normal in every respect. (See illustrations.)

The heart weighed 780 grammes.

The heart muscle was of a pale, light yellowish brown color. The papillary muscles were streaked with yellow. Both ventricles were widely dilated.

The left ventricle measured 1 cm. in thickness. The right ventricle measured 5 m. m. in thickness. Both auricles were widely distended, the left measuring 3 to 4 m. m. in thickness, and the right 2 to 3 m. m.

The circumference of the pulmonary valve was 11 cm., the aortic 8 cm.

Both lungs showed extreme congestion and œdema. No evidence of any other pathological changes.

The spleen appeared one-half larger than normal, weighing 250 grammes, dark bluish black in color, firm in consistency. Capsule thickened, trabeculae prominent, pulp firm. The liver weighed 2,200 grammes; firm in

The post-mortem diagnosis was: Idiopathic hypertrophy and extreme fatty degeneration of the heart muscles, as a probable resultant of alcoholism, with consequent muscular insufficiency of the mitral and tricuspid valves, with subsequent cyanotic induration of the internal organs; and recent pericarditis. Immediate cause of death, œdema of lungs and brain, in consequence of failing compensation of heart.

The previous history of polyarthritis-rheumatica, together with the findings of the physical examination, seemed sufficient to warrant the clinical diagnosis made in this case; and had not the autopsy disclosed the true underlying pathological condition, never a suspicion would have crossed the clinician's thought but that his bedside conclusions were sound, and in the future, under similar conditions, he would have committed the same error, blinded by his own unrectified past experience.

This case is but one of many, not alone of the writer's experience, but of that of noted clinicians, that have come under his observation, illustrating the value, yes, even the necessity of the autopsy to restrain the speculative tendencies and to confine within the strict limits of the facts and pathological laws our bedside conclusions.

Diagnosis is truly surrounded by many pitfalls, which only the diagnostician, whose work is in daily review by the relentless autopsy, learns to appreciate. It is he alone who fully comprehends the seriousness of his work, and because of repeated humiliations at the post-mortem table, by stern necessity becomes critical and conservative in his bedside conclusions.

It is the work done along this line for the past fifty years and more that to-day places Germany in the front rank in pathology and diagnosis; which is reason enough for the more ambitious of our American students to seek her hospitals for that thorough grounding in these two branches that so indisputably represent the largest share of the battle-ground of medicine.

THE MILK PROBLEM FROM A SANITARY STANDPOINT.*

By WILLIAM A. BAKER, M.D.,

ISLIP, N. Y.

A BETTER title for this paper would be, I think, "Our Milk Supply from a Sanitary Standpoint," for in writing it I have had especially in mind the conditions of rural delivery; and my object in presenting it is to bring before country practitioners the need of some system of regulation.

The whole subject of the proper sanitary control of milk is a large one, and can hardly be covered within the confines of a single paper; I will therefore consider the question more in the line of general application. It is hardly necessary to bring before a medical body the importance of a pure milk supply. As a matter of public health and public safety, especially in its bearing on the whole problem of infant feeding, both in sickness and in health, this fact is being appreciated more and more every year. It is hardly second in importance to that of a pure water supply. We all know in a general way what has been accomplished in New York City: at first through private philanthropy, on the part of individuals like Nathan Straus, and next to the efforts of the Cuthy Medical Society (through their Milk Committee), which work is now being gradually taken up by the Sanitary Bureau of the Department of Health, the whole milk supply of the Greater New York, covering the source

of production, the mode of handling and shipment (including proper cooling), and the conditions under which it is offered for sale are under expert observation and control, and is, therefore, practically standardized, and necessarily of a low bacterial count. There is at present a large production (and the demand exceeds the supply) with a guaranteed bacterial count below 30,000 per c. c.; while on the other hand some years ago, before these earnest efforts were made, samples purchased on the open market, during the heated term, often showed a count from 2,000,000 to 5,000,000, and in exceptional cases as high even as 200,000,000 per c. c.!

A lack of time prevents me from securing accurate statistics bearing upon this point. And further, I am sure that a comparison of the mortality tables relating to infants during the last twenty years or more would be most instructive in this connection. This general regulation of the milk supply has been taken up not only by the other large, and the smaller cities of the State, but by towns and even many incorporated villages. But in country districts (outside of dairy districts) nothing has been done in the way of public control. The question has often come up for discussion, but no formal action has been taken for the reason that so many difficulties have seemed to present themselves in the way of inaugurating the system. I am sure that you are all familiar with the conditions that generally prevail in this county. My experience shows, in most cases, an utter disregard of the most common rules of cleanliness. The cows are housed, and confined during the winter months, in unclean, ill-ventilated barns, so stabled as to be often continually stable-marked (excepting during the summer months when they are at pasture, and when they are living more by the laws of nature than by the ignorance of man), and milked in this condition, and often by unclean hands, and in this manner making the contamination of the milk by organic matter certain, and often to a marked degree.

This whole question of lack of care and necessity for regulation was impressed upon me by a case (which almost defies description) which came under my observation as Health Officer some time since. Here the sanitary conditions were absolutely deplorable, and, as many had been using the milk in entire ignorance of the conditions under which it was produced, and, as the whole milk supply of the town was indirectly involved, it was considered advisable to get expert counsel in the matter.

In accordance with this decision and through the courtesy of Dr. Darlington, the Health Commissioner of New York City, we secured the attendance of Dr. Walter Bensel, Chief of the Sanitary Bureau of the Department of Health, and in charge of the whole milk supply of the Greater New York. Dr. Bensel stated to the Board of Health that not over one-quarter of the milk in country districts was produced under

*Read at the Annual Meeting of the Suffolk County Medical Society, April 26, 1906.

conditions that would allow it even to enter the City of New York; that it was not a question of laboratory analysis, but of sanitation; that if the conditions were good—the stables kept clean and sanitary, the cows groomed and properly cared for, the necessary attention given to pails and cans and other minor details considered—then the bacterial count would be low and the milk pure and wholesome. But if these conditions were not met and the rules of cleanliness not strictly observed, then the bacterial count would be high, and the milk unwholesome as food and always a possible danger to health.

It was also advised that these conditions be considered by the Board; that inspections be made, and that no persons be allowed to sell milk in the town, either in large or small quantities, without a permit from the Board of Health, issued and revoked at the discretion of the Board. An action of this kind would, I am sure, be a step forward in sanitary reform, and would be endorsed not only by the intelligent public, but especially by those producers of milk who are disposed to observe, and are already observing the necessary sanitary precautions.

And now, to make this paper practical, it would seem well to consider as to how action of this kind can be brought about. At present the sole authority rests with the Board of Health of each town. The Health Officer can not act independently of the local Board. The fact must not be overlooked, however, that the task of inaugurating a system of this kind in a whole township is a difficult one, and would require strenuous and determined efforts. A large part of the public would be apathetic, and among the producers of milk you would find many who did not know, and could not, and would not be taught; many antagonisms would be aroused, and as Health Boards are at present constituted, with the ever present factor of politics, they could hardly be expected, in my opinion, to take action excepting in a case of pressing importance, or to meet a public demand; and a public demand can only be brought about by educating the public to a realization of the whole subject; and to this end I think we have an "entering wedge" in the work that is now being done by our larger cities. City people are coming more and more to appreciate the fact that the purity of their milk supply is being guaranteed; and as they realize more fully what this means, not only to themselves but especially to their children, they will not only ask, when they go into the country for the summer months, but *demand* to know the quality of the milk that is offered to them. In other words, they will purchase only "certified" milk.

And finally, another way is by proper legislation, whereby the State Department of Health can empower Health Officers, who are now appointed by the State, to take such action independently of the local Board, when in their opinion this seems necessary or wise. And as the science of sanitation and preventative medicine

becomes more advanced, and the organization of the State Department of Health more complete, an action of this kind becomes not only possible, but probable.

The problem resolves itself very largely into the question of educating the general public. And the country consumer merits the same safeguards as the city consumer.

The whole subject is a very important one and I cannot better conclude than by stating *with emphasis* this fact: the people have the right to know, and should know, the conditions under which their milk supply is produced.

THE DETERMINATION OF THE END OF DANGER OF INFECTION FROM PATIENTS WHO HAVE SUFFERED FROM INFECTIOUS DISEASES.

By LOUIS FAUGERES BISHOP, M.D.,

Physician to the Lincoln Hospital
NEW YORK.

THIS is a matter of much importance which should at this time lend itself to more definite statement. The danger to a community from a case of yellow fever recognized as such is very slight as compared to the danger from a patient who has supposedly recovered from typhoid fever, and yet carries the infection. The knowledge that has amounted to most and which has been most practical in limiting infection has been gained by the experience which has shown the length of time during which isolation is practically necessary. In this matter in regard to some diseases, particularly typhoid fever, there has however been error. The reason for this is found in the history of typhoid fever infection. The patient infected, the germs grow and multiply and produce the characteristic symptoms. Later, the patient gradually develops an immunity to the noxious influence of the germs so that they no longer cause symptoms. The germs themselves persist for quite a time in the body and are found in the urine. This fact accounts not only for the spread of typhoid fever in the most mysterious manner, but it also accounts for the frequency of relapses in the individual even after the patient is apparently well. The examination of a patient bacteriologically for typhoid germs would probably determine the end of the infectious period, but it is a simple matter, if one could only remember to do it, to administer drugs which have the property of disinfecting the urine.

In regard to diphtheria the disappearance of these specific germs from the throat is properly watched as indicating the end of the infectious period. As to measles we know from experience that the infectious period is short. As to scarlet fever it is longer. The infectious period of

syphilis has been a matter of much dispute, but it may become a matter determinable by clinical pathology if the findings of the spirochæta pallida is confirmed as the cause of the disease. The infectious period of gonorrhœa is also a matter of much importance which can also only be determined by the findings of clinical pathology. Tuberculosis is probably infectious so long as the tubercle bacilli appear in the sputum, though it is easily conceivable that these germs have various degrees of vitality at various times.

It is an unfortunate thing that the infectiousness of a case is not over when the patient himself has recovered from the acute symptoms of the disease. Every one knows enough to avoid an acute infectious disease, while the patient is suffering. The trouble is that the individual, attacked in the acute form, after living down the disease still carries the germs and is ready to infect other individuals. The physician is often dismissed from a case and his advice no longer followed when a patient is symptomatically well. From this time on the importance of the disease is greater to other people than to the patient.

As these "other people" cannot very well employ a physician to take care of the former patient in their interest, they are banded together as communities and maintain health departments. These health departments are supposed to control the infectious individuals in the interest of the public after the individuals themselves have ceased to have interest in the infectiousness of the disease from which they have recently suffered.

The person who has recently had typhoid fever has no personal interest in the freedom from typhoid germs of the water supply of his town, because he, for the time being, is immune.

The rule should be enforced that every individual who has suffered from an infectious disease of whatever kind, should be restrained from such relations with non-immune people as would render infection possible until there has been a determination of the end of danger of infection. This may be determined by experience which shows that danger of infection is over at a certain time, but in diseases of indeterminate duration it can only be determined by a careful investigation by the physician and the laboratory.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By **JAMES J. WALSH, M.D., Ph D.,**

NEW YORK.

(Continued.)

Nothing seems to have come of this attempt at securing legislation, and the minutes of subsequent meetings of the Medical Society have very little of interest for several years. Indeed, the

minutes are so briefly written as compared to some of those at the beginning of the Society's career, that there is more than suspicion that the secretary was neglecting something of his duty, to the detriment of those, at least, of posterity who are interested in medical historical matters, now that a century has passed. In 1806, however, a special meeting of the Medical Society of the State of New York was called for the purpose of considering the law that had been passed in April, by the Legislature of the State. Another special meeting was called two weeks later to take action with regard to it, and the Society practically accepted its legal obliteration and determined, though with many misgivings evidently, to abide by the law that had been passed. At a subsequent regular meeting the name of the Society was changed and it evidently passed over into the New York County Medical Society, as it exists at the present time.

"At a special meeting of the Medical Society of the State of New York, held by order of the President, June 10, 1806.

Present: The President and Drs. Tillary, Hammersley, Faugres, Onderdonk, Gamage, Borrowe, Proudfit, Servant, Barrow and Stringham.

Dr. William Turk having been duly admitted a member, signed his name to the Constitution.

The Society, after having considered the late law passed by the Legislature, respecting the regulation of the practice of Physic, adjourned for a further consideration of the same until Saturday, June 28th."

"Agreeably to adjournment, the Society met on Saturday evening, June 28th, 1806.

Present: The President, Vice-President and Drs. Hammersley, Bainbridge, Faugeres, Onderdonk, Post, Gamage, Proudfit, Servant, Turk, Buchanan and Stringham.

The law passed by the Legislature, April 4th, 1806, entitled, An Act to Incorporate the Medical Society of the State of New York, for the regulation of the practice of Physic and Surgery in this State, being duly considered, it was determined by a majority of the Society, that although many parts of the above Act were highly objectionable, still that under all circumstances, the profession might be benefited by a meeting of the members of this Society with the other physicians of this City at the time and place appointed by law."

"On Tuesday, July 8th, 1806, an ordinary meeting of the Society was held.

Present: President and Vice-President, Drs. Faugeres, Onderdonk, Gamage, Hammersley, Proudfit, Servant, Borrowe, Buchanan, Turk and Stringham.

The report of the committee appointed to draw up a code of by-laws, and which had lain over since the last ordinary meeting, was now revived and adopted with amendments. The Society considered that under existing circumstances, it was necessary that the name of this Institution be changed. Drs. Gamage and Stringham were appointed a committee for this purpose, to report at the next regular meeting. Notice was given by Dr. Hammersley that he should propose at the next meeting an alteration of that article of the Constitution relative to the sum to be paid as the initiating fee. Drs. Manley and Neilson were proposed as members. A communication by Dr. Servant was read and ordered to be filed among the papers of this Society."

(To be continued.)

In Memoriam.

GEORGE RYERSON FOWLER.*

By ALGERNON T. BRISTOW, M.D.,
BROOKLYN, N. Y.

THE month of May has rightly been dedicated to remembrance and commemoration. Springtime is nature's fulfilment of the promise of resurrection. The long sleep of winter is past. Its snows have melted and swollen the mountain streams into laughing waters. Its chill grey skies have changed to a warm and sunny blue, beneath which the trees put forth their buds to burst into full leaf and blossom. The woods, the meadows and the brown furrows have sprung from the image of chill death into a visible resurrection. Thus nature teaches her children evermore the lesson of immortality. The April woods toss their dark and twisted limbs against the cold and rainy sky. It is the month of sorrow, but the tears of April bring the blossoms of smiling May and the bare and wind-vexed branches lose their harsh outlines in the tender green of the May foliage. Year after year we see the miracle of death when November gales sweep over the sere fields, stripped of their harvest, to witness a few months later the twin miracle of resurrection when the soft breezes blow lightly through the rustling boughs. Not alone for fruitage does nature clothe the orchards with bright blossoms, nor for harvest alone does she array the brown and withered meadows with fresh herbage. It is a book of prophesy which she opens before us, and she brings the robins from the Southland to voice the joy of life renewed, to sing the song of spring, a lay of immortality.

So let us while we decorate the yet brown mounds of our dead, mourn not as those without hope, but with uplifted vision let us look beyond the twilight of life, the night of death into the everlasting dawn, which nature prophesies and for which the race of man has ever yearned.

"There's rosemary, that's for remembrance," saith the poet. Its sweet and faint essence recalls the fragrance of a life that has passed from among us. So we bring here to-night a wreath of rosemary in memory of our friend, not in sadness nor wholly in grief, but with sincere gratitude for the recollections which must ever cluster around his name and in the hope that we shall meet again in another spring-time, on another shore, be it distant or near.

Commemoration which deals with a recital of the mere facts of birth, education or subsequent achievement easily degenerates into a barren chronicle devoid of human interest and without the power to touch our hearts or teach us the lessons which may be learned of a noble life; for there is a sermon in the life history of every man whether of warning and judgment or inspiring example.

*Address delivered before the New York Academy of Medicine, May 3, 1906.

A man's achievements, it is true, are the measure of his intellect and his force of character but they do not always give us a clear insight into the hollow chambers of the heart wherein dwells the spirit of love and self sacrifice which is the true measure of a noble life. So says the apostle, "though I understand all mysteries and all knowledge and have not charity, I am nothing." How clearly is this exemplified in this day of mighty fortunes, heaped up by great intellect, prostituted to mere gain and personal aggrandizement, fortunes whose fabric is compacted out of the lives of other men cemented with blood and tears and guilt. The heart which beat within the bosom of our friend was not attuned to such discords. He sympathized too keenly with the misfortunes of others, ever to become a man of millions, by the aid of superior craftiness. His bright intelligence was devoted to the task of saving others from the evil results of their own weaknesses, from faults of nature, of heredity, or mischance. It would have been impossible for him to have lived the life of a wrecker battenning on wreckage of which he had been the cause. He was force personified; energy incarnate, but it was energy directed into beneficent channels. His early years gave evidence of the same dauntless spirit and scorn of toil and danger which marked his life throughout its course. There are still a number of us who remember in the days of our childhood the stirring events of '61. When we were boys we marched and counter-marched. We drilled with wooden guns. Happy the lad who had a drum or a fife. We formed a noisy part of many a torchlight procession. Most of us were content with the wooden arms, the noise and the torches. Not so our friend. The shrill alarms of war, the piping of the fife, the long roll of the drum awoke in his boyish heart the desire for action and when but twelve years old, he ran away from his home in Jamaica, Long Island, and trudged the long ten miles that stretched their dusty and winding way between that village and New York. Night found the boy far from home, but still not near the accomplishment of his purpose. He slept in a friendly barn, and the next morning continuing, crossed the ferry to New York in search of the enlisting station. Fortune favored the brave in the broader sense of the word and so sent him back to his parents. His life was too valuable to be wasted in untimely effort and some New York regiment lost a brave little drummer boy and the world gained a great surgeon, for the mission of that lad was to save not to destroy life.

The boy is father to the man. There is no incident in Dr. Fowler's career which better exemplifies one side of his character than this boyish exploit. His was the form of youth, the frame of a child, but he had a lion's heart in his body and was not to be daunted by toil or the thought of danger. Lion-hearted he was in life as in the hour of death. He advanced where others hesitated nor took

one backward step. Like so many great Americans, he had no more than a common school education. No university claims him. His was a mind, however, which did not need the artificial support of a university education. Not that such training is to be spoken of lightly or with disparagement. Most of us need it in order to do our best work. There are men nevertheless who become great in spite of early disadvantage or lack of advantage. Obstacles seem to stimulate their powers and they rise superior to their environment or lack of special training to grasp the highest rewards of life. Universities sometimes need such men more than they the university. Dr. Fowler stood pre-eminent in his chosen profession, as one who by unaided native energy and worth hewed out his path to usefulness in a wide sphere, to greatness and to fortune.

The current of a mountain stream is often diverted from its course by relatively slight causes. A fallen tree, a sand-bar heaped up by the freshet of a rainy night and the brook finds a new path to the sea. So it is with the lives of men. Circumstances, trifling in themselves, frequently turn the current of events and bring about a complete change in a life's work. After leaving school, Dr. Fowler worked as a telegraph operator in one of the stations of the Long Island Railroad. One day a serious accident happened and the injured victims were brought into the little station and laid on the floor. The young telegraph operator saw the preparation of the surgeon, appreciated his skill, understood the greatness of the mission and immediately knew his life's work. It sought and had found him.

We may be sure however that it was not so much the manual dexterity of the surgeon that appealed to his boyish enthusiasm. It was the nobility of the vocation, its helpfulness, which called to him with a voice which was not to be denied. All his life, it was never the fee that attracted him so much as the necessity of service, the helplessness and suffering of those in need.

Our friend graduated from Bellevue Medical College in 1871 and almost immediately sprang into active practice. His personal qualities, his boyish freshness which he retained to the end of his life, his *bonhomie* and cheerfulness could not fail to attract to him crowds of patients. His mere presence in the sick-room was a medicament in itself. No one could feel discouraged long in his presence and to gaze on his face and into that bright eye was to feel the pulse of renewed hope and returning health. The activities of a general practice are great and its usefulness measureless. There are fortunately many men well fitted to carry on its responsibilities with honor to themselves and advantage to the community. Few are they, however, who are adapted to the vicissitudes of a surgical career, able to cope with the graver and more thrilling emergencies of practice, to act as counselors and teachers of their brethren. Fortunately, for the community in which he lived and

the profession which he so long and faithfully served, Dr. Fowler soon found his proper place. Almost from the first, surgical work and the opportunities of dispensary and hospital practice attracted him. One year after graduation he became a member of the Brooklyn Central Dispensary. Six years later he was made visiting surgeon to the Bushwick and East Brooklyn Dispensary, and finally, after fifteen years of successful general practice, he retired therefrom to take up the exclusive practice of surgery in which he became a master among masters. Boards of Trustees in different parts of the city rapidly recognized his extraordinary ability, and at no long interval he became successively surgeon to the Methodist Episcopal Hospital (1887), to St. Mary's Hospital (1889), the Brooklyn Hospital (1895) and the German Hospital (1899). It can be truthfully said of him, *nullum quod tetigit, non ornavit*. Dr. Fowler's surgical activities commenced at that time when the teachings of Lister were first being put into practice in this country. His quick, keen mind instantly appreciated the revolution which the adoption of the new technique was destined to bring about in the treatment of wounds, and he entered into all the details required with scrupulous exactitude and painstaking elaboration. He did not long cling to the early mistakes of antiseptic surgery. For a time he wore rubber boots or sabots like some of the rest of us, but he rapidly learned that prime maxim of the surgeons, *non nocere*, and ceased to plague the tissues with floods of needless and harmful solution. He never kept to old customs because of habit nor did he fail to discard a new fashion if experience proved it to be of doubtful value. To him, as much as any man in our midst, the community in which he lived is indebted for the development of a sound and rational technique, careful and exact in essentials, yet never descending to absurdities which have characterized some operating rooms. He never made himself or his assistants look like members of the *Velmegericht* or the *Ku Klux Klan*. His methods were sane and sufficient for the purpose at which he aimed. At the same time he was never satisfied with his technique, but constantly strove to improve it by observation, wide reading and constant communication with the surgeons of other countries as well as his own.

There is nothing more rare in business or professional life than executive ability. In the profession of medicine when it exists it is not always associated with a high order of scientific attainment. Dr. Fowler, happily for the hospitals with which he was connected, united both these qualifications in extraordinary degree. He was a great organizer and administrator as well as a great surgeon. His great abilities have left their indelible mark on the institutions which he served. It is unnecessary before this audience to recount his surgical achievements. Their extent would befit a memoir rather than memorial ad-

dress. He has, however, left us the experience of his lifetime in his treatise on surgery, which may be said to be the culmination and crown of his activities. With singular pathos, he did not live to see a printed copy, though fortunately for the student, it was completed when the hand of death removed him from our midst.

It was not alone the scientific side of medicine which appealed to him. He was a man of warm and sympathetic impulses and appreciated the advantages of organization and friendliness for his own profession. He realized that doctors as well as men of other professions must gather together into societies for the interchange of views, experiences and the adjustment of differences. Personal quarrels, private enmities and petty jealousies have ever been the curse of our profession. Dr. Fowler realized that misunderstandings were the basis of most of these foolish quarrels. He knew that when men know each other better they are more ready to appreciate the good and make allowance for human weaknesses and peculiarities. It is difficult to dine with a man and keep an old quarrel alive at the same time. So our friend was active in promoting the interests of the county and State societies in their social as well as their scientific aspects. He was a leader among leaders, but always a brother amongst brethren. The scientific meetings in which he took part were always illuminated by his experience and breadth of knowledge. In debate he was ready, convincing, eloquent, courteous. The social gatherings of his professional brethren from which he was rarely absent were enlivened by his presence. Nothing of human interest was foreign to him.

Even a brief notice of his life would be incomplete without some reference to his services to his State and country. The State government, when it wisely undertook the supervision of medical education, called upon him to occupy the position of Examiner in Surgery in the State Board of Examiners. In this capacity he endeared himself to his colleagues, filling the duties of the position with distinction, up to the time of his death. If he was denied the privilege of serving his country as a boy, he had the satisfaction later in life of offering his riper judgment and experience, first to the State military organization and afterward to that of the nation. He met with no rebuffs then. The important work of instructing the soldier, in first aid to the injured, owes its inception to Dr. Fowler, who formed classes of instruction at the State camp, Peekskill. These courses were subsequently continued at the armories in the winter time largely through his efforts. The Cuban campaign was too brief to allow him much opportunity for useful work, yet he did what he could. He could always be depended on for that. For a few months he was on the staff of Gen. Fitzhugh Lee as division surgeon, abandoning a large civilian practice to serve his country.

After a period of twenty years of division in our ranks in this State we are at last a united profession. No one who was not concerned in the transactions which preceded and led up to unification has the remotest idea of the difficulties with which the joint Committee of Conference had to contend. There was no more ardent worker on this committee than Dr. Fowler. His unfailing good temper and cheery disposition, his good fellowship and frank sincerity of purpose played a very large part in bringing to a successful conclusion the work of that committee, so that we may say that the last service which he rendered to the men of his profession was in some respects his greatest work, since, where contention is, there can be little progress, and certainly no united action. The highest service which our profession owes the State and the public is that which it renders through the officers of the State society. This is the only body which can render effective opposition to evil legislation which imperils the public health, and in which must originate affirmative laws concerning the public welfare. Dr. Fowler recognized the importance of State medicine, a science yet in its infancy, and with fair-mindedness, and without bigotry did his part to bring about the unity for which all conscientious and sincere men had longed for many a year. He lived to see the accomplishment of his heart's desire. He journeyed to Albany last January anticipating the keenest pleasure in joining his brethren, so long separated, in a memorable reunion. He had fought a good fight. It was his last camp-fire. Stricken suddenly with the disease of whose surgery he was a master, while appreciating his danger, he did everything in his power to aid those who were caring for him. He who had so often encouraged others in their hour of need, now himself on a bed of pain, put heart and fresh courage into those who watched by his bedside. "Everything is for the best, do what you think is necessary, be the result what it may." So he spoke to his friends, for he knew that they were deeply tried and sore afraid. His eye was bright, his countenance cheerful, his manner as hearty as it used to be when he brought aid to others, though now, alas, it was he who required all the science and skill of our craft. Bravely he fought out his last battle, nor acknowledged defeat until the shadows of night and his approaching rest drew the mystic veil between us, and he passed out of our sight from time to the bright dawn of eternity. On that day in February, when we laid him to rest, the storm clouds were lowering over the city and gusts of snow swept through the streets, but as we stood in the cemetery to pay our last token of respect and love, the clouds broke away and the setting sun shone brightly from the blue, and touched with brilliancy the leafless trees which a winter's gale had clad with crystal. So, too, for him the storm of life was over. His sun had set, full orbed in all the glow and color of achievement, and promise fulfilled.

We who were left behind returned to our posts to meet again the storm and stress of life with all its defeats, discouragements and disenchantments. Discouraging, indeed, would be our condition if any of us really believed that that flower covered mound was the end of all. Even the agnostic does not cease to hope; but hope is itself the denial of positive negation. We learn our first lessons of life as of death at our mother's knee. Taught by her we lisped our first prayer. Happy the man who goes through life firm in the faith of his childhood. Fortunate is the world that the faith of childhood is still its guiding star. Whatever in our later years we may think of those early lessons we cannot doubt that our social fabric rests securely on no other foundation. Without the hope of immortality and the belief in a future life our entire fabric of law, of morals and government would fall to pieces as in an earthquake, shaken beyond the possibility of reconstruction. There is neither hope nor comfort nor firm foundation in the philosophy of a cold materialism. These were the sentiments of our friend who is gone. In his last hours he said to the one whom he held dearest, "You know my faith is very firm." We are sure that he would not be unwilling for the men of his own profession to know of the faith which was within him, for he well knew that one of the severest trials incident to a scientific career is its inevitable tendency to unsettle old beliefs and shake the convictions which lie deep in the hearts of mankind though incapable of proof. His was an exceptionally keen and bright mind. In science he proved all things, and held fast to that which was good. His faith in the life to come was unostentatious but unquestioned and in that faith he died. Faith is a quality of the mind no less than reason and there is in nature a realm of faith not less real than that of fact. If we believed only those things which we thoroughly understood in life, we should find that we believed in nothing. There are no facts in nature which we can really explain. We can only say of them that they exist. The force which brings a wounded bird to the ground or strews our orchards with windfalls, acts with the same resistless power through unmeasured space to sway the course of unnumbered suns and systems. Who can measure the mighty power which keeps the planets in their orbits or mark its boundaries in eternal space? Whence its source? We have indeed discovered and formulated certain laws concerning what we call gravitation, but if we seek to penetrate further into its secret places, we quickly face the same impenetrable mystery which surrounds all the forces of nature. As scientific men we are compelled to have faith concerning many things, else all our philosophy becomes mere babbling folly. Thus we trust in the uniformity of nature, the uniformity and unchangeableness of natural laws, the inexorable sequence of cause and effect, yet these are matters of faith. They are incapable of

mathematical proof. So says the great prophet-poet of the nineteenth century:

"O, living will, that shalt endure
When all that seems shall suffer shock,
Rise in the spiritual rock,
Flow through our deeds and make them pure,

"That we may lift from out of dust
A voice, as unto him that hears
A cry above the conquered years,
To one that with us works, and trust,

"With faith that comes of self control,
The truths that never can be proved,
Until we close with all we loved
And all we flow from, soul in soul."

PHILOSOPHY OF OSLER.

Except it be a lover, no one is more interesting as an object of study than a student.

No human being is constituted to know the truth, the whole truth and nothing but the truth; and even the best of men must be content with fragments. In this unsatisfied quest the attitude of mind, the desire, the thirst, the fervent longing are the be-all and end-all.

The hardest conviction to get into the mind of a beginner is that the education upon which he is engaged is not a college course, not a medical course, but a life course, for which the work of a few years under teachers is but a preparation.

Men will not take time to get to the heart of a matter. After all, concentration is the price the modern student pays for success. Thoroughness is the most difficult habit to acquire, but it is a pearl of great price, worth all the worry and trouble of the search.

The true student is a citizen of the world, the allegiance of whose soul, at any rate, is too precious to be restricted to a single country.

Lift up one hand to heaven and thank your stars if they have given you the proper sense to enable you to appreciate the inconceivably droll situations in which we catch our fellow creatures.

Hilarity and good humor, a breezy cheerfulness, a nature sloping toward the southern side, help enormously both in the study and in the practice of medicine.

Io victis! Let us sometimes sing of the vanquished. Let us sometimes think of those who have fallen in the battle of life, who have driven and failed, who have failed even without the strife.

You cannot reach any better position in a community; the family doctor is the man behind the gun who does our effective work.

The successful teacher is no longer on a height pumping knowledge at high pressure into passive receptacles—he is a senior student anxious to help his juniors.

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Editorials.

THE HOME TREATMENT OF TUBERCULOSIS.

STATISTICS show that there are four million families in the United States, living upon four hundred dollars a year. That means that over one-fourth of the population of the country lives so meagerly that it would be impossible for them to avail themselves of sanatoria or tent colonies in case of consumption. As a matter of fact most people with consumption remain at home; and they must be cured at home or there they will die.

Lichty has called attention to the importance of the home treatment of this disease and the responsibility of the family doctor in the battle against tuberculosis.* He thinks that too much stress is laid upon the sanatorium and not enough upon the home. At the Tuberculosis Exposition in Philadelphia this year, there were no papers on tuberculosis in the home. He thinks that the estimations of cases in sanatoria are in selected cases, whereas the cases in the home involve every sort. If 90 per cent. of the people of this climate have had tuberculosis, and 80 per cent. recover, as statistics show, this speaks pretty well for the home treatment.

The sentiment seems to be growing that if a consumptive is curable at all, he can be cured at home. The necessity of pure air and good food, as the important curative agents, must be

*Sanatoria and Tent Colonies. *Jour. Am. Med. Asso.*, May 12, 1905.

taught; and the family physician is the one to do this. The consumptive poor man may be sent to a sanatorium, but when he is pronounced cured he returns to his old haunts and habits, and stands a poor chance of remaining cured. Had he been cured at home, the process of curing him would have required a remedying of the defects which were responsible for his disease, and his cure would have been upon a more rational basis.

One of the urgent needs of our times is the improvement of the modern house. The architect has advanced in structural ingenuity, but he has also advanced in his ability to devise breeding places for tuberculosis. The destruction of the North American Indian by tuberculosis is due to his exchanging the natural life of the out-of-doors for the wretched conditions of the modern house.

More important than the cure, however, is the prevention of the disease. While it does not lie in everyone's power to recover from consumption, it does lie within the reach of everyone not to have consumption.

Lichty truly says that the original unit of society is the family, and through it the factor to prevent tuberculosis is the family doctor; there are and will be only a few sanatoria, but there are and will be many family physicians.

THE DIAGNOSIS AND TREATMENT OF TYPHOID PERFORATION.

THE mortality of typhoid fever has been reduced by virtue of the possibility of certain diagnosis and by the improvement in the medical treatment. About one-third of the mortality of the disease now is from perforation. In the Army in 1898, the statistics, which were based upon autopsy findings, showed that perforation was the cause of more than fifty per cent. of the mortality. It is possible that the estimate for civil life is too low. However, upon this basis about 25,000 persons die annually from typhoid perforation, of which number Woolsey claims that over 6,000 might be saved by prompt operation.* This author regards early diagnosis, with a correspondingly early operation, as the important factors for the reduction of the mortality.

The tables of Hart and Ashhurst show that the cases operated upon thirty-six hours after the perforation gave a lower mortality than those

*G. Woolsey: Observations on the Diagnosis and Treatment of Typhoid Perforation, *Ann. of Surg.*, No. 5, Vol. XLIII, 1906.

operated upon at any earlier period; and this, Woolsey attributes to the fact that patients who have survived thirty-six hours have a milder infection, or the process has been slow enough to permit a combative reaction or a limitation of the process. He has collected from the reports of the Presbyterian Hospital and from his own experience seventeen cases operated upon, and argues for Osler's dictum, that, what is needed is a fuller knowledge of the immediate symptoms of perforation as distinguished from those of the subsequent peritonitis, which is what is usually diagnosed. The average period at which perforations occurred in his cases was the twenty-seventh day of the disease. He has found only one symptom which was nearly always present, and that is abdominal pain, usually coming on suddenly and generally severe. This pain is usually in the lower half of the abdomen, and usually in the right side.

This has been the general experience of other observers, the lower three feet of the ileum being the usual site of perforation. A certain degree of general depression, as indicated by increase of pulse rate, is commonly present. After this the symptoms become those of peritonitis. Tenderness, increase of polynuclear leucocytes, distention, constipation, vomiting, rigidity, inhibition of diaphragmatic respiration, rise of temperature, increase of pulse rate and respiration rate. These may be present in part or in whole. The growing conviction among surgeons is that sudden and severe pain, especially in the lower part of the abdomen, in a typhoid patient in the fourth or third week, especially if associated with rigidity and tenderness, should call for operation. The strongest probability is that a perforating ulcer will be found, and found at the time when its surgical treatment promises the best result. If the cause of the symptoms is not perforation, as might rarely be the case, some other surgical condition may be discovered, or, if not, the slight harm that is done the patient is fully compensated for by the advantages accruing to the cases whose perforations are discovered early as a result of this policy.

CLEAN MILK.

THE question as to which is the best milk for infants and children, next to mother's milk, has passed through various stages of discussion. The most available milk in this country is that of the cow; and sterilization by

means of heat was applied to it as soon as the bacterial cause of the enteric diseases of childhood was understood. This process has undergone much the same change as the contention for absolute asepsis in surgery has: it has been found that it is quite impossible to eliminate all bacteria, that a few micro-organisms do little or no harm, and that to kill all the bacteria inflicts damage upon the environment in which the bacteria live. So pasteurization wrought deleterious changes in the milk; and effort simply to minimize the number of bacteria has been followed by such astonishingly good results that it signalizes one of the great advances in preventive medicine.

Certified milk has resulted from this knowledge; and the demand for this milk is increasing beyond the supply. The sensitiveness of the urban infantile intestine is destined to exert a powerful influence for good upon the rural barnyard; and the farmer is beginning to wash his hands, just as the surgeon did twenty years ago.

THE FIFTY-SEVENTH ANNUAL MEETING OF THE AMERICAN MEDICAL ASSOCIATION.

THE fifty-seventh annual meeting of the American Medical Association which was held in Boston on June 5 to 8, has gone into history as the most important meeting of that organization.

The representation from New York State was large, and the transactions of every section were participated in by members from this State. The fact that the program of this meeting contained the titles of over four hundred papers, to be read before the various sections, to say nothing of the discussions, testifies to the energy and enthusiasm of the members of this association. Harvard University and the hospitals of Boston opened their doors, and added the teachings, which their powerful influence could give, to the general medical improvement which was in progress.

The election of Dr. Joseph D. Bryant, of New York, to the presidency is an earnest of the wisdom which prevails in the councils of this association.

This session has done more than advance the science of medicine: it has helped to unify the profession in America, and has inspired it with confidence in its own power and worth.

Observations.

Medicine, is the most important of all, and yet, because of its inaccuracies, it has never taken its well deserved place among the sciences. Medicine is the most beneficent of all, and yet, because its votaries must secure their livelihood by its practice, it has never taken its well deserved place among the philanthropies. Some day it will, but there is to be a vast amount of education for both doctor and public before these consummations may be realized.

Medical practice in Utopia is different. Here it is untrammelled by the necessities of the dollar. Here the doctor perfects himself in his science and art, and, with the spirit of true philanthropy, advises his patient just what is best for him, nothing more nothing less, that is the only consideration, and his reward is measured by the conscientious devotion which he puts into the task. We have some eminent practitioners in Utopia, but many more are needed.

The saddest spectacle in all the practice of medicine is that of the doctor dealing out medicine to a patient who does not need it, but who does need to be told how to live.

The practice of medicine has not yet been cured of its drug addiction. Do you remember what your professor of materia medica and therapeutics taught you outside of the products of the drug store? Very little. The best things in our therapeutic armamentarium he scarcely mentioned. Fresh air, the bath, food, proper clothing, proper breathing, exercise, proper eating, sleep, rest as a therapeutic agent, the curative power of work, the care of the mind, the training of the child—how little really well formulated knowledge we have of these most vital things compared with our well formulated knowledge of the uses of drugs. The charlatan steps in and masters one of these subjects, and scores many a triumph over the doctor of medicine.

I have seen a man dying with pneumonia in a room so close that the nurse had a perpetual headache, but the poor man was taking oxygen from the drug store. Why? Because the use of oxygen from the drug store was taught by the professor of materia medica and therapeutics, but not the use of the oxygen of the free and open air which can be secured without the mystic scroll which means *recipe*.

One of the greatest needs of medicine to-day is not so much new knowledge as a scientific formulation of the old. One says, wear linen next to the skin; the other says, wool, by all means. One puts the windows up; the other puts them down. One says, beware of the night air; the other says, that is the only kind there is to breathe at night. Let us formulate and put upon a scientific working basis the important things which involve the every day life. The hygienist will tell me that he has. This may be true, but the knowledge has

not yet reached the general practitioner, and the knowledge of the less important things has.

My children sleep with their windows open summer and winter; they are the ideal of perfect health. My neighbor doctor's children sleep with their windows closed; they look sickly and they are often sick. Which is better? Are these observations only exceptions which have some other explanation or are they worthy to be studied and formulated; and should we not be as well agreed upon this subject as we are upon the action and uses of strychnia?

Doctor Treves has emphasized the beneficence of diseases, and he has gone so far as to allege that we should all have been dead long ago had it not been for diseases. This is not offered in a spirit of waggery, implying that we live by diseases, for in this gross sense the diseases would always have to be left to some one else to do the suffering. This is the idea promulgated by Mr. Clemens, that the best place to have a carbuncle is on the back of the neck of somebody else. No, what Doctor Treves refers to is that the *symptoms* of disease, the suffering of disease, is but a manifestation of an effort on the part of the body to throw off some offending and harmful foreign substance. Whether it is ptomaines or cucumbers that are causing the trouble, the symptoms are but an evidence of a salutary effort of the organism to rid itself of the noxious invader. This we know full well to be true. Peritonitis has saved more lives than "all the drowsy syrups of the East."

Finally, the effects of drugs fall into the same category, along with the ptomaines and cucumbers. The so-called physiological actions of drugs are but the symptoms of an effort of the system to throw off an offending foreign substance, or they are an evidence of the system being overcome by this same substance.

Items.

COMMISSION ON POLLUTION OF NEW YORK BAY.—Mayor McClellan has signed a bill which provides for the appointment of a commission to consider ways and means of protecting the waters of New York Bay from pollution. The Commission will co-operate with a similar body from New Jersey.

CONTAGIOUS DISEASES IN NEW YORK CITY.—During the week ending May 12th, 2,228 cases of contagious disease were reported to the Health Department. Of these cases 1,068 were measles, with 32 deaths; 387 were diphtheria, with 34 deaths; 340 cases of tuberculosis, with 153 deaths; 56 cases of pertussis, with 4 deaths; 32 cases and 32 deaths from Cerebro-spinal meningitis; 27 cases of typhoid fever, with 9 deaths, and 90 cases of varicella. The total number of deaths from contagious diseases was 294. During the week previous the total number of cases reported was 2,489, with 350 deaths.

TRIBUTE TO DR. AUSTIN FLINT.—On the occasion of the retirement of Dr. Flint as professor of physiology at Cornell University Medical School, the Class of 1909 presented him with a loving cup appropriately inscribed.

DR. ALBERT VANDERVEER, of Albany, who was recently elected a member of the State Board of Regents of New York, took the oath of office on May 10th.

FOR NEW HOSPITAL AT NEW ROCHELLE.—Mr. C. O. Iselin has offered to give \$40,000 toward the building of a new hospital in this town, providing the citizens will raise \$60,000, so that a modern structure can be erected; \$20,000 of the required amount has already been subscribed by the local hospital management.

WEST SIDE HOSPITAL BILL VETOED.—For the third time the Mayor of New York City has vetoed a bill which provides for an hospital similiar to Bellevue on the west side of the City between Twenty-third and Thirty-fourth Streets. The measure is a mandatory one and was therefore rejected.

OPENING OF ROCKEFELLER INSTITUTE.—On May 11, this institution, which was founded in 1901 by John D. Rockefeller, had its formal opening ceremonies. Addresses were made by President Eliot of Harvard University, President Butler of Columbia University, and the President and Secretary of the institute, Dr. William H. Welch and Dr. L. Emmett Holt. At present there are twelve experimenters at work under the Supervision of Dr. Simon Flexner. When entirely completed there will be accommodation for 50 workers. Investigation will be carried on in experimental pathology, bacteriology, physiology, physiological and pathological chemistry. The only other institute of its kind is in Germany. Reports on experimental work are published in the *Journal of Experimental Medicine*, which is issued by the Institute bi-monthly.

DR. CHARLES W. PILGRIM, Superintendent of the Hudson River State Hospital, has recently been appointed President of the State Lunacy Commission to fill the vacancy caused by the resignation of Dr. William Mabon. Dr. Mabon has been appointed Superintendent of the Manhattan State Hospital.

MEMORIAL TO DR. FOWLER.—On Sunday evening, May 27th, in the building of the Medical Society of the County of Kings, in Brooklyn, a tribute was paid to the memory of the late Dr. George Ryerson Fowler by the unveiling of a bronze memorial tablet. The presentation address was made by Lewis Stephen Pilcher, M.D., LL.D. The tablet was accepted on behalf of the Society by Dr. Wm. Francis Campbell, President. An appropriate address was also made by the Rev. Lindsay Parker, Ph.D. The tablet is inscribed as follows: "George Ryerson Fowler: 1848-1906. President Medical Society of the County of Kings, 1886; Trustee, 1901, 1905.

Surgeon, Citizen, Patriot, Teacher. A servant of mankind; the friend of the suffering; a brother amongst brethren; wise in council; sagacious in debate; courageous in the hour of danger; undaunted in the face of death. His life, an inspiration to the young, a challenge to his peers, an example to all."

DR. WILLIAM WARREN POTTER has been duly appointed a member of the Question Committee of the University of the State of New York to fill the vacancy created by the death of Dr. George Ryerson Fowler:

DR. ARTHUR WOODWARD BOOTH, of Elimira, has been duly appointed Examiner in Surgery in the State Board of Medical Examiners to fill the vacancy in that topic caused by the death of Dr. George Ryerson Fowler, to serve until the next annual meeting of the Board.

SOCIETIES MEETING IN BOSTON.—The following societies also met in Boston at or about the time of the session of the American Medical Association:

Association of United States Pension Examining Surgeons.

American Academy of Medicine.

American Gastro-Enterological Association.

American Neurological Association.

American Association of Life Insurance Examining Surgeons.

American Urological Association.

American Medical Editors' Association.

THE AMERICAN GYNECOLOGICAL SOCIETY held its thirty-first annual meeting at Hot Springs, Virginia, on May 22, 23 and 24. New York was represented by the Secretary, Dr. J. Riddle Goffe; and papers were read by Drs. Henry C. Coe on Infection of Ovarian Cystomata, George Tucker Harrison on Artificial Dilatation of the Cervix Uteri, J. Clifton Edgar on the Advantages of the Bimanual Dilatation of the Parturient Uterus, Egbert H. Grandin on Dilatation *versus* Incision of the Gravid Uterus, Ely Van de Warker on the Fetish of the Ovary, Willis E. Ford on Results of Vaginal Section and Drainage in Ectopic Gestation, William S. Stone on the Technique of Repair of Large Visico-Vaginal Fistulæ, Malcolm McLean on Progressive Operation for Large Visico-Vaginal Fistulæ, George F. Edebohls on Renal Decapsulation for Puerperal Eclampsia, and Robert A. Murray on the Parturient Process in Primipara of Advanced Age.

DETROIT COLLEGE OF MEDICINE is celebrating "alumni week" from May seventh to seventeenth. Special clinics and meetings at the college and hospitals are in progress.

A SUIT FOR DAMAGES has recently been tried in the courts of a small Nebraska town for injuries which were alleged to have been received while the plaintiff was being exposed to X-Rays for the purpose of locating a vesical calculus. The plaintiff was awarded a verdict of \$600 and costs. Damages to the extent of \$6,000 were claimed.

DR. HENRY P. BOWDITCH, will retire from the chair of physiology at Harvard University, at the end of this year. Dr. Bowditch has been a teacher in the Harvard Medical School for 35 years; he has received honorary degrees at Cambridge, Edinburgh, Leipsic and Toronto.

BUFFALO MUNICIPAL HOSPITAL.—The new municipal hospital in Buffalo is to be completed this month. This hospital has been erected at a cost of \$50,000. It is intended for the care of cases of contagious diseases, and will be under the control of the health department. It is one of the best equipped institutions of the kind in the State.

THE ASSOCIATION OF AMERICAN PHYSICIANS, held its annual meeting at Washington on May 15 and 16. The following officers were elected for the ensuing year: President, Dr. F. P. Kinnicut, of New York; Vice-President, Dr. James Tyson, of Philadelphia; Secretary, Dr. Henry Hun, of Washington; Recorder, Dr. S. Solis-Cohen, of Philadelphia; Treasurer, Dr. T. P. Crozier Griffith, of Philadelphia; Councillor, Dr. L. F. Barker, of Baltimore.

BIRTH INSURANCE COMPANY FAILS.—By direction of the Attorney-General of Massachusetts a receiver has been appointed for the American Birth Insurance Company. There is said to be between \$50,000 and \$60,000 of outstanding insurance. The failure of the company was due to a much larger birth rate than was anticipated.

RESIGNATION OF PROFESSOR OSTWALD.—Wilhelm Ostwald, who has recently been lecturing at Harvard University under the arrangement for the exchange of professors between American and German Universities, has resigned his professorship of chemistry at the University of Leipsic. He was displeased at the lack of support accorded his researches.

BRITISH MEDICAL ASSOCIATION.—Arrangements are well under way for the annual meeting of this Association which will be held at Toronto, August 21 to 25. There will be 13 sections which will meet each day between 9.30 and 10 o'clock. The afternoons will be given to public addresses, general meetings and entertainments. Sir James Barr will deliver the address in Medicine and Sir Victor Horsely the address in Surgery.

"PARIS MEDICAL JOURNAL."—A monthly journal of medicine with this title has been started in Paris under the editorship of Dr. A. A. Warde and Dr. Edmund L. Gras. The object of the journal is to provide English-speaking medical men with a digest of the writings of French physicians and surgeons.

INFLUENCE OF BEER ON ATHLETES.—German writers have recently commented on the failure of the German competitors in the Olympic games at Athens; they ascribe the failure of their countrymen to the use of beer in excessive quantities.

Progress of Medical Science.

PRACTICE OF MEDICINE.

EDITED BY

HENRY L. ELSNER, M.D.,

Professor of Medicine, Syracuse University,

AND

DE LANCEY ROCHESTER, M.D.,

Associate Professor of Principles and Practice of Medicine,
University of Buffalo.

THE TONSILS AS PORTALS FOR GENERAL INFECTION.

Isaac Adler calls attention to the importance of the tonsils as portals of entry for general infections, including particularly articular and muscular rheumatism, pneumonia, general sepsis and nephritis. The histological structure of the tonsils renders them peculiarly susceptible to the entrance of bacteria, and our present knowledge fails to explain why infection does not occur even more frequently. Both acute, articular and muscular rheumatism, the author believes, are of bacterial origin, probably streptococcic, and frequently start with tonsillar infection. He is specially emphatic in stating that slight tonsillar irritation, with very few of the usual signs of inflammation and no general symptoms, may be the precursor of severe rheumatic or general infection. Intense tonsillar reaction may prevent systematic involvement. Gürich accounts for the frequent recurrence of rheumatic attacks by claiming the presence of minute pus foci in the depths of the tonsillar crypts, which tend to maintain a permanent infection. In many cases of pneumonia the bacteria are carried by the lymphatics to the pleura and thence to the lung. The author cites two cases of mild tonsillar inflammation followed by fatal septicopyæmia. Jessen states that one form of tonsillitis leading to general infection presents a characteristic arrangement of the exudate in strips along the tonsil. Adler believes the relation between tonsillitis and nephritis to be of utmost importance. In about seventy-five per cent. of all cases of pure tonsillitis an acute desquamative nephritis occurs, which presents no symptoms by which it can be recognized clinically, and in most instances disappears spontaneously. The urine is normal in quantity, but contains albumen in small amounts, renal epithelium, blood cells, and a few casts. A certain number of these cases do not clear up but pass gradually into a condition of chronic parenchymatous nephritis, and this is undoubtedly the origin of certain unexplainable cases of the latter disease. It is the duty of the physician to prevent possible chronic renal disease by making daily examinations of the urine in every case of tonsillitis, no matter how mild, during and shortly after the attack. Since diseased tonsils are a constant menace to the individual, while their removal seems to have no deleterious influence, diseased or hypertrophied

tonsils should, unless contraindicated, be dealt with by surgical means. The tonsil is much more dangerous when soft and diseased, even though small, than when merely hypertrophied.—*New York Medical Journal*, March 31, 1906.

ACCURACY IN DIETETICS.

Dudley Roberts pleads for more exact directions as to character and amount of each article of food prescribed in the dietary prescribed for a given case. To aid in such accuracy he gives a table which shows the caloric and proteid value of the common articles of food in ordinary household measures and another table which shows the daily food demands of an adult of 150 pounds weight under different physical conditions of rest in bed, slight activity, light work, moderately hard work and very hard muscular labor. Taking these two tables together it is a simple matter to pick out the amount and character of foods to produce the desired result in any case.

In a foot note it is stated that the author, Dr. Dudley Roberts, of Brooklyn, N. Y., will furnish these tables of food supply and demands on a card of vest-pocket size.—*Journal of American Medical Association*, April 21, 1906.

PROPHYLAXIS OF LOBAR PNEUMONIA.

In a brief but excellent article, J. M. Anders reviews the main factors entering into the etiology of pneumonia, laying especial stress upon its communicability and the influences which tend to increase this disease, namely, overcrowding, poor ventilation, deficient food and lack of disinfection after the occurrence of a case whether terminating in recovery or death. He concludes that effective prophylaxis embraces four main objects: (a) thorough disinfection of pneumonic sputum as well as that of healthy persons, including the secretions from the upper air passages; (b) isolation of the patient, especially from the debilitated, and the disinfection of the sick chamber, together with its contents after death or recovery; (c) removal of personal predisposition; (d) introduction of certain public measures.

For the accomplishment of the third of these, the removal of personal predisposition, he recommended the careful, judicious habituation of the body to cold air and cold water, the avoidance of prolonged exposure to cold and wet when fatigued and in the aged or debilitated; prompt and energetic treatment of ordinary cold; removal of obstruction to nasal breathing; keeping the nasal passages clean; avoidance of excess in any direction and the maintenance of the highest degree of nutrition by proper hygienic living. The public measures which are advocated are the proper ventilation of office buildings, manufacturing establishments, theatres, courts of justice, churches, public schools and passenger and street railway cars; the proper cleansing of the streets and the prohibition of indiscriminate public spitting.—*American Medicine*, March 31, 1906.

INFANTILE SCORBUTUS.

John Lovett Morse presents an interesting analysis of fifty cases of this disease. After stating the food which each case was taking he states that analysis of the foods taken by these cases justifies the conclusions of the committee of the American Pediatric Society that the development of the disease followed in each the employment of some diet unsuited to the individual child, and that the farther a food is removed in character from the natural food of a child the more likely its use is to be followed by the development of scurvy. Analysis of this table also seems to show that the absence of freshness and the heating of the food are very important elements in the production of scurvy.

So far as symptoms are concerned he says that it is evident from these figures that the earliest symptom of scurvy is, as a rule, loss of color, which is often associated with loss of appetite. The first symptom to attract attention and to justify the diagnosis of scurvy is most often tenderness or pain in the legs or back on handling. Swollen and purple gums and hæmaturia may, however, precede the tenderness and pain. Tenderness and pain on motion almost always develop sooner or later and, in about half the cases, are accompanied by swelling about the diaphyses. The legs are affected about three times as frequently as the arms. The gums are affected in about half the cases; almost always when there are teeth, very rarely when there are no teeth. Hemorrhages, except under the periosteum, are comparatively uncommon.

So far as treatment is concerned, he says that the attempt was made to give not only a more rational food but one more suitable for the individual baby. Proprietary food mixtures were changed to milk mixtures, and milk mixtures to better milk mixtures. Sterilization was always stopped and pasteurization was stopped if the milk supply and the time of year permitted. Peptonization was stopped in every case.

One patient was given lemon juice. All the others were given orange juice, except two who were given beef juice. Some were given orange juice and beef juice. In several the amount of orange juice had to be increased. The results justified the conclusion that at least one tablespoonful of orange juice daily is necessary and that two tablespoonfuls or the juice of half an orange is amply sufficient to bring about a rapid cure.—*Journal of American Medical Association*, April 14, 1906.

GASTRIC ULCER WITH TUMOR.

In many cases the inflammatory infiltration and adhesions about a gastric ulcer give the sensation upon palpation of a tumor which may be mistaken for carcinoma. This occurs in ulcers which have penetrated deeply enough to cause local peritonitis.

GENERAL PATHOLOGY.

EDITED BY

JOSHUA M. VAN COTT, M.D.,

Professor of Pathology and Bacteriology, Long Island College
Hospital, New York.A RAPID STAINING METHOD FOR THE
SPIROCHAETA PALLIDA.

Dr. Francesco Simonelli and Dr. Ivo Bandi, working together at the skin and genito-urinary clinic of Prof. Barduzzi at the University of Siena, have perfected a satisfactory stain for the spirochaeta of syphilis. The staining methods heretofore advocated for demonstration of the spirochaeta, recently described by Schaudinn and Hoffmann (1) as occurring in the primary and secondary manifestations of lues, require a great deal of time for their application, otherwise good results are not always obtainable. It is because of the difficulty encountered in staining this organism that Schaudinn and Hoffmann have termed it "spirochaeta pallida."

Among the methods proposed for the staining of the spirochaeta, they mention the following:

First, method with Azure blue; *second*, method of Marino; *third*, method of Giemsa; *fourth*, method of Reitmann; *fifth*, method of Van Ermengem.

(1.) Method with Azure blue: This is the least used of all. The specimen is fixed in equal parts of alcohol and ether, left in the stain sixteen to twenty-four hours, dried in the air and mounted in cedar oil.

(2) Method with Marino's blue: This one, though much more rapid than any of the others, is not to be preferred because it stains the spirochaeta rather a pale color, making it difficult of recognition. Marino's blue is a solution of methylene blue, sodium carbonate and eosin in methyl alcohol. This solution will keep for two months, providing pure methyl alcohol is used and evaporation prevented.

The specimens are fixed either by heat, equal parts of absolute alcohol and ether or in the staining reagent itself, which last fixes by reason of its alcohol. If the former two are employed, a little of the stain is poured on the specimen and allowed to act for about three minutes.

After draining off the excess of blue, a few drops of a very dilute watery solution of eosin are placed on the slide, allowed to stay on for about two minutes, washed off in water, the slide then dried in the air and mounted in balsam. The effect of Marino's blue may be intensified by putting the specimen, after addition of the dilute eosin, into an oven of 56 degrees C.

(3.) Giemsa's method allows of the best results and is consequently the most widely employed.

The smear on a slide or cover glass is dried in the air, fixed in absolute alcohol for ten minutes and set in the following freshly prepared solution for sixteen to twenty-four hours:

(a.) Twelve parts of an eosin solution (2.5 ccm. of a 1 per cent. solution of eosin in 100 ccm.

of distilled water), (b) 3 parts of azure I (1 per cent. watery solution), (c.) 3 parts of azure II (Aqueous sol. 8 pro mille).

It is then rinsed in distilled water, dried and mounted in cedar oil.

(4.) Method of Reitmann has but little following, and is only a modification of Sclavo's flagella stain.

The specimen is fixed ten minutes in absolute alcohol, washed in distilled water, then placed for five minutes in a 2 per cent. solution of phosphotungstic acid, rinsed in distilled water, placed in 70 per cent. alcohol and again rinsed in water. When the back of the slide or cover glass is dry, it is stained in warmed Ziehl's solution. It is finally washed in running water, decolorized in 70 per cent. alcohol and mounted in balsam.

(5.) Method of Van Ermengem: This excellent flagella stain has been used by some, with apparent satisfaction, on the spirochaeta of Schaudinn and Hoffmann. A smeared cover glass is placed for thirty minutes in a cold bath or for one minute in one warmed to 50 per cent. C. of the following mixture:

Eight ccm. of a 2 per cent. watery solution of osmic acid; 16 ccm. of a 10 per cent. watery solution of tannic acid; 1 drop of glacial acetic acid.

It is then rinsed in water, followed by absolute alcohol, placed one or two minutes in a silver bath (1 gm. crystal silver nitrate, 200 ccm. of water). Without being fixed, the cover glass is put for 1 minute in a reduction bath of gallic acid, 5 gm.; tannic acid, 3 gm.; sod. acetate, 10 gm.; aq. distill, 350 ccm.

Without washing, bring the specimen back into the silver bath, move it about until the solution is colored black. Wash, dry and mount in balsam.

A review of the methods thus far enumerated makes it evident that a satisfactory staining of the spirochaeta pallida can not be obtained unless a great deal of time is expended.

Through numerous and extensive applications of the various staining reagents and *mordentia*, whereby we attempted to demonstrate the spirochaeta pallida, we came to the conclusion that the best method, both with regard to rapidity and distinction, is that of Grünwald.

For employment of this method, which one of us has already advocated as rapid stain for gonococci, one requires the following solution.

A gramme of eosin and a gramme of methylene blue are each dissolved in a litre of water. Both solutions are then mixed and set aside for a few days. After that, it is filtered and the precipitate remaining on the filter washed with distilled water until the filtrate comes away clear. What remains, is dried at room temperature, powdered and a saturated solution made in pure methyl alcohol.

The staining procedure is very simple.

(1.) The smeared slide or cover glass is dried in the air; (2) a few drops of the stain are poured on and allowed to act for a few (4 to 10) sec-

onds: (3) wash quickly in distilled water and mount in balsam.

It is to be noted that if the object is to obtain a conspicuous coloring of the spirochaeta, the staining time should not exceed ten seconds and the washing must be done very rapidly. This gives the spirochaeta a fairly intensive stain and makes them stand out rather prominently among the other almost colorless histologic elements. On the other hand if it is a contrast stain that is desired, it is but necessary to lengthen the staining time a few seconds and then wash so long with distilled water until the smear takes on a faint rose color.

The authors had hardly formulated this report when as a result of further investigations they arrived at the conclusion that the difficulties attributed to the staining of the spirochaeta, is more imaginary than real. In fact, they were able to demonstrate the spirochaeta of Schaudinn and Hoffmann, more or less intensely stained, by employing weak and warmed ethyl or methyl alcohol solutions of fuchsin (preferably Ziehl's phenol-alcoholic), gentian violet or methylene blue, and allowing these to act for a few seconds. If, however, contrast stains are desirable, only the universal stain will given them.—Translated by Dr. Barnet Joseph from the *Reports of the Clinic of the Royal University of Siena*, 1906.

NEUROLOGY.

EDITED BY

WILLIAM BROWNING, M.D.,

Neurologist to Kings County, Brooklyn, Long Island College and German Hospitals, Brooklyn, New York.

RESPIRATORY INNERVATION.

Theory regarding a number of brain functions has been so complicated by the assumption of several centers for each that little use could be made of related clinical phenomena. One of these, that of the regulation of breathing, has been so materially simplified by recent work that a summary of results is worth giving, both for its own interest and for the hope it indirectly presents that other functions may be handled likewise.

The conclusions of Prof. R. Nikolaidis, of Athens, "On the Theory of the Central Innervation of Respiration" (*Arch. f. Anat. & Physlg., physlg. Abthl.*, 1905, p. 465-472), are: "I. In the oblongata is a center for normal respiration, *i. e.*, the rhythmic change of tension (inspiration) and relaxation (passive expiration) of the same muscle-group, the inspirators. II. There must also exist in the oblongata a center for active expiration. III. The center for normal respiration is influenced by an inspiratory inhibiting center. This lies in the posterior quadrigeminal bodies, and its removal even where the vagi are intact

is followed by changes in the respiration. IV. The center for active expiration is inhibited in its activity during normal respiration by an expiratory inhibiting center which exists in the anterior quadrigemina or in the parts beneath them. V. The inspiratory centers described in the various parts of the brain-stem above the oblongata are probably inspiratory tracts, the centers for which lie in the cerebral cortex."

"On the Respiratory Center in the Cerebral Cortex of the Dog, and the Course of the Centrifugal Fibres Emanating from it," by Mavrakis and Dantos (Athens), *Ibid*, p. 473-481.

After a literary and experimental report on the subject, these authors give the following summary: "I. There exists a spot in the upper part of the precentral convolution [shown on a diagram], irritation of which calls forth definite and pure respiratory movements (*i. e.*, unaccompanied by any other motion).

"II. The centrifugal fibers from this spot traverse the internal capsule, the foot of the crus, and the basal ganglia to the midbrain, in which they run very close to the middle line on the corresponding side, to their termination at the respiratory center in the oblongata. These fibres consequently do not cross but pass on the same side, at least to the midbrain."

FOURTH ANNUAL REPORT OF MOSHER'S DEPARTMENT FOR MENTAL DISEASES AT THE ALBANY HOSPITAL.

"Although the first conception of Pavilion F was based upon the idea of active hospital treatment, a larger view has opened its doors to all of the mental emergencies." This plan of adapting part of a general hospital to some mental cases has been widely approved, but for reasons, financial and formal, the good example has not been widely followed. The figures show its continued success at Albany. Mosher also gives a table of all the cases in these four years. A few non-mental ones are included in it, and many alcoholics—which latter help materially to increase the fine showing. In a total of 784 patients in that time, the recoveries amounted to 27 per cent. and those improved to nearly 31 per cent. more. And this was accomplished even under the following limitation: "Unless, therefore, our public patients improve so rapidly as to keep the cost of care within that of commitment and transfer to a State hospital they were obliged to leave."

While the executive care of the insane in this State is admirably carried on, their curative care often involves an expense for which present provision is inadequate. The welfare of those with incipient and early mental trouble might be greatly favored by a wider adoption of some such plan, for "prompt, early treatment of mental diseases is of the greatest importance." But innovations and even improvements are not apt to be favored by local officials.—*Albany Medical Annals*, May, 1906.

Medical Society of the State of New York.

MEETING OF THE HOUSE OF DELEGATES.

A meeting of the House of Delegates of the Medical Society of the State of New York was held at 64 Madison Avenue, New York, at 2.30 P. M., May 19, 1906. Dr. Joseph D. Bryant, President, in the Chair. Dr. Wisner R. Townsend, Secretary.

The following were present: Drs. Joseph D. Bryant, Wisner R. Townsend, Abraham Jacobi, Albert Vander Veer, Leo. H. Neuman, Arthur G. Root, William J. Nellis, Alexander Lambert, Julius C. Bierwirth, Willis G. Macdonald, E. Eliot Harris, Edward D. Fisher and Frank Van Fleet.

The minutes of the last meeting were read and approved.

The Treasurer's report was read by Dr. Lambert.

Moved, seconded and carried that it be accepted and placed on file.

Dr. Neuman, Chairman, Committee on Scientific Work, reported progress.

Dr. Root, Chairman, Committee on Legislation, gave a brief verbal report of the work done in Albany during the past session, and presented the bill of the Committee from January 1st to date, which was referred to the Committee on Audit.

Dr. Nellis, Chairman, presented the report of the Committee on Arrangements.

Moved, seconded and carried that the report of the Committee on Arrangements be accepted and placed on file.

Dr. Wisner R. Townsend presented the report of the Committee on Referendum.

Moved, seconded and carried that the report of the Committee on Referendum be accepted and placed on file.

Dr. E. Eliot Harris presented the report of the Committee on Publication.

Moved, seconded and carried that the report of the Committee on Publication be accepted and placed on file.

Dr. Wisner R. Townsend presented the report of the Secretary.

Moved, seconded and carried that the report of the Secretary be accepted and placed on file.

Dr. William Francis Campbell was nominated for the office of Delegate in the *ad interim* House of Delegates, to succeed the late Dr. George Ryerson Fowler, deceased.

The Secretary was instructed to cast one ballot as the unanimous vote of the House of Delegates for Dr. William Francis Campbell as a member of the *ad interim* House of Delegates. The ballot was cast, and the President declared Dr. Campbell elected a member of the *ad interim* House of Delegates.

Dr. Algernon T. Bristow was nominated as Delegate to the American Medical Association, to

serve for one year, to fill the vacancy caused by the death of Dr. George Ryerson Fowler.

The Secretary was instructed to cast one ballot as the unanimous vote of the House of Delegates for Dr. Algernon T. Bristow as a Delegate to the American Medical Association for one year. The ballot was cast, and the President declared Dr. Bristow elected a Delegate to the American Medical Association for one year.

Dr. William Warren Potter was nominated a member of the Committee on Scientific Work to fill the vacancy caused by the resignation of Dr. Herbert U. Williams.

The Secretary was instructed to cast one ballot as the unanimous vote of the House of Delegates for Dr. William Warren Potter as a member of the Committee on Scientific Work. The ballot was cast, and the President declared Dr. Potter elected a member of the Committee on Scientific Work.

Moved, seconded and carried.

Resolved, That in the Medical Directory of New York, New Jersey and Connecticut, published by the Medical Society of the State of New York, only the names of registered physicians be inserted.

Moved, seconded and carried.

Resolved, That the President or Secretary be authorized to present credentials, as Delegates to other Medical Societies, from the Medical Society of the State of New York, to such members in good standing as may apply for the same.

Moved, seconded and carried.

Resolved, That the President be authorized to appoint three members to represent the Medical Society of the State of New York in the Council on Medical Education of the American Medical Association.

The President appointed Drs. Albert Vander Veer, William Francis Campbell, and Edward D. Fisher.

Moved seconded and carried.

Resolved, That a Committee be appointed with power to prepare suitable resolutions on the death of Dr. George Ryerson Fowler, a former member of the House of Delegates.

The President appointed Drs. Bristow, Harris and Neumann.

Dr. Lambert, Chairman of the Committee on Audit, reported that the bill of the Committee on Legislation amounted to \$513.00, and it was moved, seconded and carried, that the Treasurer be authorized to pay this bill.

Dr. Van Fleet moved, and it was duly seconded and carried, that the House of Delegates of the Medical Society of the State of New York express its approval of the appointment by the Legislature of Dr. Vander Veer to the position of Regent of the University of the State of New York.

Dr. Harris moved, and it was duly seconded and carried that a vote of thanks be extended to Dr. Root, Chairman, Committee on Legislation, for his work during the past session.

Moved, seconded and carried.

Resolved, That on and after October 1st, 1906, no member of the Medical Society of the State of New York shall receive the *Directory*, the *NEW YORK STATE JOURNAL OF MEDICINE*, nor be entitled to malpractice defense until his County dues and State Assessment have been paid.

There being no further business, the minutes of this meeting were read and approved, and it was moved, seconded and carried that the House of Delegates take a recess to meet on the call of the chair at ten days' notice.

REPORT OF THE TREASURER.

On December 23, 1905, the available funds of the Society were, cash on hand, \$5,771.97; May 1st the cash balance was \$1,733.94. During this period the expenses have been \$5,223. These moneys, of course, do not include the Lucien Howe Prize Fund of \$1,500 nor the Merritt H. Cash Fund of \$733.07.

The current expenses of the Society have been paid, and there are ample funds at present to more than meet outstanding bills. The number of members of the Society to-day is 6,384, of these the County Treasurers have transmitted the State *per capita* tax for 331. This small number is but natural, as the *per capita* tax is not due to the Treasurer until June 1st.

It is of the greatest importance that the officers of the various County Societies do their utmost to collect the *per capita* tax from as many men as possible, for from this source the main revenue of the Society is derived. As the income is as yet problematical for this year, it is also necessary that the strictest economy be practiced by all committees of the Medical Society of the State of New York who have any disbursements to make.

(Signed), ALEXANDER LAMBERT,
Treasurer.

REPORT OF COMMITTEE OF ARRANGEMENTS, ALBANY MEETING, 1906.

The Medical Society of the State of New York,
To William J. Nellis, Dr.

Rent of Odd Fellows Hall	\$200.00
Music	52.00
Printing	74.60
Addressing Invitations	7.50
Janitor, Emanuel Baptist Church.....	10.00
Banner and Cards	18.20
Postage for Church Invitations (1,500).....	30.00
Other Postage	2.00
Long Distance Telephone (Buffalo)	1.50
Eighteen Complimentary Dinners, at \$5.00.....	90.00
	<hr/>
	\$485.80

Pages for Meeting (Senior Students Albany Medical College.)

A. B. Treadway, 3 days, \$2.00 per day	\$6.00
H. P. Carpenter, 3 days, \$2.00 per day	6.00
W. A. Reynolds, 3 days, \$2.00 per day	6.00
J. F. Robinson, 4 days, \$2.00 per day.	8.00
	<hr/>
	26.00
	<hr/>
	\$511.80

Received payment.
W. J. NELLIS, Chairman.

STATEMENT OF ANNUAL DINNER, MEDICAL SOCIETY OF THE STATE OF NEW YORK.

The Medical Society of the State of New York,
In Account with the Committee of Arrangements.

Cash received from Dr. Shaw from sale of tickets	\$2,155.10
Cash received from State Society for eighteen complimentary tickets	90.00
	<hr/>
	\$2,245.10

Cash paid out:

W. A. Wood, Caterer, 450 dinners at \$2.00 per dinner.....	\$900.00
Hotel Ten Eyck, wines and cigars....	773.00
Rent of chairs.....	25.00
Flowers	100.00
Decorations of hall.....	50.00
Stenography, stationery and postage..	26.00
Janitor, Odd Fellows Hall.....	15.00
Sundries	5.00
Carriages for speakers.....	6.50
	<hr/>
	1,900.50

	<hr/>
	\$344.60
Less Dr. Fowler's checks returned unpaid...	10.00
	<hr/>
	\$334.60

REPORT OF THE COMMITTEE ON REFERENDUM.

The Committee on Referendum appointed December 14, 1905, has held three meetings. On March 8th the method of submitting the question and securing the votes was determined. The following cards show the manner in which notice was sent to the members:

MEDICAL SOCIETY OF THE STATE OF NEW YORK.

64 MADISON AVENUE, NEW YORK.

DEAR DOCTOR:

In accordance with the provisions of the order of Mr. Justive Davy, entered December 9, 1905, establishing the consolidation of the Medical Society of the State of New York with the New York State Medical Association, this opportunity is presented to vote (referendum) by mail on the question, as to whether or not the Principles of Medical Ethics of the American Medical Association, as suggestive and advisory, shall be adopted by the Medical Society of the State of New York.

Prompt action is required to register your vote, as the Committee has decided to close the poll at the expiration of ten days after this general submission of the question. *(See foot note.)

The Principles of Medical Ethics are printed in the *NEW YORK STATE JOURNAL OF MEDICINE* in the April issue, 1906, for the purpose of enabling you to act with knowledge of the question herewith officially submitted for your vote. It is important that every member register his vote.

JOSEPH D. BRYANT, President,
JULIUS C. BIERWIRTH,
ABRAHAM JACOBI,
GEORGE MCNAUGHTON,
WISNER R. TOWNSEND, Secretary.
Committee on Referendum.

* Submitted April 27, 1906, at 12 o'clock noon.

The authority for this Referendum is the Seventh Section of the Agreement of the Joint Committee of Conference, and reads as follows:

Seventh: It is further covenanted and agreed by the parties hereto that as soon as practicable after the entry of an order for the consolidation of the corporations, the following proposition shall be submitted by referendum to the vote of the members of the Society, namely:

"The Principles of Medical Ethics of the American Medical Association, being suggestive and advisory, shall be the guide of members in their relations to each other and to the public."

You will please read carefully the above section and register with ink on this page your approval of the proposition by voting "yes," or your disapproval by voting "no." Write your name and address distinctly in the spaces allotted below, and mail this card *at once* in the inclosed return envelope.

I vote.....

Name.....

P. O. Address.....

Under direction of the Committee, the question was duly submitted "as soon as practicable," which was on April 27th, 1906.

The Committee met at 64 Madison Avenue, on May 10th, for the purpose of canvassing the vote. The result is as follows:

Votes cast in accordance with the provisions of the referendum, 3,525, of which 3,306 voted "yes," 197 "no," 17 defective, 2 duplicates, 3 letters returned by the Post Office owing to imperfect address. Eighty votes were received since the expiration of the referendum (May 7, 1906). These envelopes were not opened.

Respectfully submitted,

(Signed) JOSEPH D. BRYANT,
ABRAHAM JACOBI,
GEORGE McNAUGHTON,
JULIUS C. BIERWIRTH,
WISNER R. TOWNSEND, Secretary.

May 12, 1906.

REPORT OF THE COMMITTEE ON PUBLICATION.

TO THE PRESIDENT AND MEMBERS OF THE HOUSE OF DELEGATES:

The Committee on Publication submits its report and files a complete statement of all the receipts and expenditures for the publication of the JOURNAL, made out in detail.

A comparison between the January and February numbers and the March and April numbers shows gains as follows: Pages of reading matter, January and February, 80; March and April, 112. Pages of advertising matter, January and February, 31½; March and April, 65¾. The number of copies issued per month is ten thousand. All internal and external medicines which are advertised in the JOURNAL publish their formulas.

The Committee expects to publish the JOURNAL on the fifteenth of each month, containing acceptable advertisements only, at a cost much less than transactions could be furnished to the members.

The Directory will contain the most reliable list of registered physicians of New York, New Jersey and Connecticut, in existence, and it will be ready for delivery on or before October first.

Respectfully submitted,

E. ELIOT HARRIS, Chairman.

REPORT OF THE SECRETARY.

May 19th, 1906.

TO THE HOUSE OF DELEGATES OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK:

Gentlemen:

The Secretary desires, at the present time, to present the following report of work done in the office since the last meeting.

The first work was to get a corrected list of County Society members. This proved a long and tedious task, taking about two months, and could not have been done as quickly, if at all, but for the very complete card catalogue in the office, which had been made as the result of five years' work by the Association in the preparation of the Directory. The last list to be received of county members reached the office April 20th.

After this work, the office force took up the question of verifying the County Clerks' lists with the names in the last year's directory.

The Secretary desires to call the attention of the House of Delegates, and through it, the profession, to the great carelessness shown in the County Clerks' lists of registered physicians of this State, and to the great carelessness of the profession in complying with the laws relating to registration.

Nine hundred circular letters were sent out to men not found on the County Clerks' certified lists on file in the office, and as a result a great many errors have been corrected. A great many have registered since their attention was called to the matter, having written to us that they were ignorant of the law, or had forgotten to comply with it.

A large number who are not registered to-day will register later on, and we are receiving from the County Clerks of late notices that men who have been in practice for a number of years have just registered. Arrangements have been made to keep these lists up to date hereafter. As the County Secretaries will, in future, assist in this work, a better knowledge of the profession of the State can thus be gained by both the County and State organizations. As these lists are expensive, and the card catalogues represent much labor, it would seem wise to purchase another safe, in which they could be stored.

The State Board of Medical Examiners heartily approves of this work, and if it is to be continued it will enable New York State to have something it never had before—a complete roster of the registered physicians. Once this list is made it will last for all time, and the Green Book will then be an official register of legally qualified practitioners. The Secretary firmly believes that no name should be introduced in the Directory, which will be published in October, unless it has been verified with the County Clerks' lists. There are probably to-day 250 physicians in this State who are qualified to practice medicine, but who have failed to comply with the law in relation to registration.

All these men who are not registered are liable to fine, as they are practicing contrary to law. The Secretary would advise the passage of the following resolution:

"Resolved, That in the Medical Directory of New York, New Jersey and Connecticut, published by the Medical Society of the State of New York, only the names of registered physicians be inserted."

Delegates' certificates have been issued to the following for the Fifteenth International Medical Congress:

Charles Warrenne Allen, A. E. Macdonald, Louis L. Seaman, James N. Vander Veer, Charles G. Wagner.

The Secretary has a request from Dr. William M. Leszynsky that he be appointed to represent this Society at the meeting of the Medical Society of New Jersey.

The Secretary would suggest that he be authorized to appoint as delegates to other Medical Societies those members of this Society who are in good standing, and who apply for such appointment; this resolution to hold good until the next meeting of the House of Delegates. Many attend these meetings, and they receive greater attention if coming as delegates, and it is also a courtesy to the other Society to have delegates sent from the Medical Society of the State of New York.

The Secretary desires to report that the Medical Society of the County of Kings has completed its contract with the Society on the terms presented to the House of Delegates and approved January 29, 1906.

The following County Societies have adopted By-laws in conformity with the State By-laws, and they have been approved by the Committee appointed at the last meeting: Albany, Allegany, Broome, Cattaraugus, Chautauqua, Chenango, Columbia, Cortland, Franklin, Fulton, Genesee, Greene, Kings, Lewis, Monroe, New York, Niagara, Oneida, Onondaga, Ontario, Orleans, Otsego, Queens-Nassau, Richmond, Rockland, St. Lawrence, Saratoga, Steuben, Suffolk, Sullivan, Tioga, Tompkins, Ulster, Warren, Washington, Westchester, Wyoming. Total, 37.

The following Counties have adopted new By-laws, but they have not yet been passed upon by the Committee: Chemung, Dutchess, Herkimer, Madison, Oswego, Rensselaer, Seneca.

The following Counties have notified the Secretary that they will hold meetings to adopt new Constitutions and By-laws: Cayuga, Clinton, Delaware, Erie, Essex, Jefferson, Livingston, Montgomery, Orange, Schenectady, Schoharie, Schuyler, Wayne, Yates. Total, 14.

The Secretary would request that the House of Delegates decide whether those members of County Societies who have not paid the State Assessment before October 1st shall receive the Directory for 1906 and the monthly Journal, and whether they shall be entitled to malpractice defense.

Since the January meeting there have been seventeen applications for malpractice defense, showing the necessity and value of this work.

The Health Officer of the State of New York, in response to the resolution passed at the previous meeting, stated that he would issue orders to all local health officers to place ophthalmia neonatorum among contagious diseases which must be reported to the local Boards of Health.

In making up the new list of the Medical Society of the State of New York, it was found in the new Constitution and By-laws that no provision had been made for honorary members. The matter was referred to our attorney, and his reply is herewith appended:

May 4, 1906.

DR. WISNER R. TOWNSEND,
Secretary, Medical Society of the State of New York,
64 Madison Avenue, City.

MY DEAR DOCTOR:—With reference to the Honorary Membership list in the Society it would seem to me that in the absence of a provision for any such list in future, it would hardly be proper to receive from January 1, 1906, any members bearing the name "Honorary."

For the same reason, such list not having been disposed of, I would say that those who are already on the honorary list should be retained as such.

Faithfully yours,

(Signed) JAMES TAYLOR LEWIS, Counsel.

As the District Branch Presidents, according to the Constitution and By-Laws, are members of the House of Delegates, an expression of opinion was asked of our Counsel, Mr. James Taylor Lewis, whether the *ad interim* appointees to these positions were to be members of the present *ad interim* House of Delegates, and his reply is herewith appended. Therefore, they were not notified of this meeting.

April 19, 1906.

DR. WISNER R. TOWNSEND,
Secretary, Medical Society of the State of New York,
64 Madison Avenue, City.

MY DEAR DOCTOR:—Your request for an expression of opinion as to who makes up the *ad interim* House of Delegates is at hand, and in reply beg leave to say that the resolution passed at the annual meeting of the State Society, which will be found printed on page 42 of the February JOURNAL, determines that question, and reads as follows:

"The *ad interim* Officers, Chairmen of Standing Committees, House of Delegates and Council of the Medical Society of the State of New York, created by such order of consolidation, are hereby authorized, directed and empowered to exercise," etc.

You will therefore see that only such officers and House of Delegates as were created by the order, have authority to continue the work of the management of the Society until the next annual meeting.

Faithfully yours,

(Signed) JAMES TAYLOR LEWIS.

The Secretary begs leave to present the following letter for action by the House of Delegates:

Buffalo, N. Y., Feb. 13, 1906.

MY DEAR DOCTOR TOWNSEND:—

In reply to your favor of the 6th, I want to say that I am sensible of the honor conferred upon me by the State Society in electing me to the Committee mentioned. However, for a number of reasons it will not be possible for me to serve, and I must therefore decline. I am sure you can find others at this end of the State who can do the work much better. I would suggest Dr. Eugene A. Smith or Thomas B. Carpenter, of this city.

Yours very truly,
(Signed) HERBERT U. WILLIAMS.

[Moved, seconded and carried that the resignation of Dr. Williams be accepted.]

The Secretary begs to present the following:

February 9, 1906.

WISNER R. TOWNSEND, M.D., Secretary.

DEAR DOCTOR:—I feel much honored that Dr. Bryant has appointed me on the Committee on Prize Essays, and regret that I am unable to accept the appointment.

Very truly yours,
(Signed) HENRY HUN.

The President, Dr. Bryant, has appointed Dr. Edward B. Angell to fill the vacancy caused by the resignation of Dr. Henry Hun.

The Council on Medical Education of the American Medical Association has forwarded the following letter, which is presented for your consideration:

103 Dearborn Avenue, Chicago, Feb. 1, 1906.

DR. WISNER R. TOWNSEND,
New York City.

DEAR DOCTOR:—We are enclosing herewith a reprint of the Report of the Council on Medical Education made to the American Medical Association at the Portland session, July, 1905.

In order to accomplish the most and bring about a standard for medical education that will place our country in the lead in these matters, it is essential that the Council have the earnest interest and co-operation of the entire medical profession through the various State Medical Associations and Societies.

If your Society does not already have a committee or Local Council especially dealing with medical education, could you not appoint such a committee to co-operate with the Council and the various State Examining Boards to further this work? This, if possible, should be a permanent committee, say of three members, to serve for one, two and three years, respectively, a new member therefore to be appointed each year.

Should it be impossible to secure such a committee in the near future, could you give us the names and addresses of two or three members of your board who might serve temporarily in such capacity?

Feeling assured that we shall have your co-operation in this regard, we are,

Very truly yours,

COUNCIL ON MEDICAL EDUCATION.
Per N. P. Colwell.

A copy of this letter was sent to your President.

The President, Dr. Joseph D. Bryant, has appointed the following committees since the last meeting:

Prize Essays: Abraham Jacobi, Chairman; Edward B. Angell, Roswell Park.

Publication: E. Eliot Harris, Chairman; Floyd M. Crandall, Hermann M. Biggs, Algernon T. Bristow, Alexander Lambert.

Last fall, before amalgamation took place, the State Association was in correspondence with the American Medical Association to furnish them with data for their new National Directory. A suitable business arrangement was made with the Secretary of the American Medical Association, and the data was furnished by this office.

The membership of the Medical Society of the State of New York, May 19, 1906, based on returns from County Secretaries, and omitting duplicates is 6,384.

Notice was sent to the American Medical Association on May 1st that the membership was 6,378, and that this State is entitled to twelve delegates. Certificates have been issued to the eleven elected in January, and the Secretary has received the necessary blank from the American Medical Association for the member who will be elected to succeed Dr. Fowler.

It would also seem appropriate, at this time, that this body representing the Medical Society of the State of New York, take some suitable action on the death of our late lamented colleague, Dr. George Ryerson Fowler, who was an honored member of this, the first House of Delegates.

The vacancy in the *ad interim* House of Delegates should be filled, and the vacancy in the Delegates to the American Medical Association, and the vacancy in the Committee on Scientific Work.

Respectfully submitted,
(Signed) WISNER R. TOWNSEND,
Secretary.

REGISTRATION OF PHYSICIANS.

Through the courtesy of Mr. James Taylor Lewis, Counsel for the Medical Society of the State of New York, and Dr. M. J. Lewi, Secretary of the State Board of Medical Examiners, compilation has been made of the laws relating to medical registration in this State. Examination of the certified County Clerks' lists shows that many physicians in the State have failed to register. Their attention is called to these laws because if they are not complied with, physicians will render themselves liable to certain penalties. In addition, they also cannot recover when suing for professional charges, nor can they claim certain advantages when sued as professional men; in other words, if they are not registered the State does not recognize them as physicians in good standing. All members of the profession should register in every county in which they maintain an office. Members practicing regularly in two or more counties should register in all the counties in which they practice. Members of the profession when registering should see that the County Clerks enter their names accurately and in the proper place in the books kept for this purpose, so that if any one should investigate the matter that their names will be found without difficulty.

The Secretary of the Medical Society of the State of New York has taken up this subject, and it has been found that there are still probably 250 physicians in the State of New York who have not complied with the law, and it is hoped that before long all will have registered. If the State Society can be of any assistance in this matter, it will be very glad to render such assistance.

Letters have been sent to all those whose names are not found on the certified copies of the County Clerk's official list, and many names have since been added to the registration list. This work will be continued, and it is the intention to make the Medical Directory of New York, New Jersey and Connecticut a book which will only contain those properly registered. By this means only can it be definitely known who are not entitled to practice.

The Counsel of the Society has submitted the following report upon the laws of registration:

Chapter 513 of the Laws of 1880 provides in Section 2:

"SECTION 2.—Every person now lawfully engaged in the practice of physic and surgery within the State shall, on or before the 1st day of October, 1880, and every person hereafter duly authorized to practice physic and surgery shall, before commencing to practice, register in the clerk's office of the county where he is practicing, or intends to commence the practice of physic and surgery, in a book to be kept by said clerk, his name, residence and place of birth, together with his authority for so practicing physic and surgery as prescribed in this act. The person so registering shall submit and verify by oath or affirmation, before a per-

son duly qualified to administer oaths, under the seal of the State, an affidavit, etc. The county clerk to receive a fee of twenty-five cents for such registration, to be paid by the person so registering.

"SEC. 3.—A person who violates either of the two preceding sections of this Act, or who shall practice physic or surgery under cover of a diploma illegally obtained, shall be deemed to be guilty of a misdemeanor, and on conviction shall be punished by a fine of not less than fifty dollars, etc."

The following year an Act was passed extending the time in which physicians and surgeons might comply with the provisions of the foregoing laws of 1880—Laws of 1881, Chapter 186. Section 1 of this Chapter reads as follows:

"SECTION 1.—Any person who was duly licensed to practice physic and surgery in this State, and entitled to register in the office of any county clerk in any county of this State where such person was practicing or intended to practice physic or surgery, under and according to the provisions of Chapter 513 of the Laws of 1880, entitled 'An Act to regulate the licensing of physicians and surgeons,' and who shall not have registered as required by the provisions of said chapter, shall have until the 1st day of October, 1881, in which to register as prescribed by Section 2 of said Act, etc."

In 1884 an act was passed amending Chapter 513 of the Laws of 1880 as follows:

"SECTION 4.—A person coming to the State from without the State may be licensed to practice physic and surgery, or either, within the State in the following manner: If he has a diploma conferring upon him the degree of doctor of medicine, issued by an incorporated University, medical college or medical school without the State, he shall exhibit the same to the faculty of some incorporated medical college or medical school of the State, with satisfactory evidence of his good moral character and such other evidence, if any, of his qualifications as a physician and surgeon as said faculty may require. If his diploma and qualifications are approved by them, then they shall endorse said diploma, which shall make it, for the purpose of his license to practice medicine and surgery within this State, the same as if issued by them. . . . This endorsed diploma shall authorize him to practice physic and surgery within the State upon his complying with the provisions of Section 2 of this Act, but this section shall not apply to any physician or surgeon residing or practicing medicine or surgery in a state bordering on this State, and whose regular practice extends into the limits of this State, but such physician and surgeon, if a legally qualified practitioner of medicine and surgery in the State in which he or she resides, shall be permitted to continue such regular practice within the limits of this State without further license therein. But nothing in this act shall be construed as authorizing or allowing any physician or surgeon licensed under the laws of any other State to open an office within this State or to appoint a place at which he or she may meet patients or receive calls."

On June 23, 1887, Chapter 647 of the Laws of 1887 was passed regulating the licensing and registration of physicians and surgeons and codifying the medical laws of the State. Section 1 of this chapter provides:

"No person shall practice physic or surgery in this State who shall not have attained the age of 21 years; and no person shall practice as aforesaid unless he or she shall be, at the time this act shall take effect, a person lawfully engaged in such practice in this State under license or authority conferred by its laws then in force, and lawfully registered pursuant to Chapter 513 of the Laws of 1880 and the act amendatory thereof, or unless he or she shall be licensed or authorized so to practice by the provisions of this Act, and registered as herein prescribed."

"SEC. 2.—From and after the date of the taking effect of this act no person not theretofore licensed or authorized to practice physic or surgery in this State, shall be deemed so licensed or authorized, except one of the three following classes:

"First—All who shall have been graduated from an incorporated medical school or college in this State with the degree of doctor of medicine . . . and so forth (then follows the requirements as to courses and length of time of each course).

"Second—All who have received said degree from the Regents of the University of the State of New York after substantial compliance with the legal requisites preliminary to its attainment and after examination by a legally constituted Board of Medical Examiners of this State.

"Third—All who, having been graduated from incorporated medical schools or colleges without the State as doctors of medicine, or licensed to practice physic or surgery under the laws of those European countries in which said degree does not confer the right so to practice, shall procure their diplomas from said corporations, or their licenses from such countries, to be endorsed by the faculty of an incorporated medical school or college within this State, or by the Regents of the University on the recommendation of a legally constituted Board of Medical Examiners of this State," and so forth.

"SEC. 3.—Every person who, at the time this act shall take effect, shall be practicing lawfully physic or surgery in this State, under the authority and license conferred by the laws then in force, but who shall not be then duly registered in the county where he or she practices; and every person who shall thereafter become lawfully authorized or licensed to practice physic or surgery in this State, shall register in a book to be kept in the clerk's office of the county in which such practice is carried on, his or her name, residence, place and date of birth, and authority for practicing as aforesaid. Every person who shall apply to register as a physician or surgeon shall be required, before registration, to subscribe and verify by oath or affirmation, before a person qualified to administer oaths in this State, an affidavit which shall be filed and preserved in a bound volume, and so forth . . . It is provided, however, that nothing in this act shall require any physician or surgeon who shall have duly registered lawful authority to practice as such, conformably to the provisions of Chapter 513 of the Laws of 1880, and the acts amendatory thereof, to register again under the provisions of this act, in any county where he or she shall be registered already."

Section 4 of this act provides for a practicing physician who removes his practice or a part thereof to another county to register in this other county on exhibiting in person his certificate of registration in the original county.

Section 5 of this act also provides for an extension of the time of registration of those not already registered to October 1, 1887, and continues—

"And thereafter no person shall be entitled to register any authority to practice physic or surgery, except the license conferred upon this act and the laws enacted hereafter, and no registration shall be considered valid as such unless the authority registered constituted at the time of registration, a license under the laws of this State then in force, provided that nothing in this section shall be construed to prohibit or suspend any prosecution for non-registration under said section instituted prior to said first day of October, 1887," and so forth.

Section 6 of this act provided for the punishment for failure to register and for the improper use of the title "M.D." or "Doctor," and also prohibited a person having been convicted of a felony from practicing medicine.

In 1890 an Act was passed, Chapter 500 of that year, amending Section 2 of the Laws of 1887 in respect to the three sub-divisions above referred to.

On May 4, 1891, the following was enacted:

"Chap. 311, L. 1891.

"SECTION 1.—Section eleven of chapter five hundred and seven of the laws of eighteen hundred and ninety, is hereby amended so as to read as follows:

"SEC. 11.—This act shall not apply to any student who duly matriculated in some legally incorporated medical college of the State of New York before the

fifth day of June, eighteen hundred and ninety, provided that such student within three months after the enactment of this amendment shall file with the Secretary of the Board of Regents of the University of the State of New York, a certificate setting forth the fact of such matriculation, verified by the applicant, and signed by the Secretary of the Faculty of the College in which he matriculated."

Then followed, in 1893, Chapter 661 of the Laws of that year, at Sections 149-150, under which law registration has been continued until the present:

"SEC. 149.—Every person licensed to practice medicine shall, before the licensee begins practice thereunder, be registered in a book kept in the clerk's office of the county where such practice is to be carried on, with name, residence, place and date of birth, and source, number and date of his license to practice. Before registering, each licensee shall file, to be kept in a bound volume in the county clerk's office, an affidavit of the above facts, and also that he is the person named in such license, and had before receiving the same complied with all requisites as to attendance, terms, amount of study and examinations required by law and the rules of the University as preliminary to the conferment thereof; that no money was paid for such license, etc. . . . The clerk shall thereupon give to every physician so registering a transcript of the entries in the register with a certificate under seal, that he has filed the prescribed affidavit, and the licensee shall pay to the county clerk a total fee of one dollar for registration, affidavit and certificate."

Section 150 provides—

"A practicing physician having registered a lawful authority to practice medicine in one county and removing such practice or part thereof to another county, or regularly engaged in practicing or opening an office in another county, shall show or send by registered mail to the clerk of such county, his certificate of registration. If such certificate correctly shows that the original registration was by an authority issued under seal by the Regents, or if the certificate itself is endorsed by the Regents as entitled to registration, the clerk shall thereupon register the applicant in the latter county, on receipt of a fee of twenty-five cents, and shall stamp or endorse on such certificate, the date and his name preceded by the words 'registered also in _____ county,' and return the certificate to the applicant."

Then follows Section 153, referring to penalties for practicing medicine without registration, and its punishment.

In order that physicians who had failed from various causes to register shall have a last opportunity to do so, Chapter 404 of the Laws of 1894 was passed, which provided at Section 1:

"Any person holding a diploma of date prior to January 1st, 1880, conferring the degree of bachelor or doctor of medicine, from a reputable incorporated American medical school or college, and who has been a resident and citizen of this State continuously since June 1st, 1880, who omitted or neglected to register with the County Clerk as prescribed by law, shall upon production of his or her diploma and satisfactory proof of such facts, as provided in Section 2 hereof, be entitled, upon payment of a fee of \$25.00, to receive from a State Board of Medical Examiners recommendations upon which the Regents shall issue, under seal, a certificate to the effect that he or she may register in the Clerk's office of the county where he or she may reside, which shall, after such registration, be a sufficient license to practice medicine in the county where registered."

This act became a law May 3d, 1894, with the approval of the Governor, and Section 3 of this act limits the time for securing its benefits as follows:

"Any person desirous of securing the benefits of this act must do so within one year from the date it takes effect."

Matriculants of New York State Medical Schools before June 5th, 1890, who received the degree of M.D.

from a registered medical school before August 1st, 1895, may without further examination, on payment of ten dollars to the Regents, and on submitting such evidence as they may require, receive an endorsement of their diplomas conferring all rights and privileges of a Regents license issued after examination.

JAMES TAYLOR LEWIS, Counsel.

A conference was held at No. 1133 Broadway, New York City, April 12, 1906, for the purpose of discussing matters relating to the registration of medical practitioners in the State of New York, at which there were present, Dr. William Warren Potter, President of the State Board of Medical Examiners, representing the Medical Society of the State of New York; Dr. W. R. Townsend, Secretary of the Medical Society of the State of New York, and Dr. M. J. Lewi, Secretary of the State Board of Medical Examiners.

Informal discussion bearing on the subject of the meeting was had and it was the opinion of those present that the methods for controlling registration as outlined by Dr. Townsend were desirable and that the profession be urged and the authorities be requested to aid in the direction indicated.

(Signed M. J. LEWI, M.D.,
Secretary.

County Societies.

MEDICAL SOCIETY OF THE COUNTY OF CHEMUNG.

The last annual meeting of the Medical Society of the County of Chemung under the old régime was held in the Society's Rooms in Elmira, May 15, 1906. Dr. William B. Jones, of Rochester, was present and addressed the meeting in the interests of the coming meeting of the Lake Keuka Medical and Surgical Association, of which he is President, and the annual meeting which is to be held at Grove Springs, Lake Keuka, July 5, 6, and 7, 1906. Dr. Jones then read a paper on the general subject of Goitre, which was greatly appreciated by his auditors and was thoroughly discussed. The regular order of business was then taken up, the most important of which was the adoption of new By-laws in conformity with the new organization of the State Society.

The date of the annual meeting was changed from May to December, and the present officers were continued until that meeting by unanimous consent. The work of adopting the new By-laws having taken more than the allotted time, it was decided to postpone the address of President Theron A. Wales until the annual meeting in December.

The Society voted to send \$50 to the *Journal of the American Medical Association* for the relief of the physicians of San Francisco, who are suffering as a result of the earthquake and fire.

Dr. Arthur W. Booth, of Elmira, has been appointed a member of the State Board of Medical Examiners. The honor is a fitting recognition of the attainments of its recipient. Dr. Booth is a scholarly gentleman and a scientific physician of wide experience and study, and his influence will be felt in the efforts of this august body in guarding the interests of the medical profession.

LEWIS COUNTY MEDICAL SOCIETY.

A regular meeting of this society was held at Lowville, N. Y., May 8, 1906. Routine business was transacted. The society voted to send ten dollars to the San Francisco Medical Society for the relief of its members. Those present at the meeting were Dr. H. A. Pawling and Dr. LeRoy W. King, of Lowville; Dr. F. D. Bigarel, Port Leyden; Dr. F. E. Jones, Beaver Falls; Dr. Paul H. von Zierolshofen, Dr. Ira D. Spencer and Dr. Laurentine Rochelle, Croghan.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, May 15, 1906.

Scientific Program.

"Recent Experimental Work Bearing on the Etiology of Cancer," by Harvey R. Gaylord, M.D., of Buffalo, N. Y.

Sections.

SECTION ON LARYNGOLOGY, RHINOLOGY AND OTOTOLOGY, May 17th.

1. "Three Cases of Middle Ear Suppuration with Cerebral Complications," by B. C. Collins, M.D.

2. "Headache as a Symptom of Intransal Disease," by S. H. Lutz, M.D.

SECTION ON PEDIATRICS, May 23d.

1. "Early Symptoms of Pott's Disease and Other Curvatures of the Spine in Children," by Chas. Dwight Napier, M.D.

2. "Some Observations on Pyrexia in Infancy and Childhood," by Wm. A. Northridge, M.D.

3. "Some Notes on the Summer Milk Distribution of the Children's Aid Society," by Louis C. Ager, M.D.

4. "Hysterical Paralysis in a Child," by W. H. Wogolom, M.D.

SECTION ON GENERAL MEDICINE, May 14th.

Symposium on Diabetes Mellitus:

"Chemistry," Dr. E. H. Bartley.

"Pathology," Dr. J. M. Van Cott.

"Sæmiology," Dr. Frank E. West.

"Treatment," Dr. J. A. McCorkle.

MADISON COUNTY MEDICAL SOCIETY.

This society observed its one hundredth anniversary at Oneida, May 8, 1906. The society was called to order by A. P. Dodge, of Oneida, the President. Almost the entire membership of the society was present, besides several guests. Among the latter were Dr. W. R. Townsend, of New York, Secretary of the State Medical Society; Dr. H. G. Jones, of Utica, President of the Oneida County Medical Society; Dr. W. M. Gibson, of Utica, and Dr. John L. Heffron, of Syracuse.

The reports of the officers were received, and business was transacted. The most important matter to come up was the adoption of a new set of by-laws. The new by-laws adopted are in conformity with those of the Medical Society of the State of New York.

Officers elected for the ensuing year: Dr. A. P. Dodge, President, Oneida; Dr. H. G. Germer, Vice-President, Canastota; Dr. George W. Miles, Secretary, Oneida; Dr. S. J. Wilson, Treasurer, Oneida.

Dr. W. M. Gibson, of Utica, presented a paper on "The Acid Auto-Intoxications." This was followed by an address by Dr. John L. Heffron, of Syracuse, on "The Progress of Therapeutics."

The scientific and business program was followed by a dinner, which was participated in by the members and their families and the invited guests.

The Madison County Medical Society was organized in the town of Sullivan, July 29, 1806. Its first officers were Israel Farrell, President; Jonas Fay, Vice-President; Elijah Pratt, Secretary; James Pratt, Treasurer.

MEDICAL SOCIETY OF THE COUNTY OF MONROE.

REGULAR MEETING, May 15, 1906, at ROCHESTER, N. Y.

Program.

1. "Immunization Against Tuberculosis in Man and Cattle," by Joseph Roby.

2. "The Treatment of Gonorrhœal Ophthalmia," by R. G. Carson.

3. Paper by A. Dann.

4. "Specimens Showing Coarse Brain Lesions: with Brief Clinical Histories," by D. L. Ross, of Craig Colony, Sonyea.
5. "Instruments and Plates for Surgery of the Brain; Preliminary Report," by Frank Hartley and J. H. Kenyon, New York.
6. "The Physician and the Social Evil," by E. W. Ruggles.
7. "The Remedial Value of the Prolonged Warm Bath in Undue Irritability of the Cerebro-Spinal Nervous System," by E. B. Angell.
8. "Some Observations on Retro-Displacements and Prolapse of the Uterus," by Kathleen Buck.
9. Report of Cases Involving Questions of Diagnosis, by L. A. Weigel and R. R. Fitch.
10. "Result of Hysterectomies for Carcinoma of the Cervix Uteri," by L. W. Rose.
11. Two Unusual Obstetrical Cases: (a) Concealed Hemorrhage at Full Term (*Ablatio Placentæ*); (b) A Full Term Ectopic Gestation. Presentation of Specimens, by Eugene W. Belknap, Syracuse.
12. "Extra-Uterine Pregnancy," by George W. Jarman, New York.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, May 28, 1906.

Scientific Session.

Under the Auspices of the Committee on Hygiene.

1. "Medical Examination and Inspection of School Children" (lantern demonstration), by S. Josephine Baker, M.D., Medical Inspector, Department of Health.
2. "Food Inspection in New York City" (lantern demonstration), by Mr. Bayard C. Fuller, Supervising Food Inspector, Department of Health.
3. "Food Laws; their Adequacy and Inadequacy," by Harford P. Walker, Esq., Assistant Corporation Counsel, New York City.
4. Discussion.

THE RENSSELAER COUNTY MEDICAL SOCIETY.

REGULAR MEETING, May 8, 1906.

Program.

- "Milk Inspection, its Advantages to the Public Health," by Dr. C. E. Nichols.
- "The Chemistry of Milk," by Dr. Wm. P. Mason.
- "The Bacteriology of Milk," by Dr. H. W. Carey.
- Dr. George T. Wilson, of Hoosick Falls, was elected to membership.

MEDICAL SOCIETY OF THE COUNTY OF STEUBEN.

The eighty-ninth annual meeting of this Society was held at Bath, N. Y., on May 8, 1906.

Program.

- Address of the President, Frank H. Starr, of Corning. Subject, "Entering Into the Labors of Others."
- "Cancer," by W. B. Jones, of Rochester.
- "Report of a Case of Chronic Articular Rheumatism, treated with Formic Acid," by Clayton K. Haskell, of Bath.
- "The Finsen and X-Ray in the Treatment of Malignant Diseases," by Frank W. Ross, of Elmira.
- "Steuben Hills' Climate and Sanitoria for the Treatment of Tuberculosis," by John A. Conway, of Rexville.
- A Memorial on the Life of Dr. R. F. Parkhill, of Howard, by L. M. Kysor, of Hornellsville.
- A Memorial on the Life of Dr. S. M. Switzer, of Bradford, by H. S. Gillette, of Savona.
- A Memorial on the Life of Dr. Ira P. Smith, of Bath, by H. R. Ainsworth, of Addison.

SULLIVAN COUNTY MEDICAL SOCIETY.

The Annual Meeting of the Sullivan County Medical Association was held at Liberty, N. Y., April 18th.

There were present: Drs. H. P. Deady, C. S. Payne, H. M. Poindexter, A. B. Sullivan, S. B. Wells, of Liberty; J. W. Davis, of Jeffersonville; S. D. Maynard, of Roscoe; Frank W. Laidlaw, of Hurleyville.

Motion made and carried that the present officers retain their positions until those to be elected under the new By-laws begin their respective terms—January 1st, 1907.

The By-laws herewith submitted were unanimously adopted, thereby changing the association's name to the "Sullivan County Medical Society."

A resolution was passed urging the votes of the Assemblyman and Senator from Sullivan County for the Stevens-Wainwright Bill.

A resolution was also passed protesting against the sale without a prescription, by druggists, of morphine, codein, heroin, cocaine, and chloral.

MEDICAL SOCIETY OF THE COUNTY OF WESTCHESTER.

STATED MEETING, May 15, 1906, YONKERS, N. Y.

Program.

1. Regular Order of Business.
2. Paper: "The Etiology of Syphilis," Dr. Goldhorn, Mount Vernon, N. Y.

Correspondence.

TOXIC ARTHRITIS.

Editor New York State Journal of Medicine.

SIR: Concerning my friend Schueller, I beg to add a few words which will interest every one of your readers. Schueller was the assistant and co-operator of Hueter. The book of Hueter, "Klinik der Gelenkkrankheiten," which has been named a classical work, was published in the year 1870. Hueter and Schueller were the first who gave an anatomico-pathological classification of the different forms of arthritis, and a better classification cannot be given. In the book quoted, Hueter says, in speaking of polyarthritic synovitis acuta, "Most cases which I classify under this name were formerly designated as cases of rheumatismus articularum acutus. The time may not be far when the unfortunate word 'rheumatismus' will be stricken out of the nomenclature of our science, for of no other word can it truly be said: it was introduced where conceptions were wanting (dass es sich da eingestellt hat wo die Begriffe fehlten). If we wish to give a general idea of what is understood by 'rheumatic affections' we can only say that it has pleased somebody to call some morbid conditions rheumatic, the etiology of which was unknown or mysterious. . . . I am convinced that the word 'rheumatism' has done harm, indeed, great harm, by deceiving about the real state of our etiological knowledge; the unfortunate word has caused the false impression as if we knew more than we really did know. . . . I shall not use this term rheumatism any longer."

A. ROSE.

ON THE PRINCIPLES OF ETHICS.

Editor New York State Journal of Medicine.

SIR:—In voting "yes" to the proposition to adopt the Principles of Medical Ethics of the American Medical Association, being suggestive and advisory, as the guide of members, etc., while in full accord with the general spirit of these principles, I wish to register my entire disapproval of Section 8 of Chapter II of that Code, so far as it relates to the subject of surgical and diagnostic instruments.

This Section encourages men of easy ethical sentiments, of which there are many in every profession, to

appropriate the inventions of men of industry and ingenuity and by some slight modification, almost invariably detrimental, to advertise the inventions as their own. Some of these borrowed inventions are not only widely published in the medical journals, but they are freely exploited in the advertising pages of these journals and elsewhere. Physicians are induced by these claims to purchase inferior instruments at enhanced prices, for these exploiters of borrowed ideas usually receive material compensation for their skill in selecting the proper instrument to imitate. Moreover, the most economical means for the manufacture of the more expensive instruments cannot be adopted, since, as a manufacturer cannot protect himself he cannot afford to make the outlay for the necessary devices by which these instruments can be cheaply made, and it is common knowledge that many of the more expensive instruments required in the practice of various branches of our profession could be made and would be sold for about one-half the price now paid could the manufacturer be assured that he would be safeguarded in his enterprise.

It thus happens that, first, physicians in great numbers are led to purchase inferior imitations when they believe that they are purchasing improvements, and these at enhanced prices; and second, that they are forced to pay larger prices for legitimate instruments legitimately made than they would do were original inventions protected.

It is my belief that there are few men in the medical profession of ability to devise new and useful instruments who would for themselves desire a patent or who would be willing to receive anything beyond the approbation of their fellows for their devices. Could they, however, permit the manufacturer to obtain protection it would undoubtedly serve the ends of justice to inventors and would prove of material advantage to purchasers.

GEORGE T. STEVENS.

New Books.

A MANUAL OF MEDICAL TREATMENT OR CLINICAL THERAPEUTICS. By I. BURNEY YEO, M.D., F.R.C.P. *Fourteenth Edition.* Vols. I and II. Chicago, W. T. Keener & Co., 1906.

This work has been familiar to the English medical world for more than twelve years. It has had a wide circulation in the British Empire, where it has been held in high esteem. This American edition should receive the same recognition as has been accorded to previous editions.

The work studies disease from the standpoint of treatment. The teaching of therapeutics is approached from the side of the disease instead of from the side of drugs or remedies. This method is more natural and surely more interesting than the older method. The work, while presenting the treatment of disease, enters into an explanation of the phenomena which the treatment is aimed to control. By this means the rational indications for treatment are arrived at.

The work contains a large number of formulæ used by well known physicians.

THE BLUES (SPLANTIC NEURASTHENIA): CAUSES AND CURE. By ALBERT ABRAMS, A.M., M.D. (Heidelberg), F.R.M.S., Consulting Physician, Denver National Hospital, The Mount Zion and French Hospitals, Etc. San Francisco. *Second Edition.* New York, E. B. Treat & Company, 1905.

This little volume deals with the etiology, symptomatology, diagnosis and treatment of a special form of neurasthenia which the writer has called splanctic. And many are the new ideas that are contained in the text while the treatment in many instances is both unique and novel.

Muscular relaxation and venous congestion are the chief factors ascribed in the causation of the disease. It is to the correction of these faults the treatment is

directed. The author's results have been so uniformly good that his method of treatment is worthy of serious consideration and trial.

The book is well written and attractive in its appearance. It will prove instructive and worth the time employed in its perusal.

Deaths.

ELI ALLISON, M.D., a former president of the Steuben County Medical Society, and for nearly fifty years a practitioner in Wayne, N. Y., died at his home on May 18; aged 70 years.

GEORGE D. ARMINGTON, M.D., of Clifton Springs, N. Y., died May 14; aged 88 years.

THOMAS ARMONIA, M.D., a member of Kings County (N. Y.) Medical Society, committed suicide at his home in Brooklyn, by cutting his throat and severing the arteries of both wrists, April 26; aged 41 years. He was despondent from ill health.

ISRAEL T. BUCKBEE, M.D., for forty-five years a member of the N. Y. State Society, died at Fonda, April 25; aged 86 years.

PHILANDER COLLARD, M.D., of Ossining, N. Y., died May 7; aged 61 years. He was formerly president of the Westchester County Medical Society.

SAMUEL J. CROCKITT, M.D., a veteran of the Civil War, died at his home in Sandy Creek, N. Y., April 21.

EDGAR A. DAY, M.D., for many years a practitioner of Brooklyn, N. Y., and lately of Newfoundland, N. J., died on May 15.

JOSEPH A. DEAN, M.D., died in New York, May 13; aged 31 years.

AMELIA A. DOLSON, M.D., died at her home in Rome, N. Y., April 25; aged 74 years.

ELIZA J. P. FOUNTAIN, M.D., of Newburg, N. Y., died May 11; aged 69 years. She was one of the first graduates of the Woman's Medical College, New York.

JAMES E. KELLY, M.D., died at his home, Saratoga Springs, May 14; aged 42 years.

BLEECKER LANSING HOVEY, M.D., one of the most prominent physicians of Rochester, N. Y., died May 5; aged 89. He was active as a surgeon during the Civil War, being Medical Director of the Twentieth Army Corps. Formerly president of the New York State Medical Association.

FRANK L. LOZIER, M.D., of Batavia, N. Y., and surgeon to the New York State School for the Blind, died at Buffalo, April 21, after an operation for appendicitis.

ARTHUR MANLEY BURNS, M.D., formerly of Brooklyn, N. Y., died at his home in San Diego, Cal., April 26; aged 64 years.

DELOS H. MANN, M.D., prominent as a total abstinence advocate, died at his home in Brooklyn, N. Y., May 2, from pneumonia; aged 70 years.

WILLIAM R. MARSDEN, M.D., died at his home, Utica, N. Y., April 25, from acute nephritis; aged 52 years.

JAMES W. McNIDER, M.D., of New York City, a graduate of the College of Physicians and Surgeons in 1896, and an ex-interne of Roosevelt Hospital, died at a private sanatorium in New York, from pneumonia and empyema following grippe, on May 26; aged 32 years.

LEROY D. McWAYNE, M.D., of Hoosick Falls, N. Y., died May 10, of heart disease.

HOWARD PHILLIPS, M.D., of Stillwater, N. Y., died April 22; aged 53 years.

BENJAMIN F. SCHUYLER, M.D., died at Rochester, N. Y., April 23; aged 59 years.

EDWIN I. SHORES, M.D., surgeon during the Spanish-American War, died at his home in Schenectady, N. Y., May 5; aged 51 years.

SOLOMON C. WARREN, M.D., died at Syracuse, N. Y., May 7; aged 73 years.

ADRIAN D. WILLIAMS, M.D., died in Brooklyn May 4; aged 30 years. He served in the Spanish-American War and in the Philippines as Army Surgeon.

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Original Articles.

THE ROLE OF PURE COW'S MILK IN INFANT FEEDING.*

By A. JACOBI, M.D., LL.D.,
NEW YORK.

NINE previous lectures have made you acquainted with good cow's milk and the methods of obtaining it and keeping it fresh and germ free. Instructions on the topic of infant mortality, and the dietary protection of tuberculosis, cholera, typhoid, scarlatina, and diphtheria has been thrown in for good measure. Finally, I have been requested to speak to you on the value of your good and pure Baltimore milk in the feeding of your babies and those of your rich and poor neighbors.

Rich and poor. As the breasts of the rich and the poor mother contain the same natural food, so its substitute should be the same for the demands of the rich and the poor baby. Democratic nature know no difference of classes.

It is true a great Boston pediatricist has blamed New Yorkers for insisting upon supplying the poor and rich alike, and thereby rendering the solution of the feeding problem more difficult. But I have ever been of the opinion that those who are to till the soil, to build our roads, to man our ships and factories, and add to the wealth and power of the country should, while being infants and children, be prepared for their tasks by a competent food.

The literature of the subject is immense but not so well known as it appears to many. I have been mixed up with good and bad milk these fifty or more years, and have come to the conclusion that I should wish to see the end of the discussions. After some preliminary attempts, I tackled the subject in the first volume of that epoch-making *Handbuch* of Carl Gerhardt. In the year, 1876, I collected a thousand books, pamphlets, and essays on woman's, ass's, goat's, and cow's milk—and still they came and are coming. There are tens of thousands in all languages. In extenuation of my many serious shortcomings, I may claim that I have not read all of them. When a play has a run of six hun-

dred representations, you go to one, perhaps, but not to the six hundred. It is only Homer, or Shakespeare, or Goethe you can read all the time. Besides, your limited time prevents me from showing off any sort of real or apparent erudition. The latter you do not care for, the former you have in abundance, for you are part, or neighbors, of Johns Hopkins.

Bad and germ-filled cow's milk is a danger to digestion, and is apt to disseminate infectious and contagious diseases. These dangers are avoided when cow's milk is pure. It is in the interest of those who are alive and anxious not to be killed, in the interest of the city and state, and of mankind present and future, that milk should be clean and pure. When it has these properties it may be used for infant feeding—but not in its pure, unmitigated, unmodified condition. It is true there are babies that no improper feeding, no indecent handling, no coarse or over-civilized maltreatment will destroy. These iron-clad young specimens of mankind are the excuses for the teaching—mainly in Paris, France, but also in its suburbs located in America—that pure cow's milk is the proper substitute for woman's milk. That is a mistake. Exceptional successes do not, as a silly proverb has it, prove the rule. Cow's milk is no woman's milk, nor can any cow's milk ever so modified, or changed, or adapted, be equivalent to a good woman's healthy milk. The occasional possibility of obtaining good cow's milk, the theoretical teaching disseminated in good and bad books and pamphlets that chemical compositions suffice for the physical demands of the young infant organism, and the imperturbable ubiquity of the proprietary food vendor and advertiser have worked a great deal of harm in encouraging the reluctance of women to nurse their own babies. If the present and future babies are to live as hearty and competent citizens of this republic, no poverty, no cruel labor law, no accident, no luxurious indolence must interfere with the nursing of children. Not nursing one's own baby comes next to refusing to have any. Antiquity did not know of artificial infant feeding. The first information we have of it dates of 1500. Turks, Arabs, Armenians, Kurds, the Circassians, and the Fellahs of Palestine, have no artificial infant feeding. Even wetnursing was not practised in old Hellas, for Hippocrates does not speak of it. It is true wet nurses were permitted

*Address delivered before the Medical and Surgical Faculty and the public of Baltimore, Maryland, April 25, 1905.

amongst the Persians, and the ancient Indians to whom Susrutas Ayur Veda gives careful instructions on the selection of a wet nurse; and they were employed by the rich Anglo-Saxons of the Middle Ages, and amongst the Romans. Even that, however, was complained of. Tacitus mourns that there were no longer any great men in Rome because they were nursed by slave wet-nurses. The stout-hearted Roman, in the interest of his country, was not satisfied with having his Roman boy suckle a vigorous barbarian woman. It is we that expect the future citizens, statesmen, savants, and pioneers to thrive on proprietary foods and milk mixtures.

But there are women that have all the loving fondness and all the sense of a mother's responsibility, but no milk. Theirs are the cases for cow's milk, since the more appropriate ass's milk is not obtainable, as properly modified as its nature will permit. But how?

Pure cow's milk—no matter whether raw or boiled—should not form the exclusive food of an infant. It gives rise to vomiting of hard curds and to constipation, with its results—indican, and diacetic acid in the urine, and secondary irritation and inflammation of the kidneys; also pyelitis. When practitioners get into the habit of examining the easily obtainable urines of little children and consent to learn the fact that nephritis is a common disease in the smallest of babies—commoner, indeed, than in the old and senile—they will appreciate the influence in that direction even of the purest cow's milk which is fed unmixed. One of the frequent legitimate outcomes of constipation, when local irritation is the result of hard milk curds, is diarrhoea, which should not be considered as an innocent relief to the overcrowded gut, but will turn into the bad forms of microbial enteritis, the accurate knowledge of which we owe to Booker, of Baltimore, Escherich, of Gratz-Vienna, and Czerny, of Breslau. Not a few cases of fatal atrophy owe their origin to the over-feeding with unmodified pure milk, on account of the dyspepsia caused by it. Finally, though ricketts is more readily produced by the infant's close confinement in hot and airless rooms, mainly during the cold seasons, one of its causes is improper food, amongst which unchanged, undiluted milk takes a high rank.

All of this proves that pure milk should not be given as an exclusive food. I repeat that many a baby will live through such an exclusive feeding. But survival is not the only object of a child's bringing up; what you want is persistent good health and vitality and resisting power.

What is cow's milk and what is human milk, which the former is to replace? Are they always alike or like one another? By no means.

It is not much easier to define the nature of a good cow's milk than that of a good human breast-milk. We appreciate the clinical differences of the milks of different cows, or different herds or races. All of them are good pure milk, however. But these differences are by no means

equal to those met with among women. A baby may thrive on the milk of one woman and not on that of another. That is why the substitution of a wet nurse for the mother is not infrequent. Even old Soranus speaks of exceptional cases of infants that thrive better at the breast of a nurse, like a plant that requires an occasional transfer to a strange soil. According to Monti, the constituents of woman's milk are only "more or less constant," that means inconstant. Johannessen and Wang (*Zeit. f. phys. Chemie* xxiv.) found in them the albumin to range from 0.9 to 1.13 per cent., the fat from 2.7 to 4.6 per cent., and the sugar from 5.9 to 7.55 per cent., still they were all good milks. They also found the amount of sugar to be less, and that of fat and albumin larger toward the end of a single nursing, and the fat to reach its minimum in the course of the night. Biedert, than whom there is nobody more accurate and searching, found the nitrogen in woman's milk to vary from 0.129 to 0.192, and the fat from 1.67 to 3.35 at equal periods after birth. But these differences are not found in the same woman; each has a fair stability in regard to nitrogen and fat, exactly like a cow. Therein lies one of the reasons why a fair amount of equality of results is obtained only when the milk of a herd is analyzed instead of that of a single cow. It might strike you, however as quite natural that in the same way that a baby may thrive at the breast of a woman after being destroyed by the milk of another healthy woman, the same thing may take place when you feed your baby on the milk of a single cow. He may not thrive on it, while the substitution of another cow with a different milk may be appropriate. And the great probability is that the average milk of a herd, the employment of which I advised forty years ago, will so dilute the improper qualities of the milk of a single cow by the mixture with that of fifty others as to render them uninjurious.

Of the thousands of recorded analyses of human milk and of cow's milk, no two are identical. Besides, modifications of breast milk occur during nursing, from minute to minute, from morning to night, on account of changes of food, state of health, during menstruation, periods of lactation, diseases, or emotions. *And they are all good breast-milks, and perfectly digested by the individual babies.* Even moderate changes in the health of the baby make few difficulties; the baby will adapt the quantity of the accustomed food to its pathological changes—gastritis, enteritis, or other feverish diseases—provided the proper amount of water is supplied to the baby while it is more thirsty than hungry. If exactly the same physical and chemical composition were required, the milk of our mothers would have killed every man and woman in this hall.

It has occurred to me, as it has to others, that if there were premeditation in this changeability of the milk of single women and of single cows it is surely successful. The changes in the rela-

tions of constituents means proteids and all the carbohydrates, including sugar and the salts. It is mostly the latter that cause the taste. In the milk of his own mother or his own cow—if, by a happy accident the proper one has been selected, the baby has the correct composition and a proper change. If there were no such changes he would lose his appetite and health. The uniformity of the food, though sufficiently nutritious, in prisons, boarding schools, boarding houses and hotels, and its influence on appetite and taste and health, some of you may be acquainted with. I am. Your appetite gets lost, your digestion impaired, your weight and health reduced. And the baby? Between his natural meals there is a diversity in fat, albumin, and sugar and salts—furthermore, he takes as little or as much as he pleases. When he is fed artificially, however, the poor thing gets six ounces, or eight ounces, under the doctor's or nurse's orders—willy nilly—of the same gradually more and more unpalatable—because undiversified—mixture, or modification, or Walker Gordonation. Statistics are a fine method of proving things when carried far enough and blended with intellect—which need not be the rule. For instance, an artificially fed baby thrives wonderfully on a certain mixture for two or three months—wonderful result! The same result is obtained in other cases and eulogized in a mercantile firm's circulars. They swear they never lie. Then dyspepsia, obesity, or diarrhea, finally, perhaps, scurvy. These are not chronicled by the tradesman, but, perhaps, by medical observers as the result of that very food—correctly, it is true. Why? Is it that very food on which others have been doing well? No. The fault may lie in the tedious uniformity of that very food. That is why you may see scurvy, even when you feed sometimes a mother's doubtful milk, more times cow's milk pasteurized, boiled or sterilized, or proprietary foods, or what not. From your own experience you know all about what is considered correct feeding. Your milk is pure, is nearly germ-free; you know and insist upon a certain percentage of fat in it. It is pasteurized or sterilized just so many minutes, you are imbued with the gospel of top-milk, boiled water, lime water, the bottle, the temperature, the number of ounces, week in week out, month in month out. Indeed, we allow ourselves to be controlled by mathematics and chemistry. If nature were as pedantic as we are, we should all be shaped over one last, in one crystalline form. There would be no harm could we men all look like Welch or Osler, but the world would be less interesting after all. I say it is a good thing for a baby to be fed on his mother's milk; first, on account of its being his mother's; secondly, because it will change in frequent intervals, though in physiological limits. Consequently the pedantic uniformity of laboratory feeding, according to iron-clad rules, is not natural. The baby's digestive organs have physiological functions to perform, and are not gov-

erned by the chemistry of the test tube. Even L. Emmett Holt and Wm. H. Park, the famous apostles of those percentage modifications of milk, say that "although desirable in difficult cases, it is not necessary in order to obtain excellent results in the great majority of infants; and a certain adjustment of a healthy infant to its food is usually soon secured." That is what I have been preaching these nearly fifty years. But then, it did not look scientific, test-tubic and mathematically iron-clad.

Cow's milk, when ready for consumption, is furnished to the baby in different ways. Some of these ways are tolerated by many, some by the vast majority, none in every case. Pure cow's milk is given unchanged and raw, or it is pasteurized, or boiled, or sterilized, or it is mixed in order to accomplish certain ends. As in most questions of hygiene and medicine, theory and practical experience must go hand in hand. In the feeding of infants nothing has been more detrimental than the repeated attempts at solving a physiological problem by the sole aid of chemistry.

The caseins of the milks of different animals vary in quantity and quality. The quantity—that is, percentages—appear to be connected with the rapidity of the growth of the animal from which the milk is taken. According to I. Von Bunge the doubling of body weight takes place in the new-born of man in 180 days—

	Proteids.	Per Ct.
Man in 180 days.....	"	1.6
Horse in 60 days.....	"	2.
Cattle in 47 days.....	"	3.5
Goat in 22 days.....	"	3.7
Hog in 14 days.....	"	4.9
Cat in 9½ days.....	"	5.2
Dog in 9 days.....	"	7.
Rabbit in 1 day.....	"	10.4

There are other differences both biological and chemical. Wassermann and Schütze (Ges. f. innere Med. 1900) injected ten ccm. of sterilized cow's milk under the skin of rabbits daily, a fortnight in succession. After that time their blood serum acquired the property of coagulating cow's milk—that is, its proteid—but not that of any other animal. More animals were treated similarly with goat's milk, with the result that their blood sera would coagulate the albuminate either of goat's milk or of human milk, respectively. In every case the specific coagulating effect was observed in that kind of milk only with which the animal was previously treated.

There are also important clinical differences between the casein of the cow's milk and woman's milk. They are, according to Immanuel Munk (Virchow. Ark. 134), as follows: Total nitrogenous substance in cow's milk 15.7 per cent., in woman's milk 15.76. Of this total sum there is in extractive materials in cow's milk 6 (4.8-8.6) per cent., in woman's 8.7 per cent. In his calculations the albuminoids in woman's milk amount

to 1.19-1.37 per cent. There is more syntonin in cow's milk casein, and more lime; (6.6 per cent. compared with 3.2 per cent. in woman's milk, Lehmann), more phosphorus in woman's (0.84) than in cow's milk (0.68), less sulphur in woman's milk (0.74) than in cow's milk (1.11). In "Lab." ferment the casein of cow's milk coagulates in coarser lumps than woman's milk; these lumps are modified by the introduction of milk sugar, of fat, of chloride of sodium, or of dextrinized or other flours.

Again: the casein of woman's milk is not so easily thrown out by acids or salts as that of cow's milk and is more readily dissolved in an excess of acid. Wroblewski demonstrated that woman's casein retains during pepsin-digestion its nuclein in solution. This proteid with its ample supply of phosphorus is fully digested; artificial gastric juice, however, does not fully digest the nuclein of cow's casein, of which a "paranuclein" is deposited undigested and undissolved.

According to Schlossman, of the albuminoids in woman's milk 63 per cent. are casein, 37 per cent. lacto albumin, the latter of which is absorbed directly. There is, moreover, according to Wroblewski, in the human milk another proteid, rich in sulphur, poor in carbohydrate, and, according to some, albumoses and peptones, that also would be directly absorbable.

Of nuclein (V. Wittmaack and M. Siegfried, *Zeitsch. f. phys. Chem.* xxii.) there is contained in cow's milk 0.057, in goat's milk 0.110, and in woman's 0.124 per cent. In cow's milk the phosphorus of the nuclein amounts to 6 per cent. of the total amount of phosphorus contained in the milk, in woman's milk 41.5 per cent. That explains why good cow's milk with its inorganic phosphates may give a baby rickets, while good breast milk does not do so at all. After all, between the $3\frac{1}{2}$ per cent. of casein contained in cow's milk, and the 1 or 2 per cent. of casein in human milk, there are essential, biological, physical, chemical and clinical differences.

Similar facts may be stated in regard to the fat of the two milks. Fat, that is cream, is added to cow's milk for two alleged reasons. First, to increase the nutritiousness of the food and second, to enhance the digestibility of the casein. Now and then, however, you meet with an author—Monti, for instance; Jacobi, another, for instance—who considers a high percentage of fat injurious; on the other hand, Schlossmann—quite a rising authority—declares the belief in the injuriousness of fat "antiquated." In our country the several modifications—those of Rotch or of Holt—are very positive, or have been so, in the demands of a high percentage of fat.

I prefer a low percentage of cream in infant feeding for the following reasons: *First*, the normal stools of the nursling contain unabsorbed fat, no matter whether fed on mother's or on cow's milk—9 per cent. of the ingested fat, according to Wegscheider; 5.9 or

5.3 per cent., according to Heubner. Knöpfelmacher proved that the infant expelled much more olein, derived from unabsorbed milk, than the adult. As such a quantity is expelled and proves unutilized, useless, superfluous, it does not seem rational to increase the fat ration beyond what is natural or required. *Second*, Woman's milk and cow's milk have nearly the same percentage of fat. Bunge has 3.8 per cent. for woman's milk, 3.7 for that of the cow. Marfan gives the same figures, supported by six first-class authorities. Why, now, should fat be added, equally in summer and in winter? If our babies were all Esquimaux of Baffin's Bay, fat would be, or might be, required. The parents live on fat. Babies exposed to the cold of our winters might tolerate additional fat; but those who live in a temperate climate or the summer temperature all the year round should have less fat and be less exposed to the consequent elimination of ammonium in the urine, indicating acid intoxication. This remark is absolutely valid when no dilution takes place. It is just to say, however, that it is seemingly not justified when the milk is diluted and thereby the fat percentage reduced. But experience teaches that the babies thrive best on less fat. Formula No. 2 of the Nathan Straus Laboratory, which has been furnished to tens of thousands of babies, reads as follows: Water, 90.11; solids, 9.89. The solids, not fat, are 7.70; there are 2.19 fat; 5.56 cane sugar; 0.39 ash; and 1.75 proteids. This is meant for babies from 4 to 8 months old. On that they thrive. And a similar composition I have used these fifty years of private and institutional practice. The first of four formulæ supplied in Chicago to very young infants contains fat 1.5, milk sugar 5, and proteids 0.5.

Third. There is a chemical and a physical difference between the fat of the two milks. Woman's milk has more oleic acid, less volatile acid than cow's milk. Woman's milk contains its fat in a finer emulsion and holds from two to four times as many fat globules as are contained in equally fat cow's milk (Schlossmann). This condition makes it more digestible; it is assumed, and reasonably so, that the fine fat globules are absorbed directly through the epithelia of the intestinal villi. Moreover, cow's milk-fat before it is used undergoes changes. When taken after slow rising it is apt to be acidulated; when sterilized and centrifuged it is changed chemically and physically; when frozen, it separates from the milk and does not mix again. There is another important difference between human and cow's milk—in their enzymes. By that term we mean digestive properties, which may vary according to the animal furnishing the milk. They digest mainly the fat of human milk and are absent from cow's milk which contains its own particular enzymes.

All of these facts and considerations and the low percentage of fat in ass's milk, which was known to agree best with nurslings and to be

inferior to woman's milk only (according to Vernois and Becquerel's analyses made fifty years ago; also according to Parrot, West, R. von Ranke and Klemm and Marfan), have led me to reduce rather than to increase the fat of cow's milk used for infant feeding. I meet with no fat diarrhea and no excessive acidity when babies are fed according to that rule.

Ass's milk is digestible and wholesome, not in spite of, but because of its low percentage of fat, and in spite of its albuminoid being contained in larger quantity in ass's than in woman's milk.

The modern experience in infant feeding with buttermilk seems to upset all the fine spun theories of the laboratories. It appears to be proven by the results of Dutch peasants and many first class European clinics that buttermilk—which, indeed, cannot be claimed to be like woman's milk, either physically or chemically—is an excellent nutriment in acute and chronic gastro-enteritis of the young, in grave dyspepsias, in the chronic dyspepsias, for instance, of syphilis, and also in their healthy condition. Its percentage of sugar is only 2.82-3.5, of albumin 2.5-2.7, of fat only 0.5-1.0—still *the infants thrive*. The literature of the last few years, which has become quite extensive, and the names, many quite illustrious, of the sponsors of the buttermilk feeding prove it. They merely confirm the old experience of the Dutch peasant population.

The main recommendations in the use of buttermilk are as follows: It should not be taken from milk that has been standing longer than twenty-four hours. It should be boiled so slowly that after twenty-five minutes only are there a few ebullitions; a quart should be mixed, while being so boiled, with ten or twelve grammes of farina or rice; and, finally, with seventy or ninety grammes of sugar. In order to reduce the casein to the finest possible coagulations, the buttermilk while being boiled should be gently whipped.

Other positive rules enforced by Teixeira de Mattos and many others are as follows: The carbohydrates must *not be dextrinized*. They must be flour, not malt. The sugar must be *cane* sugar, not milk sugar. There should be an addition of sodium chloride (table salt). The addition of fat is useless and may be dangerous.

I request you to compare some of the figures referring to buttermilk with those of human and of ass's milk. There are albuminoids in woman's milk, 1.7 per cent.; in cow's milk, 3.5; in ass's, 2.3; in buttermilk, 2.5-2.7; fat in woman's milk, 3.8; in cow's milk, 3.7; in ass's, 1.6; in buttermilk, 0.5-1.0 per cent.; sugar in woman's milk, 6; in cow's milk, 4; in ass's milk, 6.2; in buttermilk, 2.82-3.5 per cent. Of all these there is the greatest resemblance between ass's milk and buttermilk, both of which are vastly different from woman's milk. Why is it that both should have proven excellent nutriment for the infant? Is not all this rank heresy? Does it not conflict with the experiments and the

dictates—mind, I do not say experience—of laboratories? Does it not rather confirm all the observations and teaching of Jacobi these nearly fifty years? Does it not prove that nature is not pedantic and allows ample latitude in the choice of a food, as long as it is pure and honest.

(*To be continued.*)

ECHINOCOCCUS CYST OF THE LIVER.*

With a Report of Ten Cases Personally Observed, and a Differential Consideration of Tumors of the Liver.

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I WOULD that time and space would permit me to treat more deeply of this most fascinating subject. The history of echinococcus cyst of the liver is the history of surgery of the liver. Its by-paths are many and absorbingly interesting. In the preparation of this article I have quoted freely from the résumé of liver surgery by George Ryerson Fowler¹ and my own three previous articles upon diseases of the liver^{2 3 4} and echinococcus cyst.

Hippocrates, Galen and Aretæus mention the occurrence of large cysts of the liver filled with water, so that this condition was evidently familiar to ancient physicians. But it remained for the anatomists of the sixteenth and seventeenth centuries to accurately describe these cysts. We have records of careful observations of these cases by Felix Plater, Vega and Riverius. In the "Sepulchretum" of Bonetus there are several well-described cases. Up to 1760 the cysts were supposed to be enlargements of the lymphatics, and their peculiar nature remained unknown. Finally, Palbas proved them to be independent parasites, and showed their close relation to the tapeworm. This was subsequently confirmed by Goeze. The first accurate descriptions of the echinococcus occurring in the human body was published by Bremser in 1821. From 1860, the year in which Davaine published his excellent work, to the present time, there have been numerous cases reported in detail, until now it would seem that the pathology and treatment of this interesting disease were established, and it only remained for us to so increase our diagnostic skill that the lesion might invariably be recognized.

The *exciting cause* in the production of an echinococcus cyst is the *tænia echinococcus*. This

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¹ Historical and Critical Observations upon the Surgery of the Liver and Biliary Passages, *Brooklyn Medical Journal*, 1900.

² Tumors of the Liver, *Brooklyn Medical Journal*, December, 1900.

³ Echinococcus Cyst of the Liver, *Annals of Surgery*, December, 1900.

⁴ Surgical Treatment of Cirrhosis of the Liver, *Brooklyn Medical Journal*, April, 1905.

parasite has its habitat in the upper portion of the small intestine of dogs. In its mature condition, the worm is from four to five millimeters in length. The head is 0.3 millimeter in diameter. There are two rows of hooklets around the rostellum. There are three or four proglottides, the last being the largest. Introduced into the intestinal canal of man, the ova undergo partial development, and may be carried to distant parts of the body. The manner in which this occurs is as follows: Digestion destroys the covering of the ovum, and its contained scolices are liberated, burrow in the intestinal wall, and thus enter the circulation. Should they, as is commonly the case, enter a radicle of the portal vein, they are carried to the liver. Here, or in other tissues, cysts are formed in the immature of cysticercus stage (Prudden) and are known as hydatids. Owing to the inflammatory reaction set up in the parts in which the cyst is lodged, a protective connective-tissue encapsulation is finally effected. The cyst wall proper consists of two layers—an outer, laminated layer, the cuticle, and an inner vascular layer, designated as the parenchymatous layer. Within the primary or parent cyst are generally found secondary or daughter cysts, and within these again other cysts may develop. The heads or scolices of the parasite are formed on the inner surface of the cysts. These develop in the pediculated vesicles, called brood capsules (Prudden), the walls of which are similar in structure to the primary cysts. Several scolices may be formed in each brood capsule. They are similar to the head of the adult parasite, having a double row of hooklets surrounding the rostellum and four sucking discs. There is a pedicle on the posterior end of the scolex, marking the site of its attachment to the wall of the vesicle. Small, laminated concretions of lime salts are often present in the scolex. The scolices may be found free in the brood capsule, or, should these rupture, they are found free in the cyst. The hooklets, on the death of the scolices, may be embedded in the granular mass formed by the degeneration of the latter, or may be free in the brood capsule or in the cavity of the cyst. It may happen that neither brood capsule nor scolices develop in the cyst. Such cysts are known as sterile cysts. The cysts contain a clear gelatinous fluid which may be present in large or small amounts, or may be almost absent from the primary cysts. It is the presence or absence of fluid in the primary cyst which causes the variations in the so-called hydatid fremitus. The reaction of the fluid is, as a rule, neutral; rarely it is alkaline, and more rarely still, acid (Lueke). The specific gravity varies from 1.007 to 1.015. Albumen is absent. Succinic acid may be present, but is not constant. Grape sugar, leucin, inosite and sodium chloride have been found in the fluid. Disintegration of the scolices may render the fluid turbid, or it may contain fatty detritus, cholesterol crystals, or lime salts. The fluid may be

partially absorbed, leaving a thick grumous matter within the cyst, which may become calcified.

Boinet, in April, 1894, reported his results in experimentation with the fluid from hydatid cysts. From this fluid he extracted a ptomaine, of which three-sixty-fourths of a grain injected under the skin of a mouse caused death in five minutes; seven-eighths of a grain injected into the veins of a rabbit gave rise to symptoms of hydatid intoxication, convulsions; first, accelerated and then retarded respiration, rapid action of the heart, dilatation of the pupil, collapse, and a reduction of temperature to about 80° F. Death was preceded by a few convulsive attacks. A patient with hydatid disease of the liver succumbed with symptoms of rapid respiration, and convulsions followed by paresis of the lower extremities, symptoms very similar to those observed in the animals experimented upon. This toxin is found more abundantly in cases in which puncture and electrolysis have modified the vitality of the hydatids, transforming the clear fluid into a yellowish, turbid, syrupy liquid, rich in albuminoid matters. It resembles the mytilotoxin of mussels, and results from the reduplication of albuminoid matters. This ptomaine seems to exercise a toxic action upon the still intact hydatid vesicles, causing their aseptic necrosis and death.

The fully developed cyst is comparatively easy of microscopic diagnosis. There is the connective-tissue capsule, the primary, secondary, and sometimes tertiary cysts, and the characteristic fluid. In cysts which have not degenerated the microscope will show the scolices entire.

In cysts, the seat of degenerative changes, hooklets or portions of hooklets will be found in the detritus and also portions of the characteristic cyst membrane. In cysts which have become calcified there may be nothing to show the origin of the cyst. Prudden mentions two rare forms which the cysts may present. In the first the secondary vesicles are formed on the outside of the primary cysts. The name given to this variety is the *Echinococcus scolecipariens* or *exogena*. It is rare in man. The second variety, the *Echinococcus multilocularis*, is more common. It is almost always found in the liver. It seems to be the result of disturbances in the development of the cysts. There are a series of irregular sized cysts surrounded by broad and narrow bands of connective tissue. These contain gelatinous fluid and a few scolices or hooklets, the latter difficult of detection. The entire mass is encapsulated, and may present an alveolar appearance. For this reason it was formerly regarded as alveola carcinoma.

In order to preserve the cysts in as nearly a natural state as possible, Prudden recommends that the specimen be placed at first in a 5 per cent. aqueous solution of chloral hydrate. After remaining in this solution for a week the cyst is immersed for permanent preservation in

a 10 per cent. solution of the same drug. A saturated aqueous solution of chloroform acts almost as well.

The *contributing cause*, as intimated above, is close companionship with dogs in persons of uncleanly habits. The parasite is most frequently found in the upper part of the small intestine of the dog. It is also present in the intestine of wolves and jackals. The ova of the parasite are evacuated with the feces, and may be taken into the human system through the medium of polluted drinking water. This mode of infection is probably not common. Much more likely the ova are introduced through the handling or caressing of dogs. The ova may be conveyed by dogs licking the individual's hand or face. Iceland is the locality where the parasite attacks man most frequently. It is perhaps worthy of note that not a single case of the multilocular variety has been noticed in Iceland. This variety is indeed rare. Bauemler, 1878, collected 37 cases, and perhaps half as many more have been reported since that time. Next to Iceland, the disease occurs most frequently in Australia. The disease is seldom met with in France and Germany. In Russia it is very rare. An Italian physician tells me that the disease is quite common in Italy. This is borne out by my own experience, as the patients in whom I have observed the disease were all Italians. In England the disease is rarely met with outside of London. In the United States the disease is comparatively rare.

Symptoms.—These are due to pressure effects. Usually the first symptom noted is the presence of a tumor in the liver region. Or there may be first noticed more or less discomfort or dragging pain in the epigastrium, loin or back. Should the growth be situated upon the superior surface of the liver, that organ will be pushed downward, so that its anterior edge may even reach the level of the umbilicus (see Case VII). The tumor in such a case will press upon the diaphragm and may cause some discomfort in breathing. Either the right or the left lobe may be the seat of the disease, which may be on the surface of the liver or entirely within its structure (see Cases I and VII). Those cysts which are posteriorly placed are the most difficult of detection. Most frequently the cyst will be found springing from the inferior surface of the liver. In the case of the right lobe, the mobility of the liver will probably not be increased; but if the left lobe is involved, the weight of the tumor will drag down that lobe, and it may well be that the tumor can be moved to almost any part of the abdominal cavity (see Case III). Pressure on neighboring viscera may result in symptoms referable to those viscera. There may result interference with the action of the heart or lungs. The vena cava may be pressed upon, causing œdema of the lower extremities. Pressure on the bile passages may cause jaundice (see Case IX). Ascites may be caused by pressure on the

portal vein. The tumor is firmly elastic and dull on percussion. Its surface is smooth and rounded. Its connection with the liver is usually readily made out.

Hydatid fremitus is due to the impulse of the daughter cysts upon one another in the absence of liquid in the parent sac. When the parent sac contains fluid, the daughter cysts swim, and do not yield the tremor (Tillaux). I have not noted this symptom, as all the cases observed contained fluid in the parent sac.

Santoni, in 1894, found that the stethoscope (by auscultatory percussion) reveals a special and peculiar sound of sonorous quality, having a low tone and of brief duration, which ceases abruptly. It may be compared to the sound produced by striking a membrane stretched upon a metallic frame. This sound is so characteristic, that once heard it can scarcely be forgotten. He considers it a pathognomonic sign of the disease.

Thomas Fiaschi, of Sydney, 1895, considers Santoni's resounding or booming sign as a valuable addition to the semeiology of hydatid disease. A fourth practical application of the test, not mentioned by Santoni, is the diagnosis of single from multiple cysts, the sound being uniform in a single cyst, no matter on what part of the tumor the percussion is made; while in multiple cysts there is a variation of the hydatid resonance dependent upon the number of cysts and the point percussed. I have not been able to demonstrate this sign.

Diagnosis.—In considering the diagnosis of echinococcus cyst of the liver it is necessary to pass in review the various tumors of the liver, both those in which the entire organ is the tumor and those in which only a part of the organ is involved.

Tumors of the liver are of rather frequent occurrence and, as a rule, are not difficult to recognize. They may be classified as malignant or benign; as primary or secondary growths; as solid or cystic; as limited to a portion of the liver or involving the entire gland; or the liver itself may form the tumor.

As examples of involvement of the entire liver we may mention hypertrophic cirrhosis, amyloid liver, fatty liver, the uniform enlargement due to massive cancer, the hepatitis due to abscess of the liver, hydatid cysts, or neighboring inflammation in the gall-bladder and ducts. Under such circumstances the organ is enlarged as a whole. It is not such cases that we shall discuss, but rather we shall turn our attention to localized enlargements of the liver. Before going further, however, it is necessary, from a diagnostic standpoint, to consider those instances in which the liver itself forms the tumor. Such cases are not rare. The most frequent form is the *pulsating liver* met with in chronic mitral disease. The insufficiency of the tricuspid valve allows each systole of the right ventricle to be communicated through the right auricle directly into the column of blood in the hepatic veins (Osler). This re-

sults in an expansile pulsation of the entire liver, synchronous with the heart-beat. *Floating or movable liver* is another variety. This is either congenital or acquired. In the latter event it results from tight lacing or from the dragging upon the liver of an enlarged gall-bladder or of large tumors or cysts. The congenital variety is usually accompanied by enteroptosis. The degree of mobility depends upon the amount of lengthening of the suspensory, lateral and coronary ligaments and in rare instances the absence of the two latter. It occurs much more frequently in women than in men. Such a liver may give rise to no inconvenience and the lesion only be discovered at the post-mortem table, or there may be so much dragging pain in the hepatic region as to render the unfortunate individual's life quite unendurable. Attacks of severe pain and jaundice may be present at times. Digestive disturbances are common. Examination will disclose a tumor, the size and shape of the liver, which in many instances can be made by manipulation to occupy the normal liver site. In addition, percussion will elicit tympanitic resonance over the hepatic region. In such cases George Ryerson Fowler and myself have repeatedly performed complete hepatectomy with most satisfactory result.

The acquired variety may be complete or partial. The latter is by far the more frequent. The left lobe is usually affected. I have operated upon a case of this kind in which the etiological factor was a large echinococcus cyst springing from the inferior surface of the left lobe in the neighborhood of the transverse fissures (see Case III). This had been in existence for some time, and had so dragged upon the liver that the tumor and left lobe could be moved to almost any part of the abdominal cavity. The cyst was removed entire without rupture, the suspensory ligament, which was much elongated, was shortened, the superior surface of the liver was scarified, and gauze was placed between the liver and diaphragm to produce adhesions. The case made an uninterrupted recovery. The *treatment* of this unique condition is, in congenital cases, the reposition of the liver and its retention by a suitable appliance. Should this not prove satisfactory, operation must be resorted to. Hepatectomy, partial or total, has proved successful in the hands of several operators (Langenbach, Tscherning, Gerard-Marchant (hepatectomy), Richelot, Lannelongue, G. R. Fowler, R. S. Fowler (complete hepatectomy). In the acquired variety the exciting cause should be sought for and removed. If due to tight lacing this is to be prohibited and a suitable belt applied. Tumors and cysts should be removed when such a course is feasible and hepatectomy performed. If a distended gall-bladder is at fault it should be emptied and stitched to the abdominal wall.

Yet another form in which the liver may present as a tumor is *botryoid liver*, so called from

its resemblance in shape to a bunch of grapes. Such a condition is the final result of a syphilitic hepatitis, and the changes are permanent. I have encountered one such case.

J. F., shoemaker, Italian, aged 25 years, was seen in consultation with Dr. Accetta, September 9, 1903. He gave the following history: Three years before he had a chancre, for which he received six months' treatment. He had never had malaria. His present sickness dated back about one year. It began with an aching pain over the upper abdomen and occasional vomiting. The pain increased in severity, and the vomiting increased in frequency. Six months later he developed ascites, moderate at first, but later rapidly increasing. My examination showed the heart to be normal, the lungs to be normal, except for slight dullness at the left apex, the liver to be considerably smaller than normal, the spleen was not made out, on account of the ascites, the abdomen enormously distended and filled with fluid, the superficial abdominal veins dilated, edema of both feet, urine normal, temperature 99 degrees F., pulse 80 and weak. The man was much emaciated. I diagnosed cirrhosis of the liver and advised operation, which I performed two days later.

Under ether anesthesia, an incision was made from the ensiform cartilage to the umbilicus. This allowed the escape of an enormous quantity of ascitic fluid, bright yellow in color. The liver was found in a condition of atrophic cirrhosis, of the type known as botryoid liver, the final stage in a hepatitis of syphilitic origin. The liver showing beautiful blue and purple coloring, with tinges of red, exactly resembling a huge bunch of grapes. The spleen was about three times its normal size. The technique, already described,⁵ was carried out, with the exception of suturing the liver to the abdominal wall. A second row of sutures was used in suturing the omentum to the abdominal peritoneum, in order to secure broader approximation.

The patient left the table in fair condition. After twenty-four hours there was considerable oozing of ascitic fluid through the wound. In spite of this, healing progressed favorably for the most part. On the second day following the operation the temperature rose to 102.4 degrees F., pulse 120, respirations 35. Examination of the chest showed physical signs of pneumonia. This resulted fatally thirteen days after the operation. Post-mortem examination showed slight peritoneal adhesions as a result of the operation.

Accessory Lobes.—Usually these are too small to attract attention and are only discovered at autopsy. Occasionally, however, they may become hypertrophied and be mistaken for new growths. This justifies their mention here. Martin (*Birmingham Med. Rev.*, XLIV, p. 92, 1898; Keen, *Ann. of Surg.*, p. 176, 1899) removed such an hypertrophied accessory lobe from a woman thirty-six years of age. The swelling had been noticed for twelve years and was the size of a six-months' pregnancy. The provisional diagnosis was renal cyst. Laparotomy disclosed the true condition. The base of the lobe was ligated and the gall-bladder excised with the mass. The abdominal incision was closed with interrupted silkworm gut sutures. No drainage was employed. A good recovery followed. Examination showed liver-cells in the accessory lobe, but no ducts. Some of the cells resembled sarcoma. Keen, in his table of seventy-five cases of hepatectomy, cites five instances in which a constricted, accessory, or herniated left lobe was removed.

⁵ *Brooklyn Medical Journal* April, 1905.

The usual causes of tumor of the liver are cancer, abscess, syphilis, hydatids, and occasionally tuberculosis. The most common form is secondary carcinoma. Sarcoma, lymphadenoma, and angioma are at times observed; more rarely still myxoma, fibroma, and atheroma. *Aneurism of the hepatic artery* must be considered from a differential diagnostic standpoint. Here we have a tumor in the hepatic region which by pressure on the common bile-duct invariably causes jaundice. Pain is very severe. The diagnosis rests on the expansive pulsation and the bruit. A case of this kind was investigated by exploratory laparotomy by George Ryerson Fowler in the Methodist Episcopal Hospital in Brooklyn, in 1892.

Primary Carcinoma of the liver is rare. Such a case was treated by partial hepatectomy by George Ryerson Fowler in 1896. The case was referred with the diagnosis by Dr. Hoxsie, of Brooklyn. The patient was 28 years of age, and there was a possibility of syphilitic disease. A careful examination failed to reveal evidences of carcinoma in other organs. The only symptoms present were localized pain and tumor. It was for the purpose of clearing up the differential diagnosis between gumma of the liver and neoplasm that she was admitted to the Brooklyn Hospital, and an exploratory operation undertaken. Even when the right lobe of the liver came into view, it was not certain whether gumma or carcinoma was present. The neoplasm presented the white fatty appearance of gumma, yet it seemed more solid, and having been present several months, if syphilitic in character it should have begun to break down. The growth, together with a large portion of the right lobe of the liver, was removed by the thermocautery; the hemorrhage was slight. A tampon of iodoform gauze was packed against the cauterized surface, and the wound was partly closed. The patient made a good recovery from the operation. An examination of the growth and liver tissue removed was made by Dr. Van Cott. It proved to be a carcinoma. This was a rare case, first, because of the youth of the patient, and second, because of the fact that it was evidently primary in character. The patient made a good recovery from the operation and left the hospital apparently well. She died some months afterward with evidences of general carcinomatous cachexia, but no evidences of tumor elsewhere.

In the second successful case of hepatectomy, which came under the care of George Ryerson Fowler at the Methodist Episcopal Hospital, Brooklyn, almost the entire right lobe was removed by means of the thermocautery for a tumor which presented in the epigastrium, and which could be easily traced to the liver. The patient made an uninterrupted recovery. The tumor proved to be an *atheroma*.

Secondary carcinoma follows a primary growth in the stomach in about twenty-five per

cent. of the cases, and as such is unrecognized during life. The symptoms of the primary growth are so prominent that the secondary development is over-shadowed. In perhaps another twenty-five per cent. of the cases the primary growth is sufficiently well advanced to mask the metastatic growth. In nearly all cases of cancer of the liver there is progressively increasing pain and distress in the hepatic region. There is a steady decrease in weight and loss of strength which appears early in the course of the disease. This progressive emaciation is more marked in malignant disease of the liver than in malignant disease elsewhere. The organ increases rapidly in size and is tender to the touch. Gastric disturbances are frequent. Jaundice may be present early but, as a rule, it appears late and steadily increases. The cause is found in pressure upon the common or hepatic ducts or involvement of the ducts within the liver. Cancer is the most frequent cause of long-standing jaundice. Ascites may be present. This is due to pressure upon the portal vein or to the extension of the disease to the peritoneum. In cases which run a very rapid course there may be slight elevation of temperature from time to time. The tumor varies in size. In rare cases of long standing it may almost entirely fill the abdominal cavity. Cases which involve the entire liver will present characteristic nodules upon the surface. These vary in size, some being so small as to be hardly perceptible, while others are as large as an orange. They are umbilicated, hard, with rounded edges, having a depressed center. This depression is caused by degenerative change and subsequent cicatricial contraction occurring in the center of the mass. Occasionally these cases proceed very slowly and are difficult of diagnosis. Such a case was operated upon by me in 1898 at the Brooklyn Hospital. The attending physician diagnosed the case as one of malignant disease of the gall bladder. Though enlarged, the liver felt smooth and no nodules could be made out. Exploratory laparotomy revealed a liver, the seat of massive cancer, with secondary involvement of the common duct. It is at times difficult to differentiate between carcinoma and hypertrophic cirrhosis. The presence of the nodules is characteristic. Jaundice may be present in both.

Abscess of the liver may present as a palpable tumor. Such a tumor develops beneath the right costal margin or in the epigastrium. Tenderness is present unless the disease has been in existence for a considerable time. The size of the tumor rapidly increases and as it becomes more prominent fluctuation may be obtained. In some cases there may be no change in months. The constitutional symptoms, irregular fever, chills and sweating, together with the rapid growth and extreme tenderness of the tumor, should be sufficient to establish its character. The previous history is valuable in these cases. While dysentery may not be present, a history

of it is usually obtainable. The presence or absence of amebæ should be ascertained. The sallow and malarial aspect of the patient should be considered. Leucocytosis will determine the presence of pus.

Syphilis.—Syphilitic tumors are not rare nor should they be difficult of diagnosis. They present two forms, the recent gummata and the botryoid liver, which is the final result of a syphilitic hepatitis. This form has been mentioned in the class in which the entire liver forms the tumor. It presents as an irregular, hard, knobby mass, divided by cicatricial bands. The recent gummata, however, form genuine tumors. They occur as hard nodules or flat masses of large size, presenting most frequently in the epigastrium. They differ decidedly in feeling and shape from the knobs of cancer. In many instances a clear specific history can be obtained and the diagnosis can be verified by the administration of potassium iodid. While this is unlikely to result in a total disappearance of the tumor yet there is almost invariably a rapid and marked decrease in size. A case reported by Osler is of interest as showing how such tumors may disappear almost entirely under prolonged specific treatment. A private patient, a male, 28 years of age, presented a flat tumor in the epigastrium. Its attachment to the liver could be readily made out. There was a clear history of syphilis. Potassium iodid was given and one year later the tumor had practically disappeared.

Occasionally the abdomen is opened for such tumors when no specific history can be obtained. Such a tumor was exposed by exploratory laparotomy by George Ryerson Fowler in June, 1896, at the Brooklyn Hospital. The patient, a male, 39 years of age, absolutely denied any specific history. He had suffered from pain and distress in the hepatic region for 13 months prior to his admission to the hospital. During the last month the pain and distress had greatly increased. The liver was much enlarged and was tender. A smooth, hard tumor could be felt just beneath the free border of the right lobe. This was quite tender and resembled a distended gall bladder. Exploratory laparotomy showed this to be an hypertrophied lobe of the liver. The wound was closed. Under specific treatment the patient fully recovered.

At times gummata break down and find their way to the surface. I operated upon one such case in 1898. The patient, a woman, gave a history of hepatic distress extending over a period of months. Examination showed an area of discoloration in the skin just at the right costal border. The liver was much enlarged. There was a history of syphilis. An incision was made through the discolored area and a double handful of broken-down gummatous material was curetted from the interior of the right lobe of the liver. The resulting cavity was irrigated and packed with iodoform gauze. Potassium

iodid was administered and the patient made a complete recovery. Treatment: Potassium iodid proves curative in the vast majority of cases. For botryoid liver nothing can be done. Should the nature of the tumor only be discovered after the abdomen has been opened, the wound should be closed and potassium iodid given. Some operators have excised or curetted gummata, knowing them to be such. Such practice is hardly justifiable unless potassium iodid has been proven non-eficacious, except in such as the case last cited, in which degeneration is well advanced.

Sarcomata.—Primary sarcoma is very rare. Less than 20 authentic cases have been reported.

Adenomata.—These are also uncommon. They may remain quiescent for years and finally undergo malignant change. The diagnosis can only be made by the long existence of the tumor and the absence of severe symptoms. Groube reports a case successfully treated by operation, but which developed carcinoma 11 months afterward. In 1893 Bergmann successfully removed with the thermocautery a tumor of this variety situated in the left lobe.

Angiomata.—Angioma is the most frequently observed variety of the benign tumors of the liver. There are two forms, the congenital and a form which appears later in life. The former is of exceedingly rapid growth and rapidly fatal. Of two cases cited by Waring ("Jacksonian Prize Essay," 1894) one died at the end of eight months, the other died at the end of six months. The form which appears later in life occurs mostly in males of sixty years and upwards, rarely before sixty. There may be a single tumor, but more often they are multiple. They rarely attain to a large size and are almost invariably separated from the liver substance by a fibrous capsule. They rarely become large enough to cause symptoms. Eiselberg and Rosenthal have each reported cases in which hepatectomy was performed. The former first attempted to enucleate the tumor, but the hemorrhage proved so severe that this was abandoned and removal was finally accomplished by cutting through normal liver tissue with the thermocautery at a distance from the growth. Individual vessels were tied with silk. The case made a good recovery. In Rosenthal's case it was possible to pass an elastic ligature around the base of the tumor which was somewhat pedunculated. This ligature was held in place by a steel needle. Five days later the tumor was cut away in front of the ligature by means of the thermocautery. The resulting stump was tamponed. In six weeks the patient had completely recovered. Electrolysis has been suggested for those tumors which are too large to admit of removal.

Fibromata and other tumors are too rare to need discussion here.

Termination.—The disease untreated may progress indefinitely, and death may occur from

intercurrent disease, or a spontaneous cure may be effected, or death may ensue in a variety of ways. Spontaneous cure may be effected in three ways. The parasites may die and the sac subsequently contract. A communication may be effected with the biliary apparatus, and the entrance of bile into the sac may kill the parasite (in some instances, however, the parasite may survive). The more usual manner of spontaneous cure is effected by rupture of the sac into one of the neighboring viscera, stomach, intestine, lung, or pleura. In case of the latter two, however, the chances are greatly against a favorable result. In rare instances, rupture may occur externally. Rupture into the stomach will be shown by the vomited cysts. Some may also pass per rectum. In rupture into the intestine, the cysts will be passed per rectum. When rupture takes place into the lung the fluid and cysts will be coughed up.

Duration of the Disease.—The growth of hydatid cysts is slow, as a rule, though most of my cases are those in which rapid growth has supervened for a time. In some instances the existence of the disease has not been suspected, and has only been discovered in the course of a post-mortem. It may exist for years before it is recognized. Barrier (Paris, 1840) analyzed twenty cases in reference to the duration of the cysts in the liver. In three of these the disease had lasted for two years; in eight, it had been present from two to four years; in four, from four to six years; in the remaining cases, fifteen, eighteen, twenty, and even thirty years. One case coming under Frerich's observation had suffered from the disease for seven years, others for periods varying from two to three years. Of the cases which have come under my own observation, in one the disease had given symptoms for one month; in three, for three months; in three other cases, four, five and nine months, respectively; and in the remaining three cases, one, six and nine years, respectively.

Treatment.—In the past, various operative procedures have been employed. The use of caustics to promote adhesions between the sac and the abdominal parietes belongs to the preaseptic days of surgery. Tapping either with or without the introduction of solutions calculated to kill the parasite in the absence of adhesions, in such a thick, fibrous sac wall, is dangerous both from the suppurative changes which may ensue in the sac and the possibility of the escape of sac contents into the peritoneal cavity.

It is interesting in this connection to note the progress of hepatotomy. Simple incision for opening abscess of the liver is an ancient operation. From the time of Hippocrates, hepatic abscesses have been opened either by cutting instruments or by cauterization. Celsus, Aristotle and Alucasius speak of opening liver abscesses by the scalpel. These procedures seem to have gradually fallen into disuse. In some instances,

however, the track of the puncturing needle was followed by the actual cautery, the needle remaining *in situ* as a guide. In the eighteenth century they were revived by Petit and Morand. Up to 1825 no progress had been made, when Massau called attention to the incision by means of the actual cautery; this has since been known as the method of Récamier, the latter surgeon first employing it formally and systematically in the following year in hydatid cysts. Hydatid cysts, however, had been incised by error, supposing them to be abscesses before this by Wolcherus, Mailly and others. In spite of every effort, however, the mortality of the operation remained very high (36 per cent.). Another decline of interest in the operation now occurred, and, in 1850, even in India, where the operation was most frequently demanded, non-interference prevailed in cases of suppurative hepatitis.

The real revival of the operation took place following the introduction of antiseptic surgery, when W. Aitkin published a case in 1872, although the credit of the revival is usually given to Stromeyer and Little. In 1887 Zancarol added systematic cleansing of the abscess cavity to the simple incision. To this Fontan added curettage of the intrahepatic cavity. At the present time the operation may be said to be firmly established in surgical practice.

The old method of operating at a single sitting was modified to operating in two sittings by Massau (1825) and Récamier (1826). The enthusiasm with which Von Volkmann advocated antiseptic incision in two stages has led to the operation being known as the method of Von Volkmann.

Modern treatment consists in the stitching of the sac wall to the edges of the wound in the abdominal parietes, and then incising it, either in one or two stages. In certain cases the cyst may best be reached by the transpleural route or through the lumbar region. The tension of the sac may be lessened by aspiration of a portion of its contents after making the abdominal incision and protecting the peritoneal cavity with laparotomy pads.

Subsequent to incision, the lining membrane of the sac is peeled off as completely as possible, following removal of the daughter cysts if present. A stream of warm solution directed between the lining and the fibrous capsule will greatly facilitate this. The cavity is irrigated and packed daily until only a small sinus is left. This, as a rule, closes slowly. Finally, there remains a shrivelled-up mass of fibrous tissue attached to or in the substance of the liver. This healing process may take many months and requires constant attention. A liver fistula may persist indefinitely. Injections of mild iodine solution into the cyst aid in destroying any active remaining parasites and in promoting healing. Liver fistula should be treated by thorough cauterization.

(To be continued.)

THE CLINICAL DIAGNOSIS OF STATUS LYMPHATICUS.*

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IN this brief paper not only has there been no attempt to cover exhaustively the subject of status lymphaticus, but no claim can be made even to the presentation of any new or important facts bearing upon that obscure and interesting condition. Its purpose is merely to emphasize the clinical and practical aspects of the subject and especially to dwell upon certain frequently associated conditions which while well known to most pathologists, seem not yet to have received much attention (at least in this country) from practicing physicians and surgeons; but which are, I believe, of great importance in considering the question of diagnosis.

It would be difficult, perhaps, to name any single medical question which, during the past half century, has been the cause of more violent discussion or has produced a more voluminous literature than the apparently simple one of the so-called "thymus death." Whatever the actual mode of death in these cases, the discussion has at least made it abundantly evident that sudden death without any obvious cause, in infants in whom post-mortem examination shows an abnormally large thymus, is of relatively frequent occurrence; and that in older children and young adults with enlarged thymus, sudden death from slight and apparently insufficient causes is by no means rare.

Thanks chiefly to the studies of Paltauf and the Vienna school of pathologists, it has been demonstrated during the past fifteen or twenty years that in these cases of sudden and unexplained death the enlarged thymus is only a part of a more or less general lymphoid hyperplasia, and that it is to this lymphatic state or lymphatic constitution that most, at least, of these deaths with enlargement of the thymus are to be ascribed.

This tendency to overgrowth of lymphoid tissue may show itself in any structure of the body where normally lymphoid tissue is to be found. Thus the lymph nodes, both superficial and deep, are frequently affected, as are also the tonsils (faucial, pharyngeal and lingual) and the lymph follicles at the base of the tongue, about the epiglottis and in and about the larynx. The lymphoid tissue of the stomach and intestines is especially prone to such hyperplasia, and the Malpighian bodies of the spleen are also usually enlarged and numerous, although the gross enlargement of the organ is often slight or lacking. The enlargement and persistence of the thymus, which is made up almost wholly of lymphoid tissue, is only another evidence of the tendency in such cases to universal lymphoid proliferation.

The careful anatomical study of these cases has shown also that certain other bodily abnormalities and diseases are present in very many instances. These are:

1. Hypoplasia of the heart and arteries.
2. Incomplete development of the sexual organs.
3. Evidences of old or recent rickets.
4. Abnormalities of the thyroid gland.
5. Idiopathic epilepsy.

Hypoplasia of the Heart and Arteries.—Although instances of lack of development of the heart and aorta have been known for centuries, attention to the subject was directed chiefly through the writings of Rokitansky, Bamberger, and Virchow. The first two noted the frequent association of the small heart and narrow aorta with a lack of development of the sexual organs, and the last (Virchow) emphasized especially the causal relation of these vascular abnormalities to many cases of chlorosis and also to the hemorrhagic diathesis and hæmophilia. In a case of hæmophilia, as early as 1859, he noted in addition to the narrow and thin walled arteries the presence of a persistent and enlarged thymus.

The circulatory changes described by Virchow are (a) a heart often, but by no means always, smaller than normal, and (b) changes in the aorta and large arteries. The aorta is not only much narrower than normal, but the wall is very thin and extraordinarily elastic ("like a rubber band"); there are often abnormalities in the branching, and the intima shows curious undulations and unevennesses and has a tendency to undergo fatty degeneration.

An interesting instance of this condition occurred during my interne service at the New York Hospital. A young woman, about twenty-eight years, was treated in the wards for some weeks for a severe chlorosis. She presented all the classical symptoms and physical signs of chlorosis, including a systolic bruit over the pulmonary area and at the apex. Among other symptoms was a tendency to frequent attacks of syncope. In one of these syncopal attacks she suddenly died, to the great surprise and confusion of both the attending and the house staff. The autopsy showed a dilated heart, a greatly narrowed aorta and a persistent thymus. No mention is made in the autopsy report of the appearance of the genital organs or of the lymphatic apparatus.

In a large majority of cases of status lymphaticus this narrowing of the aorta and thinning of its wall, with increase in its elasticity, are present. Hypoplasia of the heart itself seems to be less common.

Incomplete Development of the Sexual Organs (Infantilism).—Infantilism is the name given to that condition in which there is the preservation in the adult of certain physical and mental peculiarities of childhood, and an incomplete development of what are known as the secondary sexual qualities. These manifestations include the delay

*Read at a meeting of the Bronx Medical Society, April 11, 1906.

or absence of puberty, the absence or scantiness of facial, axillary and pubic hair and the incomplete development in the female of the breasts, uterus and ovaries, and in the male of the penis and testicles.

Infantilism is usually divided into two types, (a) the myxœdematous type, due to insufficient activity of the thyroid, and illustrated in the milder grades of endemic and sporadic cretinism; and (b) a type not associated with thyroid abnormalities, in which the causes seem varied and often obscure.

The very frequent association of vascular hypoplasia with infantilism was noted, as has been said, by Rokitansky and Bamberger.

In status lymphaticus some evidences of infantilism are seen in at least one-half of all the cases occurring in adults and adolescents. The commonest abnormalities are the absence of pubic and axillary hair, the rudimentary development of the breasts and the infantile type of uterus—*i. e.*, a long, narrow cervix with a very small body.

Rickets.—Evidences of recent or old rickets are found in a large proportion (at least one-half) of the cases of status lymphaticus. These evidences chiefly concern the osseous system. Rickets also is one of the recognized causes of the non-myxœdematous type of infantilism.

Thyroid Abnormalities.—The association of abnormalities of the thyroid with the lymphatic constitution is of frequent occurrence. The enlargement may be any one of the various types of simple goitre or there may be evidences of Graves' disease—as was the case in one of the patients reported by Blake.¹ The fact that one type of infantilism is known to depend upon thyroid deficiency is interesting and suggestive in this connection.

Idiopathic Epilepsy.—The close relationship between true or idiopathic epilepsy and the lymphatic constitution has been emphasized by Ohlmacher,² who has found in most of his autopsies upon such epileptics evidences of a pronounced general lymphoid proliferation, including, often, an enlarged thymus.

Clinical Importance of Status Lymphaticus.—In addition to the better known results of the lymphatic state, as seen in the sudden deaths in rachitic infants and in the not uncommon deaths during ether and chloroform narcosis, death has occurred from all manner of slight causes. As an instance may be mentioned the now famous case of the young son of Prof. Langerhans who died promptly after receiving a small prophylactic dose of diphtheria antitoxin. Death has occurred also after the administration of simple and ordinarily harmless drugs. One case is reported of death in a child following an external application for eczema. The autopsy showed only the usual lesions of status lymphaticus.

Nordmann³ has investigated the subject of sud-

den death during bathing, and it seems probable that many of the deaths from drowning which are ascribed to sudden "cramps" are really the result of this lymphatic state. Many such instances might be cited.

It is coming to be realized that status lymphaticus may play a role of some importance in determining the mortality in acute infectious diseases. Daut,⁴ in an important paper, demonstrates clearly the fact that the lymphatic constitution affects very gravely the prognosis in diphtheria. In Escherich's children's clinic in Gratz he found that among 79 autopsies in death from diphtheria there were 23 instances of status lymphaticus! Moreover, it was noticed that such individuals died even when the throat lesions seemed slight and benign and when antitoxin had been used early and freely.

Others have noticed the same lowered resistance of these cases to cholera, pneumonia and typhoid fever. Among 23 autopsies upon cases of epidemic meningitis at the New York and Hudson Street Hospitals during the past two years Elser⁵ found six instances of this lymphatic state. In each of these six cases the disease had been of the fulminant and very rapidly fatal type.

The following rare case suggests the possibility that the lymphatic constitution may have important bearings in still other directions. A muscular, well nourished driver of 22 years, in apparent good health, developed coma and died in the New York Hospital within 24 hours. The autopsy revealed a very large hemorrhage of the cerebellum which had ruptured into and completely filled the fourth ventricle. The only other lesions of importance were a persistent thymus, weighing 43 grammes, an enlarged spleen and a general lymphoid hyperplasia. The heart and aorta were of normal size. No cause whatever could be found for the hemorrhage.

It is hardly necessary to say that a spontaneous hemorrhage into the brain of a healthy individual of 22 years, without evidence of nephritis or arterio-sclerosis, is extraordinarily rare. Mention has already been made of the fact, emphasized by Virchow, Bamberger and others, of the almost constant association of hæmophilia and other forms of the hemorrhagic diathesis with hypoplasia and other changes of the vascular system, and in view of the similar connection between vascular hypoplasia and status lymphaticus it is difficult to resist the feeling that there may be some connection between this apparently causeless hemorrhage and the existing lymphatic state, in spite of the fact that the heart and aorta appeared normal.

Diagnosis.—Even from the above brief sketch of the varied clinical manifestations of status lymphaticus it must be sufficiently evident to all that the condition may have a direct relation to every department of clinical medicine and surgery. Its diagnosis therefore becomes a matter of very considerable importance.

¹ *Annals of Surgery*, XXXV, 1902, p. 745.

² *Bull. of the Ohio Hosp. for Epileptics*, Vol. I, 1898, p. 61.

³ *Correspon. bl. f. Schweizer Aerzte*; 1889, XIX, p. 202.

⁴ *Fahrbuch f. Kinderheilk.*, XLVII, 1898, p. 14.

⁵ *Jour. of Med. Research*, October, 1905.

Can such a diagnosis be made during life?

It is not to be denied that a positive diagnosis at present is, to say the least, very difficult; but it seems to me that if the possibility of such a disorder be borne in mind and if sufficient care and trouble be taken in the examination, the condition may be recognized with a fair degree of certainty in at least some of the cases.

This examination should include:

1. The lymphatic apparatus—superficial lymph nodes (often not much enlarged), tonsils, adenoids, base of tongue, epiglottis, larynx and pyriform sinuses.

2. The spleen and thymus. The thymus dullness behind and slightly to each side of the manubrium sterni disappears normally about the fourth or fifth year.

3. The heart and accessible arteries. The most constant sign of congenital hypoplasia of the vascular system is the noticeably small size and thin walls of all the palpable arteries. The condition of the heart in such cases varies much. In some the heart also is hypoplastic; in others there is distinct hypertrophy of the left ventricle. In others still, the left ventricle is dilated. In cases with hypertrophy of the ventricle the pulses are small but of high tension. Ortner has suggested that in young adults with distinct hypertrophy of the left ventricle the *absence* of aortic pulsation in the suprasternal notch would strongly suggest an abnormally narrow aorta, in the absence of other obvious cause for such hypertrophy.

4. The body for evidences of infantilism—facial, axillary and pubic hair, breasts, uterus and male genital organs. Sterility, it should be remembered, is very frequently due to an infantile type of uterus. In infantilism the body height need not be below the normal; there may even be giantism.

5. The skeleton for evidences of rickets.

6. The thyroid gland, and

7. The blood.

It might fairly be expected that in such a condition of general lymphoid proliferation much aid to the diagnosis would be furnished by a careful study of the blood, especially as to its content of lymphocytes; for an increase in these cells would seem to be almost inevitable under such circumstances. Unfortunately, however, definite knowledge upon this point is as yet altogether lacking. At least I have been unable to find any record of such a blood examination during life in a case of status lymphaticus. Nevertheless, an increase in the lymphocytes has been shown to be of frequent occurrence in some of the associated conditions already referred to: *e.g.*, in Graves' disease (Ewing), in certain severe forms of chlorosis (Neusser) and in idiopathic epilepsy (Ohlmacher); and such an increase should be carefully sought for in every case of suspected lymphatic constitution. The presence of such a lymphocytosis would certainly give support to the diagnosis; whether or not the *absence* of lymphocytosis

would be sufficient grounds for excluding status lymphaticus remains to be proved.

It should be clearly understood that any of the above mentioned stigmata may occur independently of the condition of status lymphaticus. It is only when a number of them are found in the same individual that they can be regarded as of diagnostic significance. Nevertheless, the presence of any one of them—*e. g.*, the absence, in an adult, of pubic hair—or the presence of greatly enlarged tonsils, should suggest the *possibility* of a lymphatic constitution, and should lead to a careful examination with a view to settling the question, if possible, one way or the other.

Especially in the case of anticipated operation in children and young adults I would urge that, instead of the usual perfunctory examination of the heart, a careful investigation be made along the lines here suggested.

POST-OPERATIVE ACUTE DILATATION OF THE STOMACH.*

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THE successful completion of an operation, paradoxical as it may appear, is oftentimes but the beginning of a train of sequelæ which place the patient in a more hazardous state, and the surgeon in one of perplexity and vacillating inactivity, where skill is thwarted by want of precedent, and desire by doubt.

It is with such thoughts uppermost in my mind that I present to you a post-operative condition not generally recognized and less understood—post-operative acute dilatation of the stomach. It is true that several brochures have been written on this subject from a medical standpoint, and traumatism given as one of the etiological factors, but nowhere have I found it exclusively treated from the point indicated by the title of this paper. Upon it the surgical text-books are singularly silent, but since 1873, when Hilton Fagge quoted cases occurring in Guy's Hospital, revealed post-mortem, the medical journals (English, French and German) contain numerous reports, presenting individually such distinctive clinical pictures that I hope to be able, from a study of the whole, to present in outline the salient features of its cause, diagnosis, and treatment, so that in the future the possibility of its appearance may be apprehended and its advent recognized.

By placing before you a few of the reported cases, you will observe their similarity and the entity of this pathological condition. The first case came under my personal observation. I have abridged its history, taken from the records of St. Mary's Hospital, as far as permissible with clearness, avoiding for the sake of brevity

*Read before the Brooklyn Surgical Society, May 11, 1906.

uninteresting detail. Its narration to a couple of medical friends some time ago was received with apparent incredulity, and I am happy in being able to present so many confirmatory cases.

CASE I.—Mrs. E. C.; aged 29 years; married; magazine writer; neurotic temperament; menses appeared at the age of 14, regular, lasting three days. At the age of 13 had typhoid fever.

For the past two years has considered herself an invalid, incapable of physical exertion to any extent. Complained principally of pain in the right and left iliac regions, more severe just before and during menstrual flow; great weakness and nervous depression; derangement of stomach with marked dyspeptic symptoms.

Physical examination of chest and abdomen negative; there was a cicatrix about four inches in length midway between umbilicus and symphysis pubes, the result of an operation for ovarian cyst two years before; uterus enlarged and fixed to a mass involving right broad ligament; bimanual examination extremely painful. Diagnosis: pyosalpinx.

Operation at St. Mary's Hospital on the afternoon of April 16, 1905, assisted by Doctor H. C. Keenan and house staff. Abdominal incisions made through old scar; uterus, left tube and ovary found buried in an inflammatory exudate; right tube and ovary absent. A supra-vaginal hysterectomy was performed with removal of remaining tube and ovary. As the appendix was involved in the exudative deposit, it was likewise removed. Duration of operation about one hour. Patient reacted well. During the early portion of the night vomited at short intervals a quantity of greenish material; three attacks of hiccough lasting about fifteen minutes each. Complained of pain at seat of operation. Vomiting ceased at 1 A. M. Dozed at intervals until 5 A. M., when vomiting recommenced.

April 16th: Almost constant vomiting of green fluid with eructation of gas; short spells of hiccough; extremely restless and irritable; pain in wound and over stomach, which she said felt full. Morphine hypodermically for pain. Chloral hydrate per rectum for sleep. Nourishment by enemata only. Average pulse since operation 102; temperature 99½ degrees.

April 17: Vomiting of the same character continued. Medication exercised no power of control over it; voided gas by rectum. To secure an action of the bowels the following enema was given:

Mag. Sulph., oz. i; glycerine, oz. ii; turpentine, oz. ss.; soapy water, pt. i. Fairly effectual; abdomen uniformly distended; vomited but little; slight fecal movement. Morphine necessary to relieve pain and grant sleep. Rested fairly well during the night. Vomiting returned at 5 A. M.; pulse weaker, but not very rapid, 116; temperature 99 degrees.

April 18: Very restless; intervals between vomiting spells much greater; character of vomitus the same; quantity greater. Retains different fluids for an hour or more at a time; two liquid bowel movements; eructation of large quantities of gas. Dressing removed to inspect wound; found clean; belly very much distended, resonant and painful. Pulse and temperature about the same.

April 19th (fourth day since operation): Complained of great pain all over abdomen; vomited but little; retained milk and broths; pulse 116; temperature 101 degrees; respiration 26; abdomen more distended, tense and painful to touch; delirious at times during night; vomitus became yellow, with fecal odor; evidence of extreme exhaustion. It was on the afternoon of this date that, on my visit to the patient, I recognized the unmistakable fecal character of the vomited material. The belly was distended to the size of that of a woman at term, resonant everywhere and tense as a drum. I was unable to analyze the symptoms satisfactorily. The movement of the bowels with escape of flatus caused me to doubt the presence of intestinal obstruction, and the character of the pulse and temperature, peritonitis;

and yet, it was to such that I attributed the great distention.

Looking upon the patient's death as practically certain if left to her fate, I decided upon an exploratory laparotomy, in the hope of finding somewhere in the upper portion of the small intestine an occlusion, to me the only imaginable cause which could produce analogous symptoms. With the patient under ether anesthesia, I reopened the original incision midway between the umbilicus and symphysis, when bulging outward, making an ellipse of the opening, there presented a bluish-white tumor resembling in appearance an ovarian cyst, less its glistening surface. Passing my hand between the tumor and the abdominal walls, I found it completely filled the abdominal cavity extending into the pelvis. I could feel no coils of intestine. It was only after reaching upward over its anterior surface to the diaphragm and liver that I recognized the fact that the tumor was the enormously distended stomach. I was at a loss to determine what procedure to adopt. From its resonance I believed it to contain gas alone. Its size precluded the possibility of any further investigation of the remaining abdominal viscera. On impulse, I was about to make a small incision into the walls, when better judgment dictated the use of a stomach tube, through which the gas escaped and about three quarts of feculent fluid, the stomach gradually contracting down to about its normal size. As the stomach contracted, the large intestine dilated, while the small one lay over the spinal column completely collapsed into a mass easily held within the palm of the hand. Commencing at the duodenum, which was normal for about two inches from the pylorus, I carefully and slowly traced it down to the cæcum and site of the removed appendix, which was covered with a grayish exudate resembling a superficial slough, without finding occlusion or constrictions of any kind whatsoever. To be doubly assured, I retraced it to the pylorus with alike negative result. The large intestine from the cæcum to anus remained distended.

Pitcherfuls of hot saline solution were poured into the peritoneal cavity as a stimulating medium to the intestinal walls, without producing any evidence of peristalsis. The wound was then closed with through and through sutures of silk worm gut, without drainage.

The rubber tube was again introduced and it required repeated filling and emptying of the stomach, with water, before it returned clean and odorless. Patient was then put to bed and its foot elevated. My general instructions to the house surgeon were to wash out the stomach every six hours. Neither fluid nor nourishment was to be given by the mouth. Nutritive enemata every five hours, consisting of peptonized milk, liquid peptonoids, whiskey and saline solutions alternately. Hypodermically, morphine to relieve pain if necessary; strychnine 1-30 of a grain; eserine 1-40 of a grain every three hours. During the night and following day the patient rested well, slept lightly at short intervals, in all about six hours. Neither pain, vomiting, nor nausea. Expelled gas by mouth and rectum; pulse 116; temperature 99; respiration 26. All the enemata were retained.

Passing now to the notes of the third day, I find recorded: pulse 86; temperature 99½; respiration 26; slight delirium; two liquid bowel movements with large amount of gas; fecal odor still present in the stomach washings. Eserine discontinued. In the evening, for the first time since the operation, the yellowish tinge to the returned fluid was absent and scarcely any fecal odor. On the following day green particles floated in the otherwise clear water.

On the sixth day patient slept all through the night. Frequency of stomach washing reduced, and after each small quantities of peptonized milk given and retained; patient objected to enemata; felt hungry and wanted all food given by mouth. Washings from stomach at first slightly green in color, but soon returned clear; large amount of gas still passed by rectum, two movements from bowels. Pulse 104; temperature 99¼; respiration 24.

From this period until the date of her discharge from the hospital, May 11th—22 days—amount of easily

assimilated food was gradually increased and the cleansing of the stomach gradually discontinued. On the 12th day the sutures were removed; union perfect. Three months after the patient reported at my office in seemingly perfect health.

CASE II.—Extract from a case reported by Hunter Robb in the *Cleveland Medical Journal*, 1904: "An abdominal incision was then made. As soon as the peritoneum was opened a tumor mass could be felt filling the upper angle of the incision. As soon, however, as an attempt was made to introduce the hand through the abdominal incision, the tumor mass at once extended as a tense sac to the symphysis pubes, interfering with further manipulation." He was not long in discovering that he had a dilated stomach to contend with. A rubber tube was introduced through the cesophagus, through which air escaped, the organ at once contracting and returning to the upper abdominal zone. The patient made an uneventful recovery without any return of the dilatation. The original operation consisted of the removal of the appendix, one ovary and suspension of the uterus.

CASE III.—Appel reports a case in the *Philadelphia Medical Journal*, 1899, of a young man who sustained a simple fracture of the thigh, and who on the twentieth day developed symptoms demanding an exploratory laparotomy. "The mass was found to be a dilated stomach crowding the collapsed intestines down into the pelvis. No stricture could be detected. The stomach was opened and drained and the wound closed. The patient was comfortable for thirty-six hours, when the distention recurred, and he died twenty-four hours later. Neither at the operation nor at the autopsy could any signs of peritonitis be detected."

CASE IV.—Extract from case reported by Doctor Borchart in the *Deutsche Medizinische Wochenschrift*, October 13, 1904: "In performing nephropexy, he injured the peritoneum. For fifty-two hours after the operation, the patient found herself perfectly well, when she suddenly entered into a state of collapse. The belly became enormously distended and so painful that he instantly thought of peritonitis. Opening the abdominal cavity he found it completely occupied by the stomach. This he closed, and with a stomach tube drew off a pailful of biliary fluid. On the following morning the patient appeared better. He then, through the advice of others, placed his patient on her chest and belly. She grew worse instead of better, as the position interfered with respiration and added to the danger of mechanical heart failure. About twenty-eight hours after the appearance of the first symptoms the patient died. By drawings he illustrated the magnitude of the distention, showing the expanded costal arch. On autopsy there was found another pailful of the gall-stained fluid, which he had failed to remove during life because of the failure of the syphon tube to reach it." His other cases were successful because correctly diagnosed and treated. Concerning therapy, he believed that prophylaxis was of the highest importance. In the bad cases he did not think the tube treatment sufficient. He had heard gastro-enterostomy advised, but he was afraid the authors of the suggestion had no practical experience. Surgeons who have seen such cases will admit the practical impossibility of its performance. The patient's condition is such that an operation does more harm than good. Personally he was in favor of creating a gastric fistula.

These four cases are sufficient to show their anatomical similarity at least. There was published in the *Pennsylvania Medical Journal*, a list of twenty of all the then known cases, but in seeking information on the subject I met so many, and allusions to so many others, that I deem it unnecessary to add them to the above list, as the frequency of its occurrence requires no further substantiation. I might

add that about one-half of these cases followed operations at a remote part from the stomach—for example: amputation of the extremities, amputation of the breast, ischio-rectal abscess—while others followed accidents.

SYMPTOMATOLOGY.

Its onset is extremely variable, appearing immediately after the traumatism, but often delayed for ten or more days. Its course may be foudroyant, terminating in death within twelve hours, or gradually extending over a period of eight days, but usually lasting from four to five.

Restlessness and nervous irritability are the prodromata, followed by vomiting. This may be a continuation of that caused by the anesthetic or it may commence long after the stomach has been functionally well. *This symptom of vomiting is of particular importance and characteristic.* At first the vomitus contains particles of the ingesta, later it is composed of a thin, watery, greenish material, evacuated in surprisingly large quantities. A gallon or two may be expelled within twenty-four hours. The act is without effort, projectile in character. With the increased distention, the intervals of vomiting become greater and may cease entirely, due to paralytic distention and inability of the abdominal muscles to cause contraction of the enlarged globe. During this period nourishing fluids may be relatively retained. This, with the cessation of vomiting, is a peculiarly deceptive symptom. My own was the only case in which I found that fecal vomiting was given as a symptom.

The abdominal distention is more marked in its upper zone, gradually extending downward, becoming uniform and tense. When the abdominal walls are thin there may be observed in the earlier stages an irregular enlargement, the left hypochondrium being full and the right flattened, while the outlines of the lower curvature of the stomach may be seen moving up and down during respiration. With the increased distention, there is a corresponding increase in the respiratory embarrassment, and interference with the heart's action, resulting in dyspnoea and anginous pain. The temperature is not great, the thermometer registering about 100 degrees. The pulse grows rapid and weak; urine scanty. The bowels move naturally or respond to injections. Resonance is marked, but after partial or complete paralysis, dullness may be found in the lumbar or umbilical regions; and if so, a succussion splash sound. Hiccough may or may not exist. From malnutrition and the loss of the bodily fluid by vomiting the patient becomes greatly emaciated and presents all the features of a grave condition.

ETIOLOGY.

The causative influences are still involved in doubt but can be included under three heads: vaso-motor, mechanical and constitutional. In abdominal operations it would be a natural suppo-

sition that adhesions or constrictions would play an important part, but autopsies have shown (except in a very few cases) the absence of mechanical factors, as well as that of peritonitis, their usual accompaniment.

While the whole category of intestinal injuries can be considered as possibilities, the fact that accidents in which the integrity of the skin is not even destroyed are followed by this condition of dilatation in the most serious form, must cause us to seek further for a solution. Preceding diseases of the stomach in which structural changes exist involving a loss of nerve tone, systemic impairment from any cause, grave operations, and those requiring an undue length of time in their performance, acute infection, injury to the sympathetic ganglia, and improper diet may have an indirect influence.

Whatever the cause may be, there is a paralytic dilatation underlying it, caused by some agent acting upon the central nervous system. In reference to this statement, I can do no better than quote an excerpt from a discussion on the subject of acute dilatation of the stomach following operation before the *Freie Vereinigung der Chirurgen Berlins*, in June, 1904. Dr. H. Brau, an assistant of Dr. F. Krause, had observed in the latter's clinic, five cases following abdominal operations, all of which recovered. In discussing its cause he said:

The explanation of acute dilatation of the stomach is not due to precedent diseases or to mechanical impediment of the pylorus or cardiac extremity, nor in the lack of muscular power of the muscular forces of the stomach, but that in considering his own cases and the experimental observations of others (Steider, Kelling, Jarowski, von Mikulicz and Sinnhuber) he thinks he is justified in assuming it to be a functional disturbance caused by all possible injuries, especially so by its failure to spontaneously regain its tonicity, showing a co-operation of a whole series of muscular and nervous forces, which may have in any case a wholly different meaning. Furthermore, its appearance in an absolutely aseptic case, shows reflex influence over the tone and mobility of the stomach and of the retrograde emptying mechanism. He believed it possible for an exhausted patient to be free from nausea and vomiting, and nevertheless, a fatal overfilling and consequent decomposition in the stomach be present. He referred to Kelling's experiment with a narcotized dog in which a maximum dilatation could be obtained by means of a gastric fistula, when, as in the awakened animal, belching and vomiting resulted at a much lower pressure. Furthermore, the animal after awakening from the narcosis, in spite of the enormous expansion and over distention, was able by belching and vomiting to relieve itself as soon as the reflex returned. Experiments showed also that in the non-narcotized animal when the vagi were served, maximum dilatation occurred within two hours, but in time the animal regained the expelling power, going to show that other nerve influence played a part as well.

Touching upon the symptomatology he adds:

Its rapid development may lead to errors in diagnosis, for instance, strangulation, perforation and peritonitis. He particularly emphasized that the most sinister cases are those in which nausea and vomiting are wanting, symptoms which refer directly to the stomach. Therefore, results the rule to always exclude the participation of the stomach, by continual observation, in the cases where after operation, especially laparotomies, the course is uneven.

MORTALITY.

The twenty published cases collected by Thompson and Appel show a mortality of 85 per cent. Little consideration may be given to this data as in nearly all of the cases the diagnosis was made post-mortem. In contrast to the above, in Germany, where early treatment was resorted to, the mortality was about 50 per cent.

DIAGNOSIS.

Post-operative peritonitis, occlusions and paralysis of the intestine present so many symptoms in common with acute dilatation of the stomach, that they are apt to be confounded and mislead us in determining the true pathological condition. The initiatory chill with the onset of peritonitis, the rapid and full pulse, the gradual elevation in temperature, the intensity of the pain, the essential difference in the character of the vomiting and the amount vomited, with the added nausea and dry retching, are so markedly in contrast, a differential diagnosis is not at all impossible; of lesser importance are the location and amount of distention. In intestinal obstruction and paralysis, the insurmountable constipation, together with the symptom of concomitant peritonitis, will distinguish their individuality. The succussion sound with dullness in the lower abdominal zone, will also aid us negatively (by their absence). But the introduction of a stomach tube of proper length, if followed by the escape of gas and biliary fluid and a diminution of the distention, will be our most effectual aid. It is possible to conceive, also, how a greatly distended bladder surrounded by inflated intestines could be misleading.

TREATMENT.

With our present knowledge, prophylaxis, by a careful inquiry into the past and present functional health of the stomach of a prospective subject for operation, and by proper dieting in advance, we may prevent its occurrence; but the possibility of its appearance should ever be borne in mind. After operations requiring prolonged anesthesia the stomach should be washed.

Where the vomiting persists after the first twelve hours, an inspection of the stomach should be made, removing the dressings if necessary. Should it be found dilated, no matter the prostration of the patient, it should be submitted to repeated washings, using some mild antiseptic solution, for herein lies the hope of preventing extreme distention. Nourishment should be given by rectum and medication hypodermically. Physostigmine sulphate, it is claimed, produces peristaltic action in the intestines and could be rationally used, but because of its nature it could not be well continued for any length of time with a weak heart, strychnine, in my opinion, should be used by preference. Both of these drugs are advised by others. Faradism might prove valuable, as also massage. Postural treatment hav-

ing for its object counter pressure does not appeal to me. If, notwithstanding our efforts, the dilatation should continue to increase and paralysis ensue, the only surgical procedure to hold out hope of success would be the establishment of a gastric fistula to be attempted as a *dernier resort*. So far there has been no successful case recorded following gastrotomy.

In conclusion, let me add that post-operative acute dilatation of the stomach is an assured fact beyond dispute. Furthermore, that its frequency holds an important ratio to other sequelæ; that in the past it frequently has escaped detection; that it has distinctive symptoms by which it can be recognized without exploratory laparotomy; that its early diagnosis will enable us by proper treatment to prevent in a majority of the cases extreme dilatation, the chief source of danger; and that in the future with its more general recognition and improved therapy, many lives will be saved. In drawing your attention to the subject, the object of the writer has been attained.

FURTHER RESEARCH ON SYPHILIS— BY WHAT DATA, SIGN OR SYMPTOM CAN WE DETERMINE A CURE?*

By J. MONROE LIEBERMANN, M.D.,

NEW YORK,

Late Assistant to the Chair of Surgery at New York Post Graduate School and Hospital.

WHEN, in September, 1905, I was requested to open the discussion on Dr. Finkelpearl's paper on syphilis at the recent meeting of the American Electro-Therapeutic Association, it appeared to me almost a useless task to try to interest a scientific body of men in a subject that is so hackneyed and one whose literature is so voluminous and rich that there is scarcely a characteristic symptom, sign or manifestation connected with this disease that has not been written extensively and repeatedly discussed. It would seem that there is nothing new or of interest to bring before the profession, whether in reference to history, diagnosis, prognosis or treatment. True enough arguments and counter-arguments are often heard in the various journals and in medical societies as to the validity of this or that method of treatment; and it may be set down that all methods of treatment, whether by inunction, hypodermic injection, internal administration or cataphoric impregnation, virtually rely upon one and the same specific—mercury. No matter in what form it is exhibited, whether by means of a menstrum containing 33 per cent. or 50 per cent., or in some compound of its salts, it is the same specific, differing merely in form. In the secondary or tertiary stages the same medicament is continued

with the addition of some form of iodides. Each of the various methods of exhibiting these remedies has its advocates; and each champion of a certain method does not hesitate to prove both clinically and statistically the advantage of his method over all others. Many go so far as to claim a cure for syphilis by this or that special method within a period of three to five years. Some maintain the necessity of continuing treatment for a longer and some for a shorter period. At the outset of my paper I desire to ask each of my learned colleagues and all these syphilographers and advocates of different methods of treatment to carefully describe at least one unequivocal symptom or sign which indicates a cure of syphilis. I assume and contend that each theory and claim must stand or fall by the presence or absence of this sign or symptom. There must be no uncertainty. This positive indication must be found in every case of syphilis, be it primary, secondary or tertiary. Its existence must be demonstrated while the disease is raging and its absence when the disease is cured. To be consistent, the advocates of any system must demonstrate a certain method of diagnosis which admits of no doubt, and which is plain enough to be understood by the merest tyro of medicine as well as by the specialist and skilled practitioner. With such method of diagnosis the claim of superiority for this or that method could be positively established. But is there such a method of diagnosis? Have we discovered even one symptom or sign by which we can assure our patients, after any course of treatment, whether long or short, that they are positively and permanently cured?

Every practitioner who has made a specialty and life study of the treatment of venereal diseases appreciates how hard it is to pronounce a case positively cured, and will be very careful in committing himself to any positive statement, as to whether such a case is or is not completely restored and permanently freed from syphilitic virus.

In my consideration of this intensely important subject—for it has been asserted that every eighteenth man, woman and child in this great city is sooner or later a syphilitic—I addressed letters of inquiry to a number of practitioners who are eminent in their field. Some of these replies, with which I fully coincide, are herewith submitted:

September 1, 1905.

I cannot give any hard and fast answer to your question, and must beg to refer you to my written views upon the subject. In a broad way I may say a man steadily and efficiently treated by mercury during the entire period of his manifestation may safely marry five years after his chancre, provided that the last six months of that period shall have passed without his exhibiting any symptoms of syphilis whatsoever, he, of course, during that period, to have taken no anti-syphilitic treatment. This permit to marry, however, does not carry with it an insurance against the possible appearance of later symptoms upon his own person.

E. L. KEYES.

*Read before the American Medico-Pharmaceutical League, New York, November 28, 1905.

September 15, 1905.

In reply to your query will say that we possess no accurately scientific means for the determination of the radical cure of syphilis. The most reliable data upon which the presumption of cure is based are a sufficiently active and prolonged treatment and an exemption from all specific symptoms for a period of one to two years after the cessation of treatment.

P. A. MORROW.

September 5, 1905.

You ask the following question: "By what data or symptoms, if any, are you guided to consider a case of syphilis cured?"

This question is a pretty difficult one to answer off-hand. Indeed, it is impossible to consider absolutely any case of syphilis as cured. All that I personally should be willing to say would be as to the probable recovery from the disease, and this I should base upon the following points:

1. The most important point of recovery would be the likelihood of transmission of the disease to others. This, I should say, would be unlikely to occur after a lapse of two years from the disappearance of the last symptoms, provided these symptoms were of the earlier and milder form.

2. If the last symptoms shown were of a later and destructive type, I should put the limit at three years instead of two. Of course, it is understood that in those intervals of two or three years no symptoms must be apparent in the patient after all treatment has been suspended; in other words, no treatment must be taken, so that no question can arise as to the treatment having prevented the appearance of symptoms.

3. As I am not a believer in the transmission of syphilis to offspring with seminal fluid without participation of the mother in the disease, I should consider that a male patient would not be likely to contaminate his offspring, provided no contagious symptoms were present in him, and that contagious quality I should limit to the first three years of his disease.

4. In women, inasmuch as syphilitic babies are born to women who, at the time of conception and birth, are apparently entirely free from syphilis, although they have previously suffered from the disease, I should say, as a matter of precaution and safety, place the woman upon anti-syphilitic treatment during the whole period of her pregnancy. And

5. In conclusion, I should say that there is no given period at which a patient may be positively assured that he or she has absolutely recovered from the disease. All that the prudent surgeon can say is as to the probabilities, and I trust that in the above answers I have made plain to you the data upon which I would base my opinion as to the probability of a so-called cure.

F. R. STURGIS.

August 18, 1905.

Your question is certainly difficult to answer, unless you exclude para-syphilitic affections and unless it be accepted that tabes may be due to other causes than syphilis. Under such conditions, I would follow the recognized authorities who hold that if a case is carefully treated for two years from the appearance of the primary lesion and the patient is free from any manifestation whatever for a year thereafter—(i. e., three years after the appearance of the lesion)—I would consider the patient cured. By the word "cured" I mean that freedom from manifestations which modern science reckons a cure. You appreciate that I give this answer with the reservations that are due to observation.

F. C. VALENTINE.

John A. Fordyce, in "Treatise on Surgery," edited by Roswell Park, M.D., has this to say:

Unfortunately, we have no certain means of determining when the disease is cured, or, of foretelling the cases that will prove mild and of short duration, and of those that may involve important organs and endanger the future health or even life of the patient.

I am sure that these sentiments so ably presented by Drs. Keyes, Morrow, Sturgis and Valentine are echoed by every reliable and careful observer who has been long enough in practice and observed sufficiently to render his opinion of value in the premises.

No investigation (of any scientific value) of micro-organism was undertaken prior to 1846, when Otto Funke, of Leipzig, described the filament of the blood and Obermeier described the *spirochæta*, a filamentous parasite, found in the blood of malarial patients, although Kircherius and David Abercrombie, as early as the sixteenth century, and Dider, in the eighteenth century, suggested "animal contagion" in connection with the origin of syphilis (Fanoni).

In recent years, while we have been successful in identifying and describing the pathogenic germs of many diseases we are as a profession still admittedly at sea concerning the germ of syphilis.

In 1880, about the same time when our pathologist found so many different species of germs, the German physicians found also evidences of disease in the blood; but while locating the germs and differentiating different varieties in the blood they followed the usual method inaugurated by Ehrlich of examining the blood by staining, thereby killing the bacteria instead of following the advice of that Nestor of scientific research, Virchow, by using the far better and more natural method of examining unstained blood.

Lately Schoudinn and Hoffman, in the May number of this year of *Deutsche Medicinische Wochenschrift*, have published the results of their researches in this direction. They found two varieties of *spirochæta*, the larger one of which, *spirochæta refringens*, stains readily and is found in the decomposing secretions about the genitals, and a smaller one is found in syphilitic lesions only and cannot be readily stained, which they call the "*spirochæta pallida*."

Metchniff and Roux who are known for their work in successfully inoculating monkeys with the specific virus, claiming to have succeeded in identifying the *spirochæta pallida* in eight cases, but admit that they have not succeeded in seeing it alive.

On the other hand, Richard and Hunt come forward with a different report, following the same method of research as Schoudinn and Hoffman for the same *spirochæta*. They find three different varieties: One form of the micro-organism being thick, straight and slightly curved; a second, of the same thickness as the first, but with spirals; and a third form, which is exceedingly thin, distinctly spiral with a large number of turns and very long.

Fanoni in the *New York Medical Journal* for November 4, 1905, accurately describes the *spirochæta* of Schoudinn and Hoffman, and the various methods of staining this species. Fanoni also cites the dissenting opinions of Max Schuller,

Kiolomenoglau and Cube, Omeltchenko of Russia, who deny the pathogenic or specific nature of Schoudinn and Hoffman's *spirochæta pallida*, insisting that it is either a bacillus, or else merely fragments of fibro-elastic tissue, derived from the true corium while incising or scraping a syphilitic lesion.

In all this chaos of conjecture and fog of uncertainty, something like a beacon light of hope comes to us in the demonstration of Dr. Robert L. Watkins, who for years has found in the blood of syphilitics the peculiar and pathognomonic organisms described by Salisbury in 1868, and named by him "crypta syphilitica," and was endorsed by the New York Society of Hæmatology.

August 28, 1905.

You ask, "By what data, symptom or sign are you guided for a positive diagnosis of syphilis?"

For many years I have discerned syphilis by the "crypta syphilitica," a germ found in all stages of the disease, and it has been accepted by the New York Society of Hæmatology.

It was briefly described and named by Salisbury the "crypta syphilitica" in 1868. But I have the honor to confirm this discovery in my practice of the last eighteen years. This organism is a cryptogram and belongs to the class called *protophyta* under the division of *algæ*. It is an aquatic plant and develops from the spore to the mycelium in the tissues and blood. This micro-organism requires no stains for its detection, its size, shape and lively movement are sufficient. The filament of this organism was stained by Golosz of Paris; and by many others has the bacillus or rod form of this plant been described, stained and named by some other name than that which belongs to it and was given by its discoverer. While the mycelium and rod stage of the "crypta syphilitica" are sometimes difficult to find, the spore or coccus is found invariably in all stages of the disease. Take the fresh blood, use no stains but a 1-12 objective, and remember that the so-called bacilli of many observers is only the apparent sticking together of the spores of the "crypta syphilitica," the coccus,—evolving toward their full development,—the mycelium.

ROBERT L. WATKINS.

According to Watkins, the *crypta syphilitica* of Salisbury has three stages of development.

First, the spore, which is of a round shape and of about the same diameter as the tubercular bacillus. It is of a full red color and when not interfered with by standing material, very lively. It is somewhat difficult at first to detect it, but once identified and particularly noted, it can afterward be easily recognized.

In its second stage of development, it becomes a bacillus of the same color, and about three or four times as long as its diameter.

In its third stage of development, this germ appears to be identical with the filament discovered by Golosz, formerly of Vienna, now of Paris. Golosz uses a staining method to disclose it, but Watkins claims to be able to distinguish it without the use of any stain, as naturally existing in the fresh blood, but he also insists that it must be observed quickly, since it is soon destroyed after removal from the body.

Do not stain the bacteria, but look for it unstained in the freshly drawn blood of the human subject. If this germ is found it is immaterial whether there has been a history of

infection or not; the specific treatment usually restores the patient to good health, and as the disease disappears only by the accurate scanning it will be possible to detect the germ, whereas, before treatment they could be seen clustered by millions in groups, floating about the cells. The important point in this is that you are not compelled to stain the bacteria, and once having identified it, you will easily recognize it in all future examinations. It requires some practice and much patience, but you will be abundantly rewarded by positive success. Have faith in nature. Study the disease from nature—from the blood, and you will succeed in finding the different pathological changes in the blood long before symptoms of the disease have warned the attending physician of its presence. The theory is that the disease originates and exists in the blood and that the premonitory symptoms—"symptoms of symptoms"—of any disease can be found earlier in the blood than in any other part of the body, and, that it is, consequently, much easier to diagnose this disease from an examination of the blood than in any other possible way, since examination of the blood will reveal the disease in its incipency as well as in its advanced stages. For this reason it is far easier to make a prognosis and to decide whether the case is amenable to treatment or not. Judging from numerous examinations of syphilitic blood made by me, there is well-grounded hope that this method will eventually prove the only positive and scientific mode of diagnosing syphilis.

This theory, like all other theories, will at first sight seem rather questionable, and the average physician will not care to accept it until he has looked thoroughly into the subject. I hope that every interested practitioner will study and test this method of diagnosis with conscientious care, and when he has become thoroughly acquainted with it he will be thankful to me for calling his attention to this valuable revelation. Have your patient present at the examination; draw the fresh blood from him and examine it carefully, but avoid all dried and stained blood specimens.

As far as treatment is concerned, I used the inunction method for years, so warmly advocated by our German confreres, with and without baths with good results. But at its best, the method seems to me, so to speak, filthy. The hypodermic method on the contrary is clean and gives the same good results, but many patients object to it on account of the slight pain caused, while in some nervous patients, especially in women, I have had to use either cocaine or the ethylchloride to anesthetize the tissues. The claim that this method is more scientific than the other, I will dismiss with the remark of a French observer, "Je ne crois pas." The administration of mercury *per ora* is of more value in the secondary and tertiary stages than in the primary stage of syphilis. The method I have used quite successfully within the last two or three years is the

cataphoric method. For those who are not familiar with this method I will briefly describe it. A pad of the kind described by me in a recent article* large enough to cover the chest or the abdomen of the person filled with an inner zinc plate, is saturated with a 10 per cent. solution of chloride of sodium. A piece of gauze of two or four folds thickness, the size of 10 by 12 inches, saturated with a solution of bi-chloride of mercury, is applied to the back, covered with a zinc plate about the same size as the gauze. This is held in position by a dry pad. The positive pole is attached to the mercurial side, while the negative is connected with the chloride of sodium and zinc pad, and the direct current is used. From 10 to 50 milliamperes may be used and the seance prolonged for 15 to 20 minutes, according to the susceptibility and idiosyncrasy of patient. The mercurial solution is used of a strength of 1 to 10,000, 1 to 5,000 and 1 to 2,500. During the first one or two applications the strength should never exceed 1 to 10,000, and the patient must be carefully watched to see whether he shows signs of salivation from even such small dosage. I do not repeat the application for a period of eight or ten days, and never use the same pads on different patients. Each patient has his or her own pad with name marked upon it. After four or five, possibly six applications, the results are usually very satisfactory and far preferable to either the inunction or the hypodermic methods, owing to its cleanliness and absence of pain.

En passant, a few words about para-syphilitic affections. A typical case of locomotor ataxia, with a positive history of syphilis, will prove, on careful examination, neither more nor less than a case of syphilis with ataxia manifestations; and such cases under proper treatment with the restorative and probably germicidal action of minute doses of mercury or other drugs that act as restoratives, will be more benefited and sometimes restored to normal health than by means of the heroic mercurial treatment we usually adopt when we come in contact with a syphilitic history. These are the cases that are often spoken of in our text-books as illustrating the theory of spontaneous recovery. I have recently had two cases of locomotor ataxia with syphilitic manifestations that have been restored to fairly good condition with no other treatment than the internal administration of restorative medicines. I do not look upon these as genuine cases of locomotor ataxia. In my opinion they are cases of syphilis with tabetic manifestations and requiring only moderate administration of specific and general tonic treatment, having in view all the time the steady increase of the red blood corpuscles. Those two cases referred to respond to treatment in a comparatively short time.

From my personal study of this absorbing

subject, which is of vital importance not only to the general practitioner and the specialist, but to every member of the human family, and from corroborative evidence contributed by such eminent authorities as our own Keyes, Morrow, Sturgis and Valentine, whose mature opinions I had the pleasure of submitting in the concise and admirably expressed letters already cited, I cannot avoid the following conclusions, namely:

(1) There are no positive or unquestionable evidences or signs by which to establish a complete cure of syphilis.

(2) We are now on the eve of isolating, identifying and demonstrating the micro-organism and source of infection of this disease. Whether it will prove to be Schoudinn and Hoffman's *spirochæta pallida* or Salisbury's (confirmed by Watkins) *crypta syphilitica* cannot yet be decided.

Personally, I am inclined to believe it will be the latter. Be it as it may, it is evident to me that when at last this point has been settled we shall possess a means of demonstrating that stage in the history of the disease when it may be pronounced genuinely and completely cured—if such result is possible—and we shall be enabled to definitely diagnose it at its outset, and to predict its character as to mildness or severity, and its probable duration.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By JAMES J. WALSH, M.D., Ph.D.,

PART II.

HISTORICAL EVENTS.

CHAPTER I.

STORY OF THE FOUNDATION.

THE fact that there had existed in New York City a society, under the title of The Medical Society of the State of New York, has led in many cases to confusion as regards the preliminary history of the medical organization that brought about the enactment of the law of 1806 and the establishment of the present Medical Society of the State of New York. The additional fact that some of the members who had been leaders in the earlier society in New York City became also very prominent in the legally established medical society, has been an added reason for this confusion. Wickes, in his "History of Medical Men in New Jersey down to the year 1800," in the chapter in which he discusses the foundation of medical societies, seems at least to hint at the legal recognition of this earlier, so-called, medical society of the State of New York, as the explanation of the origin of the present State society.

Dr. Packard, who is always very careful and usually very clear in these matters of earlier history, in his chapter on the "History of the

* J. Monroe Liebermann, "Locomotor Ataxia successfully treated with Ultra-Violet Rays."—*N. Y. Med. Journal*, Feb. 18, 1905.

Medical Societies, founded before the year 1800," does not seem to have had a very definite notion as to the actual relationship of these various societies, in New York.* He mentions the "well regulated association of gentlemen for the advancement of the profession," alluded to by Dr. Middleton, in his introductory lecture at the opening of the Medical School in King's College in November, 1769, and its apparent successor, organized at the City Hall in New York, November 14, 1794, which assumed the name and style of the Medical Society of the State of New York, and then comments: "Hence it would appear that the Medical Society of the State of New York is the immediate and legitimate descendant of the medical society mentioned by Dr. Middleton in his address; though he adds, "in 1806 this Medical Society of the State of New York became the Medical Society of the County of New York."

The impression that a direct relationship between these various societies could be traced existed at a very early period in the State society's history; indeed before the society was 25 years old, there had crept into print a number of errors, with regard to the preliminary steps that led to the legislation of 1806. In order that there might be a correction of these misunderstandings, the editors of the *New York Medical and Physical Journal* in 1828 asked Dr. John Stearns to write the history of the preliminary steps that led to the legal establishment of the New York State Medical Society, which he did. This appeared in a series of numbers in the *Journal* and because of its absolutely authoritative value, deserves a place *in extenso* here.†

The editor of the United States Medical and Surgical Journal introduced Dr. Stearns' articles as follows:

From the frequent inquiries made by the medical profession respecting the origin, organization, transactions, etc., of the Medical Society of the State of New York, we have been induced at the strong solicitation of many of our friends, to give a condensed history of that institution, with a synopsis of its transactions since its origin in 1806, to the present time. We have been greatly surprised to find that the profession in our own State should be so little informed in relation to the proceedings of this institution, and we can only attribute it to the limited circulation of its "Transactions"; presuming such to be the fact, we would respectfully suggest to the members of the Society, the propriety of adopting some more effective mode of circulation. Perhaps the plan now pursued by the Edinburgh Medico-Chirurgical Society, and noticed particularly in our fourth number, page 126, might be deemed the best.

*History of Medicine in the United States, Packard, Philadelphia, J. B. Lippincott, 1901.

† This account is usually attributed to the United States Medical and Surgical Journal, and, indeed, the editorial note at the beginning of it can scarcely fail to give the impression that it was an original article prepared for that Journal. At the end of the account, however, there occurs in small italics, the abbreviation, *New York Medical and Physical Journal*, 1828. It is in this journal that Dr. Stearns' article was originally published, and it seems to have been especially prepared for it. This journal was one of the best, most widely circulated and deservedly popular medical journals of the time. It was conducted according to its title page, by Drs. John B. Beck, J. Augustus Smith, Theodoric Romeyn Beck, D. L. M. Peixotto, and Alex. H. Stevens. All of these men were members of the faculty of the University of the State of New York, except Dr. Peixotto, who has the designation of Physician to the New York City Dispensary.

The synopsis we are about to give of our State Medical Society will doubtless be regarded as an interesting historical record of the various officers, members and the principal transactions of that institution. In the latter will be found many valuable practical facts from some of the most distinguished men who from time to time have adorned our profession and our State, and many of whom, now mingled with the dead, are cherished in remembrance for the high moral, intellectual and social virtues which distinguished them when living.—Ed.

ARTICLE I.—An Account of the Origin of the Law, "to Incorporate Medical Societies for the purpose of Regulating the Practice of Physic and Surgery in this State;" passed 4th of April, 1806. By John Stearns, M.D., of New York.

The influence which medical societies have had upon the profession, and the general misapprehension of their origin, impart an interest to this topic which I trust will not be deemed inappropriate. This interest is enhanced by the consideration that the time will soon elapse when those who were concerned in originating this law will have passed the confines of time, without having left a single record of the fact, by which the numerous errors which have obtained publicity in our scientific journals might be corrected, and justice rendered to whom it is due.

From these publications I shall select the following paragraph from a biographical notice of Dr. Bruce, in the first volume of Silliman's *Journal of Science*: "Previous to the year 1805 the practice of physic in the State of New York was regulated by no public authority, and of course, was not in the happiest condition to promote the usefulness and respectability of the profession. To remove as far as possible the existing circumstances Dr. Bruce became an active agent, and in conjunction with Dr. Romayne and other medical gentlemen of New York, succeeded in establishing the State and County medical societies, under the sanction of the Legislature. This act may be considered among the first efforts made in this country to reduce medicine to a regular science, by investing the privileges of medical men in the body of the members of the profession." The President of the New York County Medical Society in his inaugural address for 1824 also states, "that this is the parent society, from which the other institutions of a similar character throughout the State have emanated."

Without multiplying similar quotations to evince the error of public opinion, I take this occasion explicitly to state that neither Dr. Bruce nor Dr. Romayne, nor this medical society nor any physician, then resident in the city of New York, had any knowledge of the preliminary measures which led to the formation of this law, or the most remote agency in procuring its passage through the Legislature. These measures were commenced exclusively in the County of Saratoga, with a view to reclaim the profession from that degradation and contempt to which it had been reduced by ignorance, professional broils, and the grossest empiricism.

Those who witnessed the original and progressive settlement of the northern and western sections of this State since the year 1790, will recognize the mania that infatuated the emigrants from the East and the ambitious projects formed by those who assumed the title of doctor. Many who had never read a volume in medicine were suddenly introduced to an extensive practice and to a reputation of such imposing authority, as to control the opinions of their superiors in science and to prescribe rules of practice for their government. Consultations were generally distinguished for gross controversies at the bedside of the patient, whose health and life were often immolated to the ignorance, prejudices or discordant theories of the contending physicians. Their skill was generally graduated by their ability to magnify the cures they had made. Gratifying, indeed, would it be, at this enlightened period, to be able to bear testimony to the total extinction of this relic of quackery, and to the abolition of that still more ridiculous and growing imposture, that indignity of our profession, which by the sign of a common vendor converts the

medical office, designed for the cure of all diseases, into a private infirmary for curing only those which belong to a particular organ. But so great has been the change in public opinion, that empirics now seldom boast of their intuitive knowledge, their magic incantations, or their initiation into the mysteries of Indian practice; but are compelled to assume the appearance of learning, and to affix to their names the fictitious appendage of M.D.—a proof that scientific physicians will always be patronized as the public mind becomes enlightened. The ignorance of the practitioners so obscured the science of medicine at the period referred to, that reflecting physicians united in the necessity of adopting vigorous measures for a radical reform.

In 1796 a series of numbers were accordingly published in the newspapers of Saratoga, which directed the attention of the profession to the subject of instituting medical societies and ultimately led to the formation of a society in that county, consisting of twenty-one physicians. But so discordant were its materials, and so incompetent to sustain the character of a scientific institution, that the year of its formation became the period of its dissolution. This want of success did not prevent the renewal of future efforts.

In November, 1805, another meeting was held, at which committees were appointed and a resolution passed to invite the co-operation of the physicians of the adjoining counties of Washington and Montgomery. The following is a copy of the printed circular issued on that occasion and evidently sent to all the reputable members of the medical profession in the three counties mentioned:

"BALLSTON, November 7, 1805.

"Sir,—At a meeting of the physicians of the County of Saratoga, convened this day at the Court House in Ballston, for the purpose of devising means to improve the practice of medicine, we were appointed a committee to impart the object and wishes of that meeting to our professional brethren in the counties of Washington and Montgomery. In that capacity we beg leave to recommend to your earnest attention the necessity of adopting some vigorous measures for the suppression of empiricism, and the encouragement of regular practitioners. The evil calls loudly for the united efforts of all who sincerely wish to remove from that valuable science the imputation of quackery; under which from the ignorance of some of its professors, it not unjustly labors. The wish of the meeting is to procure from the Legislature of the State their sanction to a medical society; and we request your attendance at the court-house in Ballston on the 16th of January, 1806, at ten o'clock, A.M., either in person or by a committee of your county, for the purpose of adopting the best means for obtaining an act of incorporation. We remain, &c.,

"WM. PATRICK,
"JOHN STEARNS,
"GRANT POWELL,

"Committee of Correspondence."

Pursuant to the notice in this circular, a delegation from these counties attended the adjourned meeting at the same place on the 16th of January, 1806. A memorial to the Legislature was then reported, adopted, and signed, and a committee of three, consisting of Dr. Asa Fitch, of Washington; Dr. John Stearns, of Saratoga; and Alexander Sheldon, of Montgomery, were appointed to carry the same into effect.

The committee from Saratoga and Montgomery attended the ensuing session of the Legislature, and fortunately for the cause of science, the latter gentleman, Dr. Alexander Sheldon, was elected speaker of the House. Although the meeting at Saratoga did not contemplate the extension of the law beyond the limits of these three counties, the committee assumed the responsibility of making it general, and of extending its privileges to every county in the State.

Accompanied with this explanatory view of the subject, they presented the memorial to the house of Assembly on the 25th of February, 1806, who referred it

to a committee, consisting of William Livingston and Isaac Sargeant of Washington, Gurdon Huntington of Otsego, John Ely of Greene, and Joel Frost of Westchester. The majority of this committee being medical men, favorably received the proposed plan for a general law to extend the act of incorporation through the State, which they finally matured and reported to the House. The powerful opposition to the bill threatened its early and prompt rejection by a large majority. The speaker, the committee and several other members gave it a very able and vigorous support. But notwithstanding all the exertions and political influence of its friends, the danger to which the tranquility of the State would be exposed by the incorporation of forty distinct associations of physicians, was so magnified by the opposition, and the impression thereby made upon the House was so great, that but feeble hopes were entertained of its success.

At this critical juncture, when a decisive vote against the bill was every moment expected to be taken, the late Honorable William W. Van Ness rose its most eloquent and powerful advocate. And perhaps the pre-eminent powers of his parliamentary eloquence were never exerted with better effect. He refuted the arguments of the opposition, portrayed the benefits to the profession and to the public in such glowing colors, and with so much energy and zeal, that the opposition became feeble, the friends to the bill increased, and from that moment the successful issue was rendered certain. To his memory so the profession owes a monument of marble, with their gratitude deeply engraven upon its tablet.

On the first Tuesday of July, 1806, three months after the passage of the law, about twenty societies were organized pursuant to its provisions, and within two years scarcely a county in the State of any considerable population, was without a duly organized medical society.—*N. Y. Med. & Phys. Jour.*, 1828.

(To be continued.)

That man, I think has a liberal education whose body has been so trained in youth that it is the ready servant of his will, and does with ease and pleasure all that as a mechanism it is capable of; whose intellect is a clear, cold, logic engine with all its parts of equal strength and in smooth running order, ready, like a steam engine, to be turned to any kind of work and to spin the gossamers as well as to forge the anchors of the mind; whose mind is stored with the great fundamental truths of nature and the laws of her operations; one who, no stunted ascetic, is full of life and fire, but whose passions have been trained to come to heel by a vigorous will, the servant of a tender conscience; one who has learned to love all beauty, whether of nature or of art, to hate all vileness, and to esteem others as himself.—*Huxley*.

His to rejoice with exceeding great joy who plucks the fruit of his planting; but his the divine anointing who watched and waited, and toiled, and prayed—and failed—and can yet be glad.—*Strode*.

I will not follow where the path may lead, but I will go where there is no path, and I will leave a trail.—*Strode*.

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Editorials.

THE PHYSICIAN'S RIGHT OF PRIVACY.

NEWSPAPER notoriety has become so offensive to the better class of citizens that we are coming to the belief that the best fame that can visit a man is the fame of not having his name appear in the public prints. Physicians have long recognized this, and medical societies have warned their members of the perils of newspaper notoriety. The charlatan has courted the press to such a degree that the cultivated physician feels damned even by its praise.

A physician in Louisiana has brought suit against a newspaper for this very offense.* It seems that the plaintiff was a member of a committee of the medical society, which waited upon the press bureau in the interest of the physicians, and presented the resolutions embodying the objections of the medical society—to having their members' names mentioned in connection with their professional work. Soon after this a newspaper published the report of a case which in newspaper parlance was "unique." It set forth that many physicians had treated this patient's hip trouble without success until the plaintiff, who was a close student of the methods of Professor Lorenz, took hold and effected a cure. The story was a straightforward statement which

had been given to the reporter by the grateful father of the patient, and was given with a feeling of gratitude and kindness towards the physician who had cured his child.

The doctor brought action against the paper, and was decided against by the lower court. The Supreme Court, however, reversed the decision, and ruled that, while the simple matter of sentiment could not be considered, yet it was possible that the plaintiff had actually sustained damages by this publication. It is not necessary that a damaging statement shall be made in terms of defamation and slander. Words of apparent praise may often have a damaging effect. The physician in this case, the court held, had objected to having his name paraded before the public in the same manner as is practiced by quacks, and knowing that he desired that his professional work should not be advertised in this manner, the paper in question printed an adulatory statement concerning his treatment of a certain case in which the real facts were overdrawn, and in which the impression was presented to his professional colleagues that he had represented to the family that the case was "unique" and that his cure was extraordinary, when as a matter of fact neither of these was true. He was justified in claiming damages for having the paper represent him as pursuing the policy of the quack.

This doctor should have the sympathy of his profession. So, too, should the great number of his colleagues, who have the same grounds for complaint, and yet who allow their names to be sullied with the often justified assumption that they were parties to the publication.

THE LIGHT TREATMENT OF BLOOD PARASITIC DISEASES.

THE work of Finsen clearly demonstrated and placed upon a scientific basis the bacteriacidal power of light, acting upon superficial bacteria. During the past two years a number of investigators, notably Tappeiner, Busck, Raab, Jacobson and Jodlbauer, have experimented with certain soluble fluorescent substances as carriers of actinic influence to deeper structures, which are not well reached by direct light. They have found that the blood could be made the vehicle for carrying this fluorescent influence to all parts of the body. This

**Jour. Am. Med. Assoc.*, June 23, 1906.

property they found to exist in the derivatives of cinchona, in eosin, erythrosin, and others of the anilin coloring substances. The effects of these substances first were noted upon the parasite of malaria, in connection with exposure to light. This aroused interest in the photodynamic action of these bodies. Later the paramecia were used experimentally.

Busck and Tappeiner have just published their experiments with the protozoa trypanosoma, which are more sensitive to photodynamic influence than either of the two other organisms.* Guinea pigs were injected with the coloring substance, and blood serum containing the substance was then withdrawn, and brought in contact with the micro-organisms in question in the presence of light. The reactions which were observed led them to discover that there were fluorescent properties which were manifested in the extreme dilutions of these substances in animal serum.

Weak solutions of eosin in the presence of sunlight have been found to have a decided effect upon certain micro-organisms and ferments, which are not elicited in the dark. Diastase and trypsin are especially susceptible. The toxins of diphtheria, tetanus and snake venom are destroyed or rendered less toxic by this action. A solution of a fluorescent substance injected into the superficial tissues of an animal, and exposed to the sunlight, causes a destruction of the tissue and sloughing, which would not occur in the dark with the injection alone or in the sunlight without the injection.

Mice were injected with a virulent culture of trypanosoma and then with a weak eosin or erythrosin solution, and exposed to sunlight for seven hours daily. Three days later no trypanosoma were to be found in the blood. The control animals, kept in the dark, died with blood swarming with parasites. The sun-exposed animals recovered. When infected animals were not injected with the fluorescent body till the day following the infection they died four days after the infection, despite the sun exposure.

This work is still in an experimental state, but it promises interesting revelations. Just how far its therapeutic value may reach, is difficult to determine; but we can see in it a powerful therapeutic agency.

It is to be hoped that conclusions will not be arrived at until experiment and study have thrown more light upon the subject.

THE DIAGNOSIS AND TREATMENT OF FLAT-FOOT.

THE name flat-foot does not altogether describe the condition to which this name usually is given. The term is applied not to a foot which is necessarily flat, but to one in which there is a variation from the normal shape and position of the foot towards pes valgus. Actual flat-foot, or pes planus, need not be present: it is an incidental accompaniment or a later result of the valgus, or often it is a racial or individual peculiarity without pathological significance. There is need for a sharper differentiation in our nomenclature for these conditions. Clinically, there are several conditions, all generally classified under the heading, flat-foot. These are (1) pes valgus or eversion of the foot, (2) sinking of the arch without eversion, (3) flattening of the sole of the foot due to natural lowness of the arch, or to (4) the presence of much fat and soft tissue in the arch, and (5) eversion combined with lowering of the arch. This last condition is the ultimate and aggravated state which calls oftenest for treatment, because of pain, defective gait and neuralgic discomforts.

Ledderhose* calls attention to the relation of traumata and nervous diseases to flat-foot. He believes that flat-foot is a common cause of foot pains in cases in which there is scarcely a noticeable sinking of the arch. The pains are not strictly localized. When there is pain along the inner border of the foot, especially at the scaphoid bone, and tenderness; and when there are painful spots in front of the external malleolus, about the calcaneus, and in the region of the metatarsophalangeal joint, if the case is one of flat-foot there will be deep pains in the deeper soft parts and persistent discomfort in the bones of the foot. Pains are very apt to be present at points which do not correspond with the so-called typical seats of pain in flat-foot.

This author insists that in all cases of pain in the characteristic spots, accompanying standing, especially if there is a giving of the foot in the direction of valgus deformity, and when local disease processes can not be found to account for the pain, flat-foot is to be thought of even though the arch is present.

The ordinary mild case can be overcome by correct lace shoes made to fit and support the ankle, in conjunction with massage, to give tone and improve the nourishment of the affected part.

**Deutsches Archiv. für Klin. Med.*, May, 1906.

**Deutsche Med. Woch.*, 24 May, 1906.

The bloody operations for the treatment of this disease have not been productive of the best results. The prophylactic treatment when the first symptoms of flat-foot discomfort occurs offers the most gratifying results.

A SPECIFIC FOR SEA-SICKNESS.

GENERAL A. C. GIRARD, U. S. A., in a contribution to the *Journal of the American Medical Association*, June 23, 1906, shows that atropin and strychnin administered hypodermically are the most efficient remedy against sea-sickness. In a large number of cases the injection of 1/120 grain of atropin sulphate and 1/60 grain of strychnia sulphate effectually prevented the disease. The dose may have to be repeated, but usually one injection suffices. The rationale of the treatment, the author thinks, lies in the stimulating effect of the atropin on the cerebral circulation, the strychnin causing a similar action through the spinal cord. A large number of cases are referred to which show that this combination has an almost specific action.

Observations.

Let it be laid down as a rule of life that a man should not be addicted too much to any one thing. The wisdom of a wholesome variety and the mixing of play with work should drive the busy man afield in certain seasons of the year in search of rest and recreation. To none do these observations apply more than to the dweller in the city, and to no dweller in the city more than to the doctor of the ills of men. He lives and works in an atmosphere of stress, and he can not help himself being influenced by it. He is surrounded by the rush for gain and power, which he cannot help from entering into his blood too. About him is the strenuous business life.

"Where with like haste, thro' diff'rent
ways they run,
Some to undo, and some to be undone."

If he is wise, and fortunate, for a season he turns his back upon this scene of artificial life, and seeks the places which men have not defiled. Let him go where he will look up to the blue sky—I shall not say *can*, for he can look up to it in town if he only will—and let him roam the fields or woods or sea; and he will be a better doctor for it, and his patients will receive better advice when he returns.

There are many diversions which are helpful to the practice of medicine—riding, driving, walking, and the out-door games. They are all there, waiting for the man who will let them take

hold of him and help him. As to fishing, the best way to fish is, Tityrus-like, to lie beneath the shadow of the branches of a wide-spreading beech, and read the "Complete Angler." Walking has much to recommend it. It is an ancient pastime. Among our primitive ancestors it was cultivated as the most approved and advanced means of travel. To you of the equipage and the motor car, the Observer commends it. Take with you the society in which, of all the world, you find the greatest joy, and walk the fields, breathe deeply, inhale the breath of flowers, behold the pictures Nature has made for you, listen to the songs of birds; and when you return to work you will radiate joy just in the proportion that you have absorbed it out of the great world of beauty in which you have sojourned.



The country practitioner leads a more rounded life. He is less apt to be addicted too much to any one thing. He has his wholesome diversions. Some of these diversions his city brother, by taste and education, or want of education, would not undertake; but they will lengthen his days. Let the man who puts out his own horse and trims his hedge after the day's work is done not envy him who drops into the great upholstered chair at the club around the corner and fills the circumambient air with rings of fragrant smoke at the close of the day. The city has always been the destroyer of men and of families. *Urbs edax rerum*. No city would long endure were it not replenished with brawn and brains from the fields and mountains.

Still, the country practitioner would profit much by certain relaxations which he too rarely takes. He needs the inspiration of the contact with his fellows. He needs the meetings of his county and state and national societies more than his city brother does. He needs to exchange ideas with men of larger experience and wider observation than he. He needs to have his faith in certain things corroborated and his doubts in others confirmed. The pleasure in his work can be much increased by finding the ideas which he has gained from one case agreeing with the experiences in a hundred others. What has been in his mind as an unsettled theory becomes a solid working fact through the results of others' observations; and he goes back to his work with new inspirations and a firmer hold upon the essentials of his art.



As the practice of medicine goes, most practitioners devote themselves so assiduously and self-sacrificingly to their work that some form of sporadic relaxation does good and helps their minds and bodies; and in many cases it becomes a vital necessity. Properly viewed, this is true, unfortunately. The necessity for a vacation is an acknowledgment that something is wrong; and as a matter of fact something is wrong. Few men are doneg their work under the best

conditions. I know this, because there are few men who do not need a vacation, or who are not benefited by one.

There is a sabbatic tradition that has come down to us from people, whom history has shown have been notoriously defective in the art of living, and who even yet are the most flagrant violators of the simplest laws of health. This tradition has become a part of our religion and entered into the laws of the State. Let us see. It is unnatural that a man should conduct himself for six days in such a manner that at the end of that time he needs a day's rest from his doings of the other six. Still, most of us do. How much better it would be if we might live so that on Tuesday morning we should begin work as much refreshed as on Monday, and Saturday should find us as ready for labor and play as Wednesday had, and that our services and thoughts might be as holy on each day of the seven as we could make them. This would be the equable life, which we have not yet learned to live. The average professional and business man must have his summer vacation; he shortens his life without it. Essentially, it is not the summer vacation that is so good, it is the preceding months of work that are so bad. He has wilfully and wittingly violated the laws of health; the vacation is the therapy; he takes it as a cure to save his life. Better that he should not need the cure; prophylaxis is the thing.

Let us hope that we may attain to that state in which work and play and prayer and meditation shall be so harmoniously combined, and progress together so smoothly and naturally that a surcease from our method of life need never be forced upon us as a necessity, when each day of the seven shall have its Sabbath hours, each day of the summer its portion of summer vacation, and so in all the seasons of the year, the stream of life shall flow smoothly on towards the great sea of eternity.

And, furthermore, let it be provided always that no useful man shall envy the man who has a great stock of health and nothing more.

Items.

MEDICAL SCHOOLS TO UNITE.—Committees from the Medical College of Virginia and the University College of Medicine, Richmond, are considering a proposition to consolidate these institutions, with Dr. Stuart McGuire as President of the united colleges, the name of the institution to be the Medical College of Virginia.

THE BOSTON SESSION OF THE AMERICAN MEDICAL ASSOCIATION showed a registration of over four thousand seven hundred physicians. A large number of physicians were present who did not register, besides invited guests and associate members who are not included in the above figures. In numbers, the meeting exceeded any previous gathering of medical men in any country.

THE NEXT MEETING OF THE AMERICAN MEDICAL ASSOCIATION will be held at Atlantic City in 1907. The following have been elected to deliver the annual orations: Oration on Surgery, Dr. Wm. H. Wathen, of Louisville, Ky.; Oration on Medicine, Dr. James B. Herrick, of Chicago, Ill.; Oration on State Medicine, Dr. S. G. Dixon, of Philadelphia.

YALE MEDICAL SCHOOL.—Dr. George Blumer, formerly a director of the Bender laboratory at Albany and Professor of Pathology at the Albany Medical College, has been appointed Professor of the Theory and Practice of Medicine at Yale University to succeed Dr. John S. Ely, deceased.

HEALTH CONDITIONS AT PANAMA.—It is reported from the Isthmus that there are no cases of yellow fever at Colon and that the general state of health is excellent. During May the death rate was the lowest in twelve months.

SAUSAGE FACTORIES CLOSED.—The Health Department of New York City has ordered the closure of two sausage factories because of the unsanitary condition which was found to exist.

ILLEGAL PRACTITIONER CONVICTED.—In New York City a young woman was recently convicted of practicing medicine without a license. She was sentenced to pay a fine of \$150.00 or spend sixty days in jail. She was known as the "Supernatural interpreter of disease" and the "Girl with the X-Ray Eyes," and found many innocent victims. The prosecution was conducted by the counsel of the County Medical Society.

INSPECTION OF MEAT IN NEW YORK STATE.—The New York State Health Department has issued an order calling for immediate inspection by local health officers of all slaughter and packing houses in the State.

HEALER IN TROUBLE.—The English Christian Science healer, under whose care Major Whyte recently died, has been held for trial on a charge of manslaughter. The amount of bail required is \$10,000.

AT A SPECIAL MEETING OF THE ROCHESTER ACADEMY OF MEDICINE, held June 1st, suitable resolutions were adopted concerning the untimely death of Dr. Louis A. Weigel, President of the Academy and one of its charter members.

CEREBRO-SPINAL MENINGITIS IN GERMANY.—It is reported that there has been 864 cases of epidemic cerebro-spinal meningitis in Prussia since January first, with 392 deaths.

EXAMINATIONS FOR APPOINTMENT TO THE U. S. ARMY MEDICAL CORPS will be held at the various military posts throughout the United States on July 31st.

PENSION FOR MADAME CURIE.—The French Government has bestowed a pension of 12,000 francs to the widow and children of Professor Curie, the discoverer of radium.

Progress of Medical Science.

SURGERY.

EDITED BY

ALGERNON T. BRISTOW, M.D.,

Surgeon to the Kings County, St. John's and the Long Island
College Hospitals, Brooklyn, New York,

AND

NATHAN JACOBSON, M.D.,

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PERFORATING DUODENAL ULCER.

J. M. Elder, of Montreal, reports a case of perforating duodenal ulcer, without previous symptoms of indigestion or other disturbance of health, associated with the vomiting of bright red blood. The patient was a teamster and was seized with atrocious pains in the epigastrium, with retching and vomiting. Patient was out of his mind with agony. On admission to the hospital, abdomen was found to be of board-like rigidity, temperature 99°, pulse 72. Three hours later, temperature had risen to 100.2-5°, pulse 96. Although there was no history of previous digestive disturbances, the diagnosis of perforated gastric ulcer was made. Operation however revealed a round perforation of duodenum, three-fourths of an inch from the pyloric valve. The points of interest in this case are that (1) a perforating duodenal ulcer was present without any previous symptoms in a strong, healthy man; also (2) that with a duodenal ulcer one may get bright red blood in the vomited material.—*Annals of Surgery*, March, 1906.

THE FREE INTERVAL IN MENINGEAL HEMORRHAGE.

Connell defines the term "free interval" as a symptomless period of consciousness, following a primary transitory unconsciousness, and preceding a secondary increasing permanent loss of consciousness: this condition being usually found in association with a head injury. The interval may be absent or it may be of great length. In a series of eighty collected cases the shortest interval was a few minutes; the longest six weeks (Keen) and from six to eight weeks (Kemmerer). The average length of the latent period in the eighty cases was 67.6 hours. Jacobson states that a long, free interval indicates extra dural hemorrhage, which opinion is corroborated by Starr. La Clerc, Kiliani and Brion, however, look upon a long, free interval as significant of extra-dural clot, in which Connell concurs, but states that much stress cannot be placed upon the length of the interval as a guide to the location and variety of the hemorrhage. When evidence of injury is absent, diagnosis must depend on focal signs. Paralysis and pressure may, however, occur on the same side. Ledderhose collected forty-eight cases from

literature. Dawbarn reports a case of this character in which the clot was on the same side as the paralysis. The fibres of the anterior pyramidal tracts were found by Gray, on examination, to be all direct. In cases with symptoms warranting an operation, if no clot is found, the opposite side of the brain should always be examined. Operation is the only treatment for meningeal hemorrhage.—*Surgery, Gynecology and Obstetrics*, March, 1906.

EARLY DIAGNOSIS OF SEVERE APPENDICITIS.

In answer to the question whether we can recognize the severe cases of appendicitis which require immediate operation Krecke presents the following answer: In every case of appendicitis which we are called upon to treat we should differentiate between simple appendicitis and destructive appendicitis. The most positive manifestation of destructive appendicitis is painful abdominal rigidity. This demands immediate operation. When this sign is completely absent and no other manifestations are present which awaken anxiety one can assume that simple appendicitis is present. A pulse-rate increased to 100 or above is a sure indication of destructive appendicitis demanding operation. A low pulse-rate however, does not necessarily indicate a mild form of the disease. Repeated attacks of vomiting and severe pain which persists in spite of the use of the ice-bag indicate a severe form of appendicitis. Temperature is of no material importance in determining the severity of the attack. The increased frequency of respiration and the presence of costal breathing are always unfavorable symptoms. The presence of one positively unfavorable manifestation is to be considered of more importance than is the occurrence of several favorable ones. A diagnosis of destructive appendicitis having been made, operation should be performed within two hours.—*Muenchener Med. Wochenschr.*, 1906, No. 15.

OPERATIVE TREATMENT OF LACERATIONS OF THE GASTRO-INTESTINAL CANAL.

Vosswinkel makes the following statement: In all cases in which the diagnosis of rupture of the stomach or bowels can with reasonable certainty be made, early operation is imperative. If the patient presents a condition which seems to indicate that he cannot endure a serious operation restoratives and saline transfusions are to be resorted to. Delay increases the danger of the development of general peritonitis. The most characteristic signs of subcutaneous lacerations of the stomach or bowel, aside from shock, are extreme tenderness over the abdomen, which is usually located at the site of the trauma; next, a board-like rigidity of the recti muscles associated with either a flat or a retracted abdomen. In small circumscribed lacerations it is sufficient to close the tears with any suture which will invert the serous coat. Extensive lacerations of the intestines demand the resection of the injured por-

tion of the intestinal tract. If operation be deferred until general peritonitis is established the prospect of recovery is very slight.

However, we are not justified in refusing to operate even these late cases since operation presents the only means of controlling further leakage of the infectious material into the abdomen. Thorough irrigation of the entire abdominal cavity with large quantities of sterilized salt solution is always to be undertaken, as thereby the only possible chance is given for thorough cleansing. While we may not be able to make this cavity entirely sterile we may succeed in establishing a condition so that the peritoneum may be able to eliminate whatever infectious material remains.—*Archiv f. klin. Chirurgie*, 79, Bd. II.

THE DIFFERENTIATION OF MYELOMATOSIS, LEUKEMIA AND HODGKIN'S DISEASE.

Hoffman, in *v. Langenbeck's Archiv f. klin. Chirurgie*, Bd. 79, H. I., presents a differential picture of these conditions.

Under the term myelomatosis he includes the cases of multiple malignant tumors springing from the medullary canal and beginning as a hyperplasia of a cell element of the bone. Its histologic structure is not that of the parent tissue. Leukemia is a disease of the blood in which in addition to an increase in the number of white blood cells the lymphadenoid tissue is greatly increased. The lymph glands and the bone marrow maintain the character of the basic structure. The exciting cause of the tissue changes is probably the lympho—that is the spleno—and myelotoxin of Flexner. Hodgkin's disease is a chronic irritative process, exciting, in lymphadenoid tissue, changes which destroy its normal structure. The glands are altered by the connective tissue hyperplasia, which prevents the outpouring of lymphocytes. No specific change occurs in the blood. The round cells are increased and their type is somewhat altered.

THE ETIOLOGY OF PUNCTIFORM HEMORRHAGES IN APPENDICITIS.

Under this title Lotheissen, of Vienna, discusses the frequent occurrence of these capillary hemorrhages. Frankel has made the claim that their presence was due to the manipulation of the appendix in its removal, particularly by grasping it with clamps. This view has been opposed by Lauenstein and Ravenstorf. In 150 operations the appendix could be examined in 89. In the remaining cases it had been destroyed by gangrene. In these 89, hemorrhages were present in 59, while in 30 the appendices were entirely free from hemorrhagic areas despite the fact that all were removed after the same manner. Lauenstein called attention to the fact that these hemorrhages occurred only in the mucosa, never in the serous or subserous tissues. Various attempts have been made to determine whether the hemorrhages were dependent upon a stasis of the blood. To clear up this question the writer

made a section of the appendix in several cases without preliminary clamping. The hemorrhage was present just the same. In one case he split the appendix lengthwise, having thoroughly drawn the cæcum out as a preliminary step. Here, also, the hemorrhages were found to be present. He confirms the statements of Lauenstein that operations performed during the quiescent period are usually not associated with this hemorrhagic condition while it was as a rule present in the acute cases. In other words, he concludes that the hemorrhages are the product of inflammatory processes and are present in the exact ratio of the severity thereof. Furthermore, he states that he has repeatedly found minute ulcerations occurring at the site of hemorrhagic points and that this may be the explanation of the occurrence of the perforation of the appendix and that these hemorrhages locate the site of the greatest virulence of the infectious inflammation.—*Zentralblatt f. Chirurgie*, 1906, No. 21.

GENITO-URINARY SYSTEM.

EDITED BY

EDWARD L. KEYES, Jr., M.D.,

Lecturer on Surgery, Cornell University, New York.

TREATMENT OF PROSTATIC ABSCESS BY URETHRAL INCISION.

James McMunn reports a case of gonorrheal prostatitis in which he suspected suppuration toward the urethral side of the gland. Accordingly, he introduced a straight urethroscope into the prostatic urethra, and then plunged a long, narrow, triangular-pointed and shouldered knife into that part of the prostate which bulged into the lumen of the tube. Pus flowed and relief was immediate. *British Medical Journal*, 1906, April 14, I. 859.

THE ANOINTING OF THE BLADDER IN THE AFTER TREATMENT OF OPERATIONS FOR VESICAL CALCULI.

J. E. Bocarro advises the injection of olive oil, "slightly carbolyzed," into the bladder after litholapaxy or lithotomy. For children he injects from 1 to 3 drachms; for adults from 3 to 6 drachms, using a piston syringe and repeating the injection if necessary in from 12 to 24 hours. He states that this "undoubtedly in most cases obviates the dangers of cystitis and, at any rate, conduces toward relieving the patient of a good deal of the pain and irritation caused by the passage of instruments." He founds this opinion upon considerable practical experience. *Indiana Medical Gazette*, 1906, Feb., XLI., 60.

ETIOLOGY OF RELAPSES IN SYPHILIS.

Prof. Neumann of Vienna reviews the current theories on this subject. He combats Unna's belief that every relapse is a recurrence *in situ* of some early lesion and Lesser's recent expression

of a similar theory. He contends that Virchow's theory, though in some details inaccurate, is still tenable in the light of modern pathology. He urges that, though relapses *in situ* are more common than is generally supposed, yet in some instances it is impossible to doubt that relapse is due to a dissemination of virus which has lain dormant in a lymph gland or in some other organ. When the virus is excited to renewed activity this may be only sufficient to encourage relapses in old scar tissue or in syphilitic tissue remaining unsuspected in the scar of a syphilitic lesion; or it may be sufficient in a woman to infect her *fetus in utero* without finding in the mother a spot of sufficiently low resistance to produce a local lesion. He concludes: "(1.) The late syphilitic relapses, the relapse *in situ* as well as the metastatic relapse, have their origin in the microscopically demonstratable syphilitic products, including the syphilitic lymph glands, which persist after the disappearance of the clinical manifestations. These may exist a very long time, even more than a decade. (2.) The complete elimination from the organism of all the germs of the disease as promptly as possible therefore follows as a fundamental indication in the treatment of syphilis."—*Medical Record*; 1906, Apr. 28, LXIX, 649.

OBSTETRICS.

EDITED BY

CHARLES JEWETT, M.D.,

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PERNICIOUS VOMITING OF PREGNANCY.

J. Whitridge Williams (*Bul. Johns Hopkins Hosp.*, Vol. XVII., No. 180) makes three distinct types of vomiting of pregnancy: reflex, neurotic and toxæmic.

Reflex Vomiting may be due to abnormalities of the generative tract or of the ovum. Among these are (1) Abnormalities of the uterus, especially displacements; (2) Certain cases of endometritis; (3) Ovarian tumors; (4) Abnormalities of the ovum, such as hydramnios, hydantiform mole and sometimes twin pregnancy. Most important under the first head is retroflexion. Abnormalities of the cervix are probably accidental complications rather than important etiological factors. Cases cured by Copeman's method of cervical dilation or other local measures are to be explained as neurotic.

Neurotic Vomiting.—That the vomiting is purely neurotic in a certain proportion of cases there is little reason to doubt. Yet it cannot at present be denied that a mild toxæmia may be the underlying cause of the neurosis.

Toxæmic Vomiting.—Fischl, in 1884, was the first modern writer to propose the toxæmic theory of hyperemesis of pregnancy. In 1879 Matthew Duncan suggested yellow atrophy of the liver

as the cause in certain fatal cases. Champetier-de Ribes and Bouffe de Saint-Blaise reported definite hepatic lesions in vomiting of pregnancy in 1901. Within the last few years abundant literature has accumulated concerning the toxæmic nature of the condition. The source of the toxic material has been variously referred to (1) the gastro-intestinal tract, (2) the ovum and its appendages, (3) ovarian secretion, (4) hepatic lesions.

Of the increased toxicity of the intestinal contents in women suffering from the vomiting of pregnancy there is abundant evidence. Good effects have been credited to intestinal antiseptics and colonic irrigation in the treatment.

Veit's syncytio-toxic theory has not yet been satisfactorily proven.

Suppression or abnormality of the ovarian secretion as an explanation of the toxæmia rests on little better evidence.

Stone, of New York, in 1903, was the first to bring prominently forward the hepatic origin of the condition. He reported the autopsy findings in a fatal case of vomiting in which the liver presented the lesions of acute yellow atrophy. The central portion of each lobule had undergone complete necrosis, the peripheral position showing signs of fatty degeneration, but few cells remaining perfectly normal. Ewing recently reported finding similar changes in the livers of four women dying of vomiting of pregnancy.

Williams accepts the observations of Stone and Ewing, concerning the association of lesions characteristic of acute yellow atrophy of the liver with certain cases of vomiting of pregnancy. He does not, however, believe as they do in the identity of vomiting and eclampsia.

There is ample reason for the belief that the liver in pregnancy offers a locus minoris resistentiæ, as shown in epidemics of catarrhal jaundice. In numerous reported epidemics the course of the disease was much more grave in pregnant women than in other subjects. Pregnancy appears to be an etiological factor in the production of jaundice.

With reference to the precise relation of the hepatic lesions to the toxæmic there is still much to be settled. Williams contents himself with demonstrating that in certain cases of toxæmic vomiting of pregnancy there is a marked disturbance in the metabolism which is manifested in the urine by a great increase in the ammonia co-efficient. Future investigations must determine whether the change is directly due to the inability of the diseased liver to effect complete oxidation or whether it is a manifestation of an acid intoxication of some other condition.

We are ignorant, too, with reference to the nature of the toxic material primarily concerned and whether it is derived from the fœtus or the mother.

Diagnosis.—In severe vomiting, even though not pernicious in type, a careful examination of the pelvic organs should be made for uterine dis-

placement, ovarian cyst, inflammatory mass, vesicular mole or hydramnios. Decidual endometritis should be suspected in a patient known to have suffered from endometritis before pregnancy or in the presence of a dark, brownish discharge from the cervix. In the absence of obvious pelvic abnormalities it must be assumed that the vomiting is either of the neurotic or toxæmic type. The only means at present by which the latter conditions can be differentiated is a chemical examination of the urine and the determination of the ammonia co-efficient. In normal pregnancy, and even in neurotic vomiting, the ammonia co-efficient varies from three to five per cent. In the toxæmic type it has reached forty-six per cent. in the author's experience.

He thinks an increase of ten to fifteen per cent. should justify the diagnosis of toxæmic vomiting. The other nitrogen sub-divisions should, if possible, be determined and search be made for leucin and tyrosin.

Rise of pulse-rate and temperature does not always occur. Black vomit is a grave symptom. The occurrence of jaundice in pregnant women with hyperemesis should be looked upon as ominous.

The author makes a sharp distinction between the toxæmia of eclampsia and that of hyperemesis. The former is attended with some disturbance of the renal and circulatory functions, œdema, scanty urine, albuminuria and the presence of casts. In the latter the urine is practically normal in amount till shortly before death and albumin and casts usually appear only in the terminal stage of the disease. Oedema is never present.

The chemical differences in the urine are even more striking. In eclampsia generally there is a marked decrease in the total amount of nitrogen excreted, and though there may be considerable diminution in the urea co-efficient no very material variations occur in the ammonia co-efficient. In vomiting, on the other hand, the total amount of nitrogen may be normal, while the ammonia co-efficient becomes unusually high.

The hepatic lesions, too, differ essentially in the two conditions. In eclampsia they invade the lobules from the periphery toward the center. In the hyperemesis of pregnancy they begin about the central vein of the lobule and extend toward the periphery.

Treatment.—In the reflex type of vomiting treatment consists in remedying the pelvic abnormality if possible. Retrodisplacement must be corrected. Ovarian tumors should be removed and inflammatory masses treated by appropriate measures. Hydatidiform mole or hydramnios demand immediate evacuation of the uterus.

In the toxæmic type of vomiting the induction of abortion probably offers the only chance of saving the patient. After the evacuation of the uterus the toxic condition is to be treated by

enteroclysis or hypodermoclysis and lavage of the stomach with a weak solution of sodium bicarbonate if vomiting permits. Stomach feeding and even the use of ice by the mouth are prohibited, alimentation being maintained by nutrient enemata.

The neurotic type is treated mainly by suggestion, sometimes by a modified rest cure together with rectal alimentation. Rarely it may be necessary to terminate the pregnancy.

THE TOXAEMIA OF PREGNANCY.

Frederic E. Sondern (*Bul. Lying-in Hosp.*, N. Y., Vol. II., No. 3) is in sympathy with the general belief that hyperemesis of pregnancy, hepatic changes usually classed as acute yellow atrophy, and most cases of eclampsia are the result of toxæmia. Yet much remains to be worked out before its final acceptance. The pathological conditions are not all to be ascribed to one poison or one particular variety of faulty metabolism.

Special stress has been laid on the changes found in the nitrogenous metabolism as the cause of the clinical symptoms. Yet phosphorus and certain other poisons bring about similar alterations in the liver with similarly disturbed nitrogenous metabolism, but with entirely different clinical manifestations. He thinks it doubtful that excess of one or the other of the nitrogenous group is the cause of hyperemesis. In many instances diabetes shows as high a relative percentage of ammonia and as high a relative amount of amido acids as have been observed in erysipelas. Yet neither is attended with vomiting nor with acute yellow atrophy of the liver.

Eclampsia, which it is also assumed is the result of a toxæmia, presents two distinct types of cases having the same clinical symptoms, perhaps, but very different urinary pictures. The one class is probably toxic in origin with varied and indifferent findings in the urine, the other presents distinct evidences and history of an acute exacerbation of a chronic nephritis. If the uremic convulsions of the latter are toxic this toxin must not be confused with the other.

The causative factors remain to be found for both the clinical symptoms and the pathological changes and consequent faulty chemistry of impaired function.

Intestinal toxæmia is probably an important predisposing factor in the etiology of the toxæmia of pregnancy. There are a number of abnormal findings in the urine which may serve as corroborative evidence in the diagnosis of the condition and aid in an opinion as to its severity. Indications of intestinal toxæmia as a predisposing factor are excess of indican, skatol or phenol or, more properly speaking, increased relative amount of ethereal sulphates. The presence of acetone bodies is almost invariably the first abnormal evidence found in the urine in toxæmia of pregnancy. Both hyperemesis and the pre-eclamptic state of toxic origin show the same conditions. Changes in the nitrogenous meta-

bolism are not observed till liver changes have developed. The routine examination of the urine of pregnant women, therefore, should include search for the evidence of intestinal toxæmia as well as those of acidosis. Should acidosis occur, and not be relieved promptly, the total nitrogen and urea may be determined by reliable methods, not by hypobromite. Should the relative percentage of urea be sufficiently low to indicate hepatic involvement a complete nitrogen partition may perhaps be added. Yet it is doubtful if this complex procedure will throw much additional light on the question.

ECTOPIC PREGNANCY.

Ectopic pregnancy is made the special subject of the June, 1906 number of the *Journal of Obstetrics and Gynecology of the British Empire*.

Ovarian Pregnancy is discussed by J. K. Kelly and A. L. McIlroy, with report of a case in which the ovisac was composed wholly of ovarian tissue. The essential structural details of the specimen are well shown in numerous excellent plates.

Kelly thinks ovarian pregnancy may be more frequent than hitherto supposed. Blood cysts in the ovary should be examined carefully for products of pregnancy.

N. L. Haultain, F. E. Taylor and W. A. Milligan deal with the clinical side of ectopic gestation. This phase of the subject admits of little that is new.

Diagnosis. Whether terminating by rupture or abortion, the typical clinical picture in tubal pregnancy is amenorrhea followed by some pelvic discomfort which culminates in abrupt, more or less intense pain with acute colicky exacerbations and irregular genital hemorrhage. The expulsion of a uterine decidual cast, piecemeal or entire, may or may not be observed. The history alone frequently makes the diagnosis. To this the physical examination adds the tubal tumor, enlarged uterus and open cervix.

In nearly fifty per cent. of Milligan's cases no menstrual period had been missed, yet in most of these the last period had been atypical. The severer pain is attributed in part to distention of the tube with blood on separation of the ovum.

Cullingworth is credited with the statement that the bloody genital discharge is dark in color, almost blackish. The bleeding is increased as a rule during the paroxysms of pain. Persistence is characteristic.

The passage of a uterine cast revealing decidual cells and no chorionic villi is almost pathognomonic, yet instances have been reported by Griffith, Dakin and Eden, in which such a cast was expelled in other conditions than extra-uterine pregnancy.

The various conditions which may counterfeited ectopic pregnancy are discussed.

Recurrence was noted in four of twenty-nine cases. In one instance a tubal gestation on one side was followed by tubal pregnancy on the

opposite side within nine months, and in another, in eighteen months. Other similar cases are cited. After a vaginal operation for ruptured tubal gestation pregnancy subsequently occurred in the same tube.

Operation is advised in practically all cases of ectopic pregnancy.

Henry B. Russell, M.D., of the London Hospital, contributes a review of the literature since the middle of the year 1902. Thirty-eight papers and monographs were consulted. They are chiefly from the German.

Decidual reaction. This question has been studied by a large number of investigators with the aid of serial sections. As an example of the thoroughness with which the work has been done, 2,300 sections were made of a single tube by Vassmer.

More or less decidual reaction was found in the mucous membrane of the pregnant tube by all but one observer. Voight alone failed to find any decidual change in the mucosa.

With reference to decidual reaction in the submucous and intermuscular connective tissue and muscle, i. e. in the walls of the gestation sac, observers are not wholly agreed. Yet a radical change in the intermuscular connective tissue cells, not sufficient to form a decidual membrane, has been described by many observers, e. g. Heinsius, Berkely and Bonney, Dobbert, Williams and others.

Decidual reaction in the walls of the maternal blood vessels has been found by a number of investigators, notably von Franqué, Garkisch, Hitschmann, Fellner, Kroemer and Schambacher.

Decidual reaction in the peritoneum and surrounding tissues has been reported by a few observers, notably by Kermauner, Hirschberg and Penckert. The latter describes a case in which typical decidual cells were found in omentum on which a three-months' ovum was partly implanted. Such a case leads support to the belief that primary abdominal pregnancy may be possible.

The Uterine Decidua. Cazeaux affirms that in every case of ectopic pregnancy the endometrium undergoes profound changes during the growth of the ovum. The expulsion of decidual cast does not occur in all cases. Kermauna doubts that a uterine decidua is always developed in tubal pregnancy. Some of the blood which escapes from the uterus he thinks may come from the tube.

The Site of the Gestation Sac. On this question the views of a large number of investigators are cited. The theory that the ovum is implanted on the mucosa and has a free pole projecting into the lumen of the tube finds no supporters. The work of Peters on the embedding of the ovum in the uterus and that of Fütth on embedding in the tube are generally accepted. Most observers are agreed that the site of the ovum is intramuscular.

OPHTHALMOLOGY.

EDITED BY

ALVIN A. HUBBELL, M.D.,

BUFFALO, N. Y.

ATROPHY OF THE IRIS, ASSOCIATED WITH TABES AND GENERAL PARALYSIS.

According to Dupuy-Dutemps this special form of atrophy of the iris is said to be a previously undescribed symptom, to be noticed in cases of tabes dorsalis when the Argyll-Robertson sign is present. It is constituted by a marked general atrophy and thinning of the iris, accompanied by effacement of the reticulated surface which is so evident under normal conditions. This wasting of the iris is, however, not found to be so extreme as that which may be encountered in cases of old inflammation of the organ, and there is also a difference in degree and appearance from that flattening of the surface met with in advanced age and in high myopia; but in glaucoma an almost exactly similar change is to be found. It is not an unusual feature of this special form of atrophy in cases of paralysis to be present only in partial condition, affecting simply certain sectors of the iris, but at the same time it never occurs in the form of concentric zones. There is often also an irregular outline of the pupil aperture seen accompanying this atrophic condition, which corresponds to and is influenced by the pre-existence of the atrophy when the latter is confined merely to sectors of the iris. It has also been noted that in these cases, whilst the association between contraction of the pupil and closure of the palpebral aperture, described by Galassi and others, is sometimes regular and uniform, the accommodative movement is irregular and even segmentary.—*Annales d'Oculistique*, September, 1905.

THE INFLUENCE OF FULL CORRECTION OF MYOPIA ON ITS PROGRESSION AND ON DETACHMENT OF THE RETINA.

Vacher and Baillart divide myopes into two groups. The first of these includes the healthy young myope, who without any lesions of the posterior part of the eye possess a full range of accommodation. The second group consists of those older patients in whom there is a lessened power of accommodation with atrophy of the circular ciliary muscle, and in addition possible lesions of the fundus. In the first group it is not the use of the accommodation that is to be dreaded, but the excessive convergence. This is best avoided by full correction; at the same time great stress is laid on the necessity for a proper working attitude. In the second class of cases full correction will not be tolerated at once, but should be worked up to, use being made of unioocular accommodation exercises. The authors formulate the following rule: Correct the total myopia in all cases in which it is less in dioptries than the age of the patient in years. If

Veit, Kroemer and, to a certain extent, Feller, do not believe that the ovum can destroy maternal tissue in the manner of a malignant growth. Several investigators hold that the tube wall suffers pressure necrosis from the rapidly growing trophoblast; most that the muscle is infiltrated and destroyed by Langhans' cells.

The Relation of the Fœtal Ectodermal Cells, Trophoblast, to the Maternal Vessels. The way in which communication is established between fetal tissues and maternal blood has been studied with great care by numerous workers. Heinsius says that the invasion of the vessel walls by Langhans' cells has been proved with absolute certainty. The author observes that the bulk of the evidence is in favor of the view that the fœtal cells act in a malignant or pseudo-malignant manner toward the maternal tissues, in somewhat if not exactly the same way as do the cells of a chorio-epithelioma. The difference seems to be one of degree only, not of kind.

THE CAUSES OF TUBAL ABORTION AND RUPTURE.

Berkeley and Bonney, speaking of the causes of tubal abortion and rupture, use the term "rupture of the primary gestation sac," and describe three varieties (1) extra tubal (2) intra tubal (tubal abortion) and (3) intramural rupture. It is generally, not unanimously, agreed that abortion is really an intratubal rupture. In intramural rupture of the fruit-sac the blood-sac formed may rupture into the peritoneum, the broad ligament or the lumen of the tube. With reference to muscular contraction as a factor in the causation of abortion and rupture there is some difference of opinion.

Williams thinks the underlying causes of rupture are perforation of the tube wall by the growing villi, or acute overdistension as a result of hemorrhage into a tube whose fimbriated end is occluded. In abortion the connection between the ovum and the tube wall is loosened, the former being completely or partially separated from the site of implantation as the result of hemorrhage due to the sudden opening up of maternal wounds by the growing trophoblast and chorionic villi.

The literature shows that intraligamentary rupture is a rare occurrence, 4 in 276 cases. With reference to the etiology of tubal gestation, great difference of opinion obtains. The author remarks that in a few cases it has been shown conclusively that the ovum had been caught in a diverticulum or arrested by mucous polypi. Beyond this we have no definite knowledge of the causes of tubal gestation. The etiological relation of congenital conditions, inflammatory changes and changes due to pregnancy can be determined, if at all, only by more extensive and painstaking histological study of healthy tubes, of pregnant tubes and of the changes caused by inflammation and by utero-gestation.

the contrary is the case, endeavor to arrive at the full correction gradually.—*Annales d' Oculistique*, November, 1905.

OPTIC NEURITIS IN SYRINGOMYELIA.

Weisenburg and Thorington publish notes of a case in a girl 16 years of age. It is apparently only the third recorded instance of the association of optic neuritis and syringomyelia. The two previous cases (reported by Bullard and Thomas in America, and by Saxer in Germany) occurred in patients 6½ and 16 years of age; the syringomyelia in these cases was not diagnosed during life. The case now reported is purely clinical, but the diagnosis is scarcely open to doubt. The girl is blind in the right eye, and counts fingers at 10 inches with the left; both eyes show well developed papillitis passing into atrophy. Two explanations are offered for the optic neuritis in syringomyelia: (1) internal hydrocephalus; (2) the presence of a tumor. In reference to tumor, the writers state that, "neither in the two previous cases nor in ours can the possibility be admitted." In view of such magnificent dogmatism the post-mortem report of their case will be interesting.—*American Journal of Medical Science*, December, 1905.

County Societies.

MEDICAL SOCIETY OF THE COUNTY OF CHAUTAUQUA.

TRI-ANNUAL MEETING, May 29, 1906, at BEMUS POINT.

Program.

"Surgery of Gall-Bladder," A. W. Dods, Fredonia.
 "Treatment of Gonorrhoea," Joseph Reiger, Dunkirk.
 "Gonorrhoeal Conjunctivitis," J. R. Sackrider, Jamestown.
 Paper, N. E. Beardsley, Dunkirk.
 Paper, F. H. Nichols, Jamestown.
 Drs. J. R. Sackrider, of Jamestown; A. F. Blanchard, of Jamestown; Elmer W. Powers, of Ashville, and Fred C. Rice, of Ripley, were elected to membership. The sum of \$71.29 was contributed to the aid of the San Francisco physicians.
 The next meeting will be held on Sept. 25, 1906.

MEDICAL SOCIETY OF THE COUNTY OF CORTLAND.

QUARTERLY MEETING, June 29, 1906, at SARANAC LAKE.

Program.

"Hemorrhagic Diseases of the New Born," Dr. F. S. Jennings.
 "Hemoptysis," Dr. F. D. Reese.
 "Hematemesis," Dr. H. S. Braman.
 "Hematuria," Dr. S. J. Sornberger.

MEDICAL SOCIETY OF THE COUNTY OF FRANKLIN.

SEMI-ANNUAL MEETING, June 12, 1906.

The President, Dr. W. A. Wardner, in the Chair.
 Dr. Henry S. Goodall, of Stony Wold Sanatorium, Lake Kushagua, was admitted to membership.

The committee appointed to nominate candidates for the next year reported the following: President, Dr. Hugh M. Kinghorn, of Saranac Lake; Vice-President, Dr. F. F. Finney, of Burke; Secretary and Treasurer, Dr. Geo. M. Abbott, of Saranac Lake; Censor, Dr. Henry Finness, of Malone; Delegate to Fourth District Branch, Dr. E. S. McClellan, of Saranac Lake; Delegate to State Medical Society, Dr. A. E. Moody, of Dickinson Center.

The following resolution was moved, seconded and carried:

Resolved, That the Medical Society of the County of Franklin expresses its vigorous protest against the reduction of life insurance examination fees recently made by the large companies under the plea of economy of all departments.

Further, That this Society considers that a \$5.00 fee is the least sum consistent for medical examiners to receive for the proper examination under the present condition of life insurance; that a \$2.00 fee is the least that should be received for examinations for membership, or otherwise, in fraternal orders.

Scientific Session.

"Prognosis from Tuberculous Sputum," by Dr. A. H. Allen, of Trudeau.

"Commitment of the Insane," by Dr. Haines, Rochester State Hospital.

"Goitre—Etiological Report of Fifty-two Cases," by Dr. Chas. C. Trembley, Saranac Lake.

"Reports of Cases," by Dr. D. C. Twichell, Saranac Lake.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, TUESDAY EVENING, June 19, 1906.

Scientific Program.

"Some Rheumatisms: Their Historical, Clinical and Bacteriological Consideration," by James J. Walsh, M.D., of New York.

OTSEGO COUNTY MEDICAL SOCIETY.

The semi-annual meeting was held at Cooperstown, N. Y., Tuesday, June 12, 1906.

Program.

Vice-President's address.

"Centennial History of the Otsego County Medical Society," by Henry W. Boorn.

Symposium: "Wound Infection and Disinfection."

1. "Its Importance to the General Practitioner," by Marshall Latcher, Oneonta.

2. "The General Surgical Aspects and Treatment," by Henry D. Sill, Cooperstown.

3. "Its Relationship to Obstetrics and Gynecology," by Arthur W. Cuttler, Oneonta.

General discussion by members of the Society.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

REGULAR MEETING, May 28, 1906.

Scientific Session.

Under the auspices of the Committee on Hygiene.

"Medical Examination and Inspection of School Children" (lantern demonstration), by S. Josephine Baker, M.D., Medical Inspector, Department of Health.

"Food Inspection in New York City" (lantern demonstration), by Mr. Bayard C. Fuller, Supervising Food Inspector, Department of Health.

"Food Laws; Their Adequacy and Inadequacy," by Harford P. Walker, Esq., Assistant Corporation Counsel, New York City.

Discussion.

"A Statement by the Treasurer of the Medical Relief Committee."

QUEENS-NASSAU MEDICAL SOCIETY.

ANNUAL MEETING, May 29, 1906, at MINNEOLA.

The by-laws were amended.

Fifteen dollars was contributed to the San Francisco Relief Fund.

Officers elected for term commencing January 1, 1907: President, Irving F. Barnes, Oyster Bay; Vice-President, John N. Barry, Long Island City; Secretary-Treasurer, James S. Cooley, Glen Cove.

The next meeting is to be held at Long Island City, November 27, 1906.

Scientific Program.

"Perforating Ulcer of the Duodenum, With Report of Case," by Dr. Boettiges, of Long Island City.

"Surgical Treatment of Indigestion," by Dr. McSweeney, of New York.

"Ocular Complications of Diabetes."

"Treatment of Ocular Complications of Syphilis," by Dr. Kalish, of New York.

MEDICAL SOCIETY OF THE COUNTY OF SENECA.

At a recent meeting, held at Waterloo, this Society was reorganized in accordance with the by-laws of the Medical Society of the State of New York, and officers were elected as follows: President, Dr. George A. Bellows, of Waterloo; Secretary-Treasurer, Dr. C. B. Bacon, of Waterloo.

MEDICAL SOCIETY OF THE COUNTY OF ULSTER.

The Centennial Anniversary was held at the Court House, Kingston, N. Y., June 26, 1906.

Program.

Prayer, Rev. Octavius Applegate, Jr., Kingston, N. Y.
Introductory Remarks, E. E. Norwood, Kingston, N. Y.

"The Advancement of Medicine and Surgery During the Past Century," Albert VanderVeer, Albany, N. Y.

"Expert Medical Testimony," Hon. John J. Linson, Kingston, N. Y.

"The Physician in Politics," Hon. G. D. B. Hasbrouck, Kingston, N. Y.

"History of the County Society," E. H. Loughran and A. H. Mambert, Kingston, N. Y.

New Books.

A TREATISE ON SURGERY. In two volumes. By GEORGE R. FOWLER, M.D. Philadelphia and London, W. B. Saunders Company, 1906.

This second volume of Fowler's Surgery completes the set of this excellent work. These two volumes represent a treatise in two imperial octavo volumes of 725 pages each, with 888 illustrations in the text, and four colored plates. The work possesses the rare merit that all of these illustrations are original.

This volume is devoted to regional surgery: and it takes up in order the surgery of the dorsal and lumbar vertebræ the abdominal and pelvic regions, the female pelvic organs, the upper extremities, and the lower extremities. The index occupies sixty-four pages.

In the treatment of injuries of the spinal cord, the author states that in spite of the apparently favorable outcome in cases of suturing after division of the cord, regeneration is not to be expected after severance of the cord, however promptly the divided structure is sutured.

The author directs attention to the value of the elevated head position in the treatment of peritonitis in contrast to the elevated pelvis position.

The following indications for cholecystectomy are given: (1) Phlegmonous cholecystitis, gangrene; (2) contracted gall-bladder; (3) damaged condition of the wall of the gall-bladder by ulcer or perforation; (4) stricture of the cystic duct; (5) pronounced disease of the bladder wall, whether inflammatory or from new growth. It should not be removed if the common duct is obstructed.

The descriptions and illustrations of operations upon the intestinal tract are especially worthy of favorable comment. The author's methods of operation for prolapse of the rectum and for amputation of the rectum are well described. The operation for piles by catgut ligature and excision is not given.

The surgery of the urinary apparatus is clearly and practically presented. The operations upon the female genitalia are well illustrated.

In the treatment of Colles' fracture the author says that the displaced fragments must be reduced under an anesthetic. This fracture is particularly well described. The operation upon the lower extremities are beautifully illustrated.

As we said of the first volume, this work is eminently practical, and shows all the marks of having been founded upon an immense experience. The illustrations throughout are noteworthy for their artistic character and for being a distinct help to the text. They are the work of Mr. Francis A. Deck.

This treatise on surgery is an enduring monument to the eminent author whose name it bears.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. Third series. Vol. XXVII. Philadelphia, Pennsylvania, 1905.

This volume contains the papers read before the college from January, 1905, to December, 1905, inclusive, and is edited by William Zentmayer.

The College of Physicians of Philadelphia has been in existence for a hundred and twenty years and is one of the most substantial and admirable of our medical organizations. Its transactions are an index to medical progress and reflect the high character of work which has always been associated with this institution.

DISEASES OF THE NERVOUS SYSTEM, RESULTING FROM ACCIDENT AND INJURY. By PEARCE BAILEY, A.M., M.D., New York. D. Appleton and Company, 1906.

This is a new edition of "Accident and Injury: Their Relations to Diseases of the Nervous System," published in 1898. The work has been revised so completely and amplified that it very properly bears another title. The work deals with the nervous affections which result from injury and fright, which are generally known as the traumatic neuroses. The peculiarity of these diseases is that there is rarely a demonstrable pathological anatomical basis for the symptoms. This work is made as practical and useful as possible, and omits the general descriptions of conditions found in the ordinary text-books. Thus the immediate symptoms of brain injuries are passed over rather briefly, but the later symptoms are fully considered. The details of surgical operations upon the nervous system are not entered into.

The work is divided into four parts. The first or introductory section deals with the consideration of the case, the previous history of the patient, history of accident, physical evidences of predisposition to nervous diseases, and the examination for the actual injury. The second part takes up the organic effects of injury to the nervous system and presents fully and clearly systematic chapters upon each of the parts of the nervous system. The functional effects of injury are considered in the third part of the work, which deals with the traumatic neuroses, traumatic neurasthenia, traumatic hysteria, insanity from nervous shock, and the treatment of the traumatic neuroses. The fourth part of the work is devoted to the medico-legal considerations of these diseases.

This book is written in a graphic and lucid style. It is illustrated with reports of cases from the author's

experience, and has the character of authority. Nearly one hundred pictures illustrate the text. It is a splendid work, and is destined to take an important place in the literature of diseases of the nervous system.

THE PRINCIPLES AND PRACTICE OF MEDICINE. Designed for the use of Practitioners and Students of Medicine. By WILLIAM OSLER, M.D., Fellow of the Royal Society; Fellow of the Royal College of Physicians, London; Regius Pro. of Medicine, Oxford University; honorary Prof. of Medicine of Johns Hopkins University, Baltimore, Etc. *Sixth Edition*, revised from new plates. New York and London, D. Appleton & Company.

This last edition appearing so shortly after the previous one, evidences the value of this Practice to the practitioner and student alike. The demand for the book seems to be as great if not greater than formerly in spite of the appearance of many similar books upon the market.

The general plans of the former editions has not been changed except in minor details. Valuable additions have been made, which bring the whole of the subject matter up to date and make clearer some of the disputed points in the etiology and diagnosis of many diseases. These changes have been made possible by the introduction of newer methods of clinical and laboratory investigation and study of disease.

It has been said that Dr. Osler in the former editions of this book sacrificed treatment of disease for the fuller discussion on diagnosis and pathology. No such objections can be raised after reading this edition.

In the therapeutics of each disease many changes have been introduced that make this portion of the subject matter as full and as comprehensive as to satisfy the demands of all intelligent practitioners and students.

The chapters devoted to tropical diseases have been enlarged and most thoroughly revised. Parasitic infections so common in the newly acquired insular colonies are fully treated with and discussed. Many important additions have been made to the text on the subject of nervous diseases; the whole has been thoroughly revised.

By these many changes, the standard of the book has been sustained and even advanced to a marked degree. We consider the book the best of its kind for both student and practitioner.

TEXT BOOK OF PHYSIOLOGY. By WILLIAM H. HOWELL, Ph.D., M.D., L.L.D., Philadelphia, Saunders & Co.

Professor Howell has consistently carried out the idea which he considered of first importance in this book, namely: simplicity and lucidity in the presentation of facts and theories. He has shown great discernment in the selection of material and has presented the physiology of to-day in a masterful way within the compass of nine hundred pages. The reader will be impressed with the fact that he is in touch with an experienced investigator and teacher who knows his subject and knows how to present it in a clear, concise and attractive style. It is a text book for students and physicians, but should be read by such of the older practitioners who wish to keep abreast with the advances made in physiology.

Deaths.

CHARLES W. ALLEN, M.D., of New York, died of enteric fever, May 30, at Gibraltar. He was a specialist in skin diseases, and Professor of Dermatology in the New York Post-Graduate Medical School; aged 52 years.

DONALD McLEAN BARSTOW, M.D., of New York, died at Portland Me., on Saturday, June 9; aged 39 years.

WILLIAM DUFF BULLARD, M.D., died at his home in New York City, June 20; aged 34. He was an assistant surgeon to the Hospital for Ruptured and Crippled.

THOMAS DE L. BURKHALTER, M.D., formerly house physician of the Willard Parker Hospital, and since an inspector of the Board of Health, died at St. Vincent's Hospital June 20th of heart disease; aged 32 years.

JOHN DENNISTON, M.D., died at his home at Ovid, N. Y., May 24th; aged 62 years. For thirty-nine years he was one of the leading physicians of Seneca County.

GEORGE W. DRAPER, M.D., died at his home in Syracuse, N. Y., June 8, from nephritis; aged 73 years.

JOHN F. S. EASTGATE, M.D., of Ellenville, N. Y., died on June 9, 1906; aged 49 years.

ROBERT SHOEMAKER IVES, M.D., of New Haven, Conn., died June 9, aged 64 years. He was the son of Levi Ives, M.D., grandson of Eli Ives, M.D., and great-grandson of Levi Ives, M.D. His grandfather was organizer of the Medical Department of Yale University. His great-grandfather was the founder of the Medical Society of New Haven, and a soldier in the Continental Army.

GILBERT L. GIFFORD, M.D., the oldest practicing physician in Hamilton, Madison County, N. Y., died suddenly June 11, while attending a meeting of church trustees in Hamilton.

WILLIAM J. GILFILLAN, M.D., died on May 23 in Brooklyn. He was connected with the Brooklyn Health Department for many years; aged 66 years.

GEORGE HUNT HIBLEK, M.D., formerly house surgeon at the Harlem Hospital, and also in the Katonah (N. Y.) Sanatorium, died March 31 from tuberculosis; aged 27 years.

MARY PUTNAM JACOBI, M.D., wife of Abraham Jacobi, M.D., specialist in children's and nervous diseases, the first woman to attend the Ecole de Médecine in Paris; and first to be admitted as a fellow to the New York Academy of Medicine; at one time an ardent woman's suffragist; author of many books; died June 10 in New York City; aged 64 years.

EDWIN T. JONES, M.D., chief of the staff of the Jamaica Hospital, was found dead in his bedroom at the residence of a friend in Utica June 11. Dr. Jones was on his way to Saranac Lake to visit a son who is ill with consumption.

WALTER H. KENT, M.D., died in Jamestown, N. Y., on Sunday, May 20; aged 55 years.

JAMES G. LA ROE, M.D., died May 30 of apoplexy, at his home in Greenpoint, L. I. He was 59 years old.

ROBERT J. LISTON, M.D., died at Albany on June 1; aged 73 years.

FRITZ METCHTOLD, M.D., died at his home in Stapleton, S. I., on May 19; aged 64 years.

CHARLES S. MCKNIGHT, M.D., of New York, died suddenly at his summer home at Saratoga June 21. He was 53 years old.

FREDERICK PREISS, M.D., died at Buffalo, N.Y., on Wednesday, May 30; aged 38 years.

J. WESLEY RICHARDS, M.D., died at his home in New York City, June 3, of pneumonia. He was 37 years old.

FRANCIS L. SHEPARD, M.D., of Buffalo, was found dead on the tracks of the Erie Railway near Batavia. He was a graduate of the University of Buffalo in 1896.

HENRY A. THURSBY, M.D., died on June 11 in Brooklyn, N. Y.; aged 24 years.

LOUIS A. WEIGEL, M.D., of Rochester, died on May 31, at the age of 52. Death was caused by a malignant disease resulting from the use of the X-rays. He was president of the Rochester Academy of Medicine and one of its charter members.

ISAAC G. WHEELER, M.D., died in Buffalo, N. Y., May 31; aged 52 years.

SAMUEL W. WETMORE, M.D., died in Buffalo, N. Y., May 28; aged 74 years.

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Original Articles.

CONDITIONS WITHIN THE APPENDIX CAUSATIVE OF ITS INFLAM- MATION.*

Illustrated by Specimens.

By **A. E. ISAACS, M.D.**,
NEW YORK,
Surgeon, Beth Israel Hospital.

THE study of surgical affections has the advantage, in most instances, over that of the so-called "medical diseases," that in the latter the opportunities for direct examination are only post-mortem, while in the former the pathological conditions in the organs involved may be seen and demonstrated during life in the course of the various affections and the offending portion treated or removed as indicated by conditions encountered.

Nothing is more instructive or conducive to the advancement of medical knowledge than the confirmation or otherwise of interpretation of signs and symptoms, and the observation of the actual conditions causative of these effects. In the study of the pathological conditions of the vermiform appendix, which is our subject for this evening, nothing is more convincing of the grave risk to life of appendical irregularities than the sight and examination of the affected parts. This also affords the opportunity of superseding theory as to the causes of various symptoms by actual observation of the conditions. To the progressive practitioner this corroboration or otherwise of his diagnosis is most interesting as well as most valuable in enabling him to more exactly interpret similar manifestations in future cases.

Whether the appendix be the remains of some functioning organ that in previous ages was of use to the human economy or whether it yet has some function that we do not understand, it has been demonstrated that practically we can get along just as well without as with it. So in the consideration of its surgical removal there need not be involved the objection to parting with a useful portion of the anatomy, and all the hesitancy there may be is

confined to the risks incident to its excision. These risks are greater or less according to the condition of the organ as well as to the general condition of the patient. In weighing the indications for and against operation both these points must be taken into consideration in conjunction with the chances of recovery if left to the good intentions of Nature assisted by medical treatment. This brings us to our subject, and I will attempt, with the aid of some specimens, to show how much, or to be more explicit, how little, Nature can be depended on to carry these cases to a fortunate issue, and how useless and futile it is to put any reliance at all on medical treatment to alter the course of an appendical inflammation when once it has been established.

The causes for special liability to trouble in the appendix lie in the anatomical peculiarities of the organ itself. It is a tube closed at one end, connecting with the cecum at its other end. Therefore it has no through circulation and whatever gets into it has very little chance of getting out again. Its contents are necessarily infectious from communication with the bowel, but so long as any accumulation can drain into the bowel and not interfere by retention pressure with the integrity of the mucous lining, they are innocuous. But let the least interference take place with the patency of the outlet and a stagnation of the contents, be it only of the normal secretions, results. Their gradual accumulation causes pressure on the mucous membrane and interferes with its integrity and normal resistance to the absorption of infectious material. Meanwhile the infectious nidus has had the opportunity of developing under most favorable conditions, under circumstances resembling those of a laboratory culture tube with a good culture medium, fertilized by an abundant variety of bacilli always here available.

Another structural peculiarity of the appendix, and one that counts for very much in influencing the course of the affection, is that the inner soft mucus layers are confined in an outside tube, the serous coat, which is comparatively unyielding, and when infection of the mucus layers takes place with concomitant edema, the swelling is forced to find its place towards the lumen which it closes the more securely at the constricted portion, while the

*Read before the Eastern Medical Society, April 14, 1906.

accumulation under pressure behind the constriction forms a closed pouch under tension compressing the mucous membrane against the unyielding outer coat and so interfering with its circulation and vitality, thus affording a surface favorable to absorption from the septic contents.

The tension under which the inner layers are sometimes held is shown by slitting open such an appendix in its fresh state. They pop out like a piece of compressed sponge were it released from pressure in a rigid tube. Some of

this is that when gangrene does supervene, sensation in the affected part is abolished. When this happens to the appendix, and there is not much surrounding active inflammation, the disappearance of pain, etc., might be taken to indicate subsidence of the affection while actually there would be a most dangerous state of affairs, a frail bag of septic matter liable to spill itself into the peritoneum at any moment. These were the conditions in the case from which the large specimen of gangrenous appendix (Fig. 1) was removed.



FIG. 1.

Gangrenous and distended, split open, 8 inches long with one of normal length for comparison. Contained 3 concretions, the one in situ obstructing the lumen near the proximal end.

the specimens (Figs. 7 and 9) show this swelling of the mucous membrane, though it is better seen in the fresh state. The sponginess of the mucous membrane and the rigidity of the serous coat last only so long as the parts retain their vitality. When gangrene supervenes they lose their rigidity and permit of a certain amount of stretching as shown by these two specimens (Figs. 1 and 2), both of which were removed in a state of complete gangrene without any perforation having taken place. An important point to remember in connection with

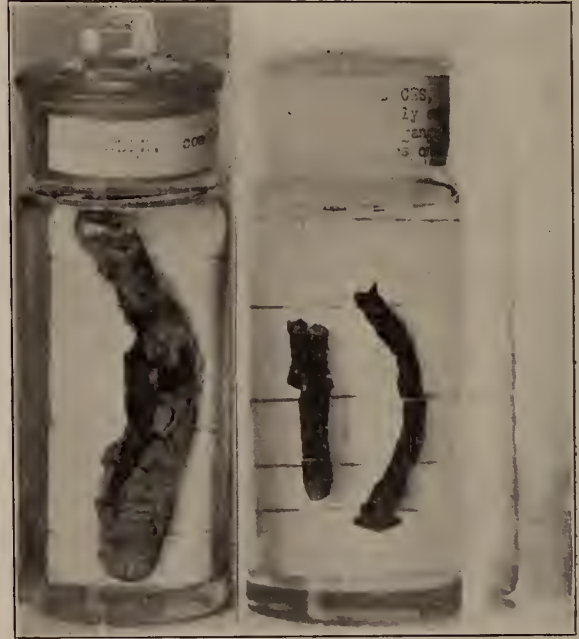


FIG. 2.

FIG. 3.

Fig. 2, Gangrenous and distended but not perforated.

Fig. 3, Two appendices, inner layers only, completely gangrenous, both found detached and floating in the pus of the abscess cavities.

To come back to our subject, the inflammatory reaction resulting from septic absorption through the crippled mucous membrane causes proliferation of pus cells, the formation of an abscess within the appendix and a surrounding lymphangitis. The occasional intensity of the surrounding inflammation is shown by the large edema of the meso-appendix in this specimen (Fig. 11). The increasing intra-appendicular pressure and interference with the nutrition of the parts result in perforation in some weak spot in the appendix wall or in complete gangrene of the organ, and in either case in the extension of the suppurative process to the surrounding parts, more or less extensive according to the efficiency of the surrounding protective adhesions which normally should have been formed during the course of this process. Sometimes the suppuration will extend by metastasis through the lymphatics without direct continuity, yet in this case also

Nature generally precedes the development of pus with the protective adhesive inflammation.

This description would apply to the course of a case going on to suppuration directly from the beginning of the trouble. But this is exceptional. It generally proceeds on the installment plan, but if not interfered with usually manages to square accounts in the end. Nature is always on the alert to overcome the invasion of infection, and generally succeeds in stopping its advance at one point or another anywhere up to the development of suppuration. But this stoppage is only a temporary one as the very nature of the trouble is such that once begun the parts are permanently crippled and

from extension of the septic process, practically making the infected region extraperitoneal. If not interfered with in this stage the process usually goes on to one of the following results: 1st, the abscess may break through the protective adhesions and set up a diffuse or general peritonitis with its dire results; 2d, the abscess may perforate into any of the hollow viscera, usually the gut, and discharge itself in this way, allowing the cavity to heal but leaving the patient with a crippled appendix liable to cause recurrence at any time and constituting the condition of recurrent attacks of suppurative appendicitis; 3d, the appendix becomes so distended with its inflammatory contents that

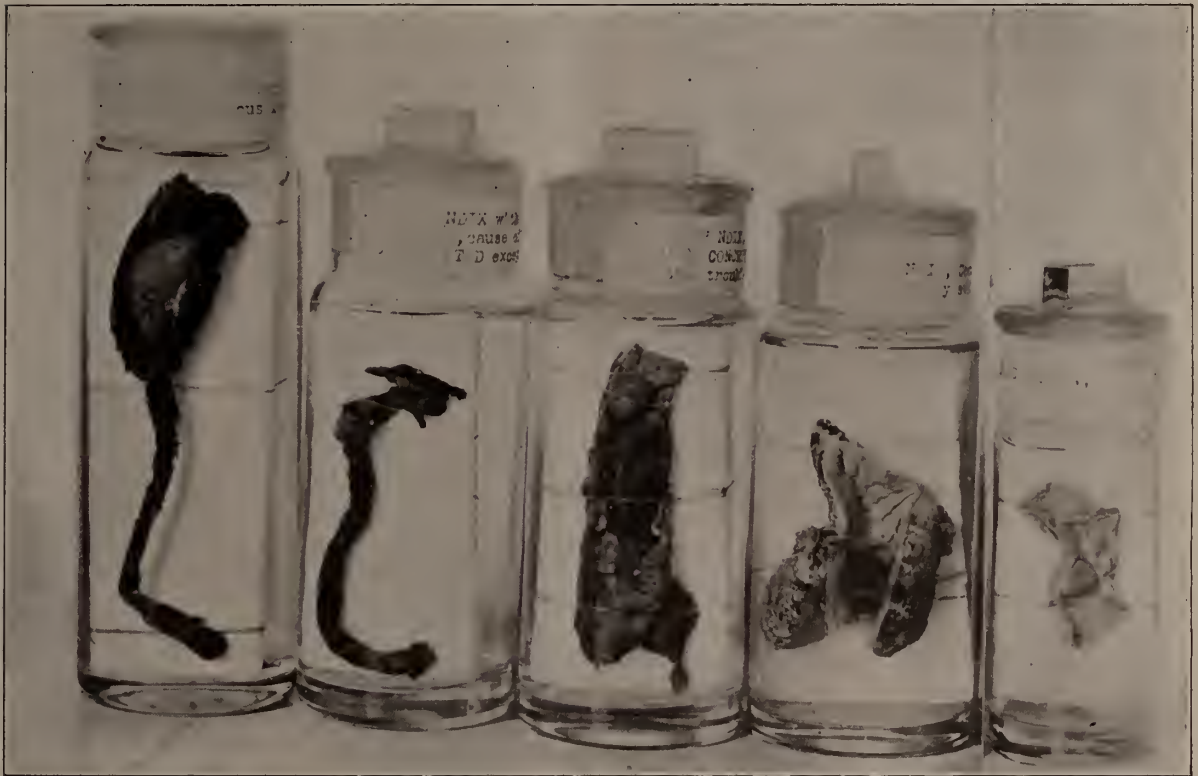


FIG. 4.

FIG. 5.

FIG. 6.

FIG. 7.

FIG. 8.

Fig. 4, Large concretion in proximal end. Appendix decapsulated on account of extensive adhesions.

Fig. 5, Concretional at site of perforation, distal portion gangrenous. Decapsulated on account of adhesions.

Fig. 6, Slit open. Concretion near proximal end. Proximal mucous membrane normal, distal gangrenous.

Fig. 7, Slit open. Concretion in situ. Mucous membrane distal to it shows spongy swelling.

Fig. 8, Slit open. Small appendix, concretion in situ.

await only the next opportunity, which will come with the first cause that interferes with the normal function of the parts, to renew the process and continue it where last left off. This corresponds with the repeated attacks of so-called catarrhal appendicitis.

The process having advanced to the stage of suppuration, Nature's remedy, not only in inflammations about the appendix, but anywhere in the peritoneal cavity, is an adhesive fibrinous exudate thrown out around the region of inflammation which closes off the general cavity

it strangulates its own circulation, becomes gangrenous, amputates itself and floats about in the pus of the surrounding abscess. Its cecal orifice, which had previously been plugged, either by a concretion or by a stricture or by swelling of its mucous membrane, becomes permanently sealed through the adjacent inflammation. As in the previous case the abscess develops and points in the direction of least resistance which ordinarily is the gut and generally the cecum into which it ruptures, discharging its contents including the separated

gangrenous appendix. The abscess contracts and heals, the gut closes and the patient remains as appendixless and as permanently cured as after the most thorough appendectomy.

This does happen and explains the course of some cases that have gone on to suppuration

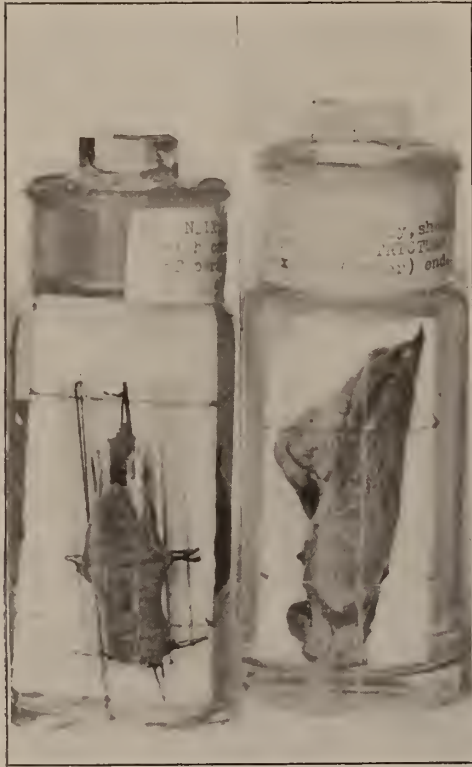


FIG. 9.

FIG. 10.

Fig. 9, Slit open. Incomplete stricture near proximal (upper) end. Spongy swelling of mucous membrane.

Fig. 10, Slit open. Complete fibrous stricture at proximal (lower) end.

and yet are followed by spontaneous cure. While I have no specimens of this class that must have passed per anum I have a few that were rescued before they reached this stage. Two of them (Figs. 1 and 2) are completely gangrenous appendices that were greatly distended, ready to separate, but yet in situ, and two others (Fig. 3) had already amputated themselves at the time of operation and floated out with the pus of the abscess cavity. It would be well if this last course would be the rule in all or even in many cases of appendicidal suppuration. But unfortunately it is the exception. "There's many a slip 'twixt the cup and the lip," and there are comparatively many more slips 'twixt inflammation of the appendix and its cure by natural means, more than justify any dependence on the successful outcome of Nature's unaided efforts. It would take more time than I have at my disposal now to go into detail as to the reasons for failure in Nature's efforts, but suffice it to say that there are so many weak links in this chain of

events that in any given case it is very improbable that one of them will not give way during the strain of the course of the affection.

So far we have been considering only what we might designate as functional obstruction of the lumen of the appendix as the cause of its inflammation. Other obstructions act in the same way though with more prompt and pronounced effects. One of the simplest of these is an acute bend in the continuity of the appendix, causing constriction of the lumen. This specimen shows such an appendix. The proximal portion was normal, to all appearances, while the mucus layers of the distal portion were gangrenous. This appendix, now slit open and straightened out, was found acutely bent on itself, its proximal and distal portions adherent as the result of previous attacks of inflammation, and the distal portion was distended with purulent contents. (Photograph does not show contrast and therefore omitted.)

Another cause of obstruction, and a very fre-



FIG. 11.

FIG. 12.

Fig. 11, Concretion tied in place at proximal end. Gangrenous patch just below it, where it ulcerated through. Large edema of meso-appendix.

Fig. 12, Perforation near distal end, without general gangrene.

quent one, is concretion within the lumen of the appendix. These concretions are formed by the gradual accretion of fecal particles that enter the appendix from the cecum. They seem to form a bed for themselves within the folds of the mucous membrane and gradually grow till they fill the lumen and even distend it, for they are frequently found of three or four times the diameter of the normal lumen. I have a number of specimens to illustrate this condition

(Figs. 4 to 8) and will call your attention especially to one (Fig. 4) with the concretion *in situ* because it is the largest concretion I have seen. It is kidney-shaped and measures one and a half inches long by three-quarters of an inch in diameter. It may readily be seen how a concretion will cork up an appendical orifice, and, being larger than the orifice, act as a ball-valve against the outflow of any fluid accumulation distal to it, especially when under pressure. Furthermore, its continued contact with the mucous membrane causes ulceration, affording avenues for the entrance of infection, and this ulceration is progressive, frequently resulting in perforation. One of the specimens (Fig. 11) shows this nicely. The concretion is tied in its original situation at the proximal end of the appendix and the semicircular gangrenous patch below it shows where it ulcerated through. This appendix was almost completely gangrenous when perforation took place. Another one (Fig. 12) shows perforation near the distal end without a general gangrene of the organ. The adhesions in this case were very pronounced, necessitating decapsulation of the proximal half of the appendix, nicely shown by the specimen.

Organic stricture is frequently met with. Often it is partial, more exceptionally, complete. The cause is likely ulceration and subsequent healing with contraction of the scar. Possibly the condition is congenital in some cases. Two of these specimens (Fig. 10 is one, the other not showing up well enough to reproduce) show complete fibrous stricture; they were both found distended with liquid contents but not yet gangrenous or perforated at the time of operation. Two others (of which Fig. 9 is one) show partial stricture, which was made complete during the inflammatory stage by swelling of the mucous membrane. One of them (Fig. 9) is only recently out of the belly and was found distended with creamy pus distal to the stricture.

Various other local conditions that cause trouble are found in the appendix, among them foreign bodies, such as pins, seeds, intestinal worms, etc., also neoplasms and tuberculosis. But I have limited myself to the more common conditions in which I have been able to mount and preserve the specimens so as to show the pathological changes.

I am indebted to Dr. H. M. Silver for the opportunity of presenting to you a fresh specimen removed by him this afternoon from a suppurative case. The prepared specimens, though they preserve most of the important points, lose a number of features that are evident only in the fresh state. You will notice the angry inflammatory redness of the serous coat, the edematous mesentery, the patches of grayish-white adhesive exudate on the surface, the local gangrenous patch with the perforation in its center, the purulent fecal contents exuding,

and, on slitting it open, the swollen and engorged mucous membrane.

NOTE.—A number of specimens were not amenable to illustration, as photography could not show the desired points. To bring out the detail in those that are printed herewith was no easy task, and I wish to express my thanks to Dr. I. S. Hirsch, Radiographist to Beth Israel Hospital, for his successful work.

THE VALUE OF EDUCATION AND TREATMENT AS SAFEGUARDS IN VENEREAL INFECTION THROUGH MARRIAGE.*

By JOHN A. FORDYCE, M.D.,
NEW YORK.

THE significance of venereal diseases to the individual, the family, society and the State has been fully considered in the numerous communications to this and other societies formed on similar lines. It is, perhaps, not saying too much when it is stated that the medical profession, as well as others interested in sociological questions, are becoming more alive to the possibilities of limiting their diffusion and preventing some of the malign results which follow in their wake. When it is more widely taught that these infections are not necessarily of venereal origin, but are often acquired in an accidental or innocent manner, the necessity for more general instruction regarding their nature will be acknowledged by those who now consider that they are not proper subjects for discussion.

As safeguards in protecting the family and race from venereal disease, our chief reliance must be placed on education as a preventative measure, and on treatment if such infection takes place. Theoretically, education seems a simple and rational solution to the problem, but at present this method has its limitations, owing to conventionality, the odium which attaches to the very mention of these affections and false modesty. As physicians, we are aware of the need of such teaching, and recognizing that ignorance alone, even among the otherwise liberally enlightened, is responsible for so much disaster, are we not failing in duty or lacking in moral courage if we passively wait for the barriers to remove themselves? Until our means for propagating this knowledge becomes better systematized, most of the work will devolve on the medical profession, but, unfortunately, even here only a sporadic interest is encountered. The indifference on the part of the profession in general, and even in those in hospitals and dispensaries where these diseases are met with, is due perhaps largely to cynicism, for not uncommonly the attending physician expresses the opinion that the patient would neither understand

* Read before the Society for Sanitary and Moral Prophylaxis, April 12, 1906.

nor heed the cautions given. Certainly it is not fair or safe to trust to good fortune, but careful instruction as to their duration and contagiousness should be imparted that further dissemination may be restricted. If concerted action in this matter were taken by medical schools, medical societies, health boards, etc., then this dormant duty might be awakened into activity. We may not be able to materially affect the disease acquired through sexual commerce, but we can at least reduce the number of victims of gonorrhoea and syphilis insontium if we live up to our convictions in every instance.

To be of value the preventive must be administered timely. We must seek not only to avoid contamination of the prospective wife, but we must go back early enough and prevent that of the husband. To attain this end such education must form an essential part of the training of the young. It is impossible to impart this knowledge in every home, because of the ignorance or indifference of the parents, and outside influences must, in many cases, be depended upon. The schools are perhaps the next best place, and in addition to the compulsory study of physiology and hygiene in the lower and higher grades, the curricula should be supplemented by special lectures on this question to young people who have reached a proper age. I am especially in favor of warning young men just entering college, and consider lectures, modeled after those given by Lassar, of Berlin, or Pontoppidan, of Copenhagen, and others, of distinct value. Such lectures should, however, be given early in the year when the schedule for work is incomplete, and the unoccupied time and the sudden escape from parental control are apt to lead to an abuse of freedom. It is easy to appeal to students: their instruction should cover, besides the physiology of the generative system, the dangers and consequences of irregular sexual life, in language which could not be misunderstood. Medical students, too, should have the benefit of this knowledge at the very outset of their career, and visits to the venereal wards of a hospital would not be without a salutary effect. An object lesson such as could be there afforded would do much to impress mere didactic instruction.

Individual judgment and future discussion must determine the extent and kind of information to be conveyed to young women on this subject. The nature of diseases which so influence the future health and happiness of wives should not altogether be concealed. Although the topic is a delicate one to broach to young women in any social class, they should nevertheless be in a position to protect themselves, if parents and guardians are negligent on this vital point.

Men rely too much on feminine ignorance regarding the real nature of venereal infections; and, while perhaps the conscientious would not wilfully expose their wives to such dangers, still there are some who do and will take advantage of this lack of knowledge.

If the etiological element of many of the diseases which arise after marriage resulting from venereal infection of the husband were known to the wife, what domestic calamities would follow! On the other hand, if young men were aware of the fact that young women had sufficient enlightenment in these matters, would they not guard themselves more carefully from infection, or, if it did take place, would not a more rigorous treatment precede the marriage state?

A system to be productive of results must be far-reaching: it must be given sufficient prominence to be impressive, and must penetrate all strata of society. The great majority outside of the pale of institutions of learning we must in time reach through the co-operation of churches, societies such as this one and heads of large employment centers.

It is, perhaps, placing the best construction on human motives when we state that ignorance is often the cause of venereal disease in the young. When properly informed, many right-minded individuals would sedulously avoid all such sources of infection; although, without undue pessimism, I might say that a large percentage would not be influenced in this way, and for this reason we must make the treatment of this class of diseases an important factor in preventing their transmission by marriage. Instruction should form as necessary a part of the treatment as the medication; and it is the duty of the physician to disabuse the patient's mind of the idea that gonorrhoea, for instance, is merely a local catarrh and easily cured. He must be impressed with its seriousness and warned against marrying while in an infectious stage. He will surely transmit the disease to his wife with such consequences as acute and chronic pelvic inflammations, resulting in chronic invalidism, incurable sterility and even death. If he attaches but trivial significance to his own condition and thereby neglects treatment, the outcome may be a double epididymitis producing sterility, a prostatitis with partial or complete impotency, or the infection may extend to the kidneys. The infectiousness of this disease may be retained for years and doubtless, even physicians, in establishing the etiology of an arthritic outbreak, overlook the rôle of the gonococcus under the assumption that it has been destroyed by time. I recall a patient with a multiple joint and tendon sheath involvement thirteen years after infection, in whom gonococci were demonstrated in the pus from the involved structures. Fortunately, through the almost universal use of the Crêde silver nitrate instillation in maternity hospitals and private practice as prophylaxis against ophthalmia neonatorum, the effects upon the eyesight of the offspring are minimized and the number of blind from this cause greatly reduced. Often and sufficient emphasis must be laid upon the fact that the patient cannot consider himself cured with the cessation of the discharge, that

the disease in its latent stage is dangerous, and that frequent bacteriological and microscopical examinations must be made before his marriage can be sanctioned.

With the subject of syphilis the same course must be pursued and all the possibilities communicated to him. He should be informed that his disease can be transmitted for the first four or five years after infection, even when all traces of it have apparently disappeared, that he jeopardizes the health of the general public through eating utensils or carelessness in the use of any article that may have come in contact with syphilitic secretions, especially salivary, and that demonstration of affection, as kissing, is a menace. His wife can be infected directly or through the fetus, causing the active disease in her and leading to repeated miscarriages or leaving her in a state of anemia and cachexia, with the danger of later manifestations of the disease. If she give birth to living children they may survive only a few years or bear unmistakable stigmata with late recurrences. As for himself, time may visit him with an optic neuritis resulting in blindness, visceral complications, spinal cord lesions, early paralysis or paresis, epilepsy, etc., etc. Such instances are met with in clinical experience, and prove the havoc this disease works when left to itself; but many of these conditions are preventable or remediable if conscientiousness and patience are combined with intelligence. The gloomy picture depicted need not be realized if the patient will avail himself of the specific remedies which, by long continued employment under proper medical supervision, will eradicate or render innocuous the virus. A man, properly and thoroughly treated before marriage, will not infect his wife, and will have healthy offspring, and the same is true of a woman. Likewise, a syphilitic woman who is actively treated during her pregnancy may produce a healthy child.

The late pernicious manifestations of the disease through the channels of the nervous system or the viscera in those who have been treated is, in a large majority of cases, due to laxity, unintentional, perhaps, or to the preparation or method employed not having been efficient.

Our work with the spirochæta has not progressed sufficiently for us to have recourse to bacteriological or microscopical tests as an indication of the existence or non-existence of the infectious agent in any stage of this disease, and until that time has arrived we must be satisfied with the consensus of clinical experience which shows that our only assurance of a cure is in the prolonged use of specific remedies over a period of three or four years and complete freedom from all signs of the disease for perhaps one year.

Have we other measures besides education and treatment to limit the spread of these diseases? In this age of preventive medicine when there is so much interest and activity displayed by our

public authorities in checking infections, it would seem that the venereal one in matrimony and in every day life might be limited to some degree by restrictive legislation. However, a practical application of such measures has not proved of much utility. It has been a prolific source of secret prostitution and has led to such concealment and deception of the infected individual that physicians in charge of lock hospitals in countries where such restriction is in operation have little confidence in its efficacy. Moreover, medical inspection is often so superficial and cursory that it affords little protection while inspiring the community with a false hope of security.

The best plan it seems is a liberal policy on the part of the health authorities in regarding the infected individual as an invalid and not as a criminal, thus encouraging him to submit to early treatment, which should be readily accessible.

Therefore, it appears that the best safeguards which we now have to prevent the introduction of these diseases into marriage, aside from early and comprehensive teaching as to their nature and effects, are the sterilization of all sources of contagion by prompt and energetic treatment and emphatic warnings regarding transmission directly or through infected media, and the certainty of their conveyance to the innocent wife and children if matrimony is entered into without the consent of the attending physician.

SHOULD NOT SAFEGUARDS FROM VENEREAL DISEASE BE THROWN AROUND MARRIAGE?*

By JOHN A. WYETH, M.D.,
NEW YORK.

TO the question to which I have been invited to speak, namely, "In view of the grave injury to the family and race from venereal infection, should not safeguards be thrown around marriage?" there can be but one answer and that in the affirmative.

The chief difficulty lies in determining the better method of securing this protection, especially to the woman and her offspring.

In my opinion, in discussing this important feature of the subject we can eliminate that large proportion of the gentler sex who appreciate the possibilities of maternity and are looking forward under both the natural and the social law to the enjoyment of this privilege.

From the dangers of direct infection before marriage this higher type of woman is protected not only by her innate purity but by the safeguards of her home and family and the rulings of modern civilization.

I would suggest that the solution of this problem can be best accomplished by dealing directly

* Read before the Society for Sanitary and Moral Prophylaxis, April 12, 1906.

with the male side of the question, both married and unmarried, and we need not hesitate to speak plainly with him.

There is not a physician of experience who does not appreciate the importance of this subject. There can be few who are not ready and willing to contribute to the best of their ability to the proper dissemination of that knowledge which alone will lead to the diminution of the spread of these infectious sexual diseases.

That the public knows practically nothing of the subject is a reflection upon our profession in its failure to inform them, and upon us should rest the blame if they fail to realize the gravity of the dangers which threaten not only society but public health.

Can one doubt for a moment that if mankind were aware of the fact that 90 per cent. of all cases of locomotor ataxia and most all of the paralytic attacks, that 80 per cent. of all the deaths from inflammatory diseases peculiar to women, and at least 50 per cent. of all the operations known in gynecology, as well as 30 per cent. of all the blindness in infancy and childhood were due to these diseases—I say again, can one doubt for a moment that with this knowledge in mind the public would not take steps to lessen the possibilities of these infections?

In our effort to safeguard marriage we must educate our men, and especially our younger men, to know that immoral sexual association will in at least 95 per cent. of cases result in the contraction of a loathsome disease which, in countless instances, may be seemingly cured for years and then break out again with deplorable consequences not only to the individual but to innocent persons.

The chief educational agent of this age is the public press, and this society with its high aims in view and with the strong influence of its membership should labor earnestly to enlist its powerful aid in this work.

In the *New York Sun* of this date (April 12, 1906) there is an editorial, entitled "Morality and the Public Health," which calls attention to the very great dangers to the public health, to the innocent as well as the guilty, from the venereal infections, and there is paid this tribute to this organization:

"There is in New York City an organization known as the Society of Sanitary and Moral Prophylaxis, which has undertaken the delicate and difficult task of enlightening the public upon this important subject. It is entitled to the moral support of all persons who have at heart the welfare of mankind."

It is no sin to be ignorant; the disgrace is in continuing so.

Wishing will bring things in the degree that it incites you to go after them.—*Strode*.

LEGAL MEASURES TO PREVENT VENEREAL DISEASES.*

By ARTHUR N. TAYLOR, Esq.
NEW YORK.

IN considering the subjects assigned to me for this evening, I have taken the liberty of reversing their order, taking up first the question, "Should the State demand a medical certificate of freedom from contagious sexual disorder as a condition of license to marry?"

Were an act passed by the Legislature requiring that every person, as a condition precedent to the right to contract marriage, should be thereafter required to furnish a physician's certificate that he was then free from any contagious sexual disorder, I, as a lawyer, should unhesitatingly take the position that it was a valid and constitutional act, such an act coming within the police power of the State.

The police power may be briefly defined as the power of the State to impose restriction upon the acts and conduct of the individual for the good of the State. In the exercise of this power the Legislature is left with a broad discretion and is permitted to impose such restrictions as it sees fit so long as they are reasonable and do not run counter to some provision of the constitution, State or Federal. The preservation of the public health is one of the principal subjects of the exercise of the police power; the courts have therefore upheld acts intended to prevent the introduction and spread of infectious and contagious diseases, acts making vaccination compulsory when there is a reasonable apprehension of an epidemic of smallpox, acts requiring pupils to present a certificate of vaccination before being permitted to attend the public schools, and the like. Such provisions must, however, be reasonable. Thus, a law requiring the vaccination of all persons, there being no epidemic of smallpox present or threatened, doubtless would be unenforceable; and so, in my opinion, would the courts decline to enforce a law requiring that every candidate for license to marry present a certificate that he *had at all times* been free from a contagious sexual disorder.

In considering the practical working of the suggested act, we may, I think, safely assume that the healthy and also the honest of both sexes would submit—not cheerfully, but nevertheless they would submit. They would go to their regular physicians, who, recognizing the delicacy of the situation and desiring to embarrass them as little as possible, would make a perfunctory examination and give the desired certificate. It no doubt would happen sometimes that an honest applicant would be undeceived as to his condition and an unfortunate marriage prevented, or at least postponed until it could be consummated with less danger.

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Here I should think, that the greatest usefulness of the law would be found.

But, how would the law work with the dishonest man, the rascal who knowingly would impart a loathsome disease to the woman who entrusted herself to his keeping? It is probable that he would solve the problem by taking his fiancée to another State, where no such law existed, and there have the marriage performed.

It may be urged that if this State were to enact a law of the character proposed, the sister States would soon follow suit, so that this sort of evasion would shortly become impossible. It is true that such a result might ensue. New York, in many respects, is considered a pioneer in legislative reforms. I believe the Legislature of New York passed the first act imposing restrictions upon the practice of medicine without qualifications. Such acts now exist, to the best of my recollection, in every State in the Union. New York has also set, or, rather, has always maintained a high-water mark in the matter of divorce; but in this regard, very few of the sister States have emulated her example. It would seem that questions affecting marriage and divorce are disposed of in accord with the views entertained locally in the several States and that such views are not readily changed.

But the rascal we are considering would, in many cases, find it impractical or quite probably impossible to have the marriage performed in a foreign State. What course would he then take? Clearly, he would not go to his attending physician for a certificate. It is quite conceivable, however, that if he went to a strange physician, such physician, however honorable and conscientious, might, through misrepresentations, be deceived into giving a certificate. Further, it is not at all improbable that a certain class of doctors, those professional outcasts whose advertisements we may see daily in the newspapers, would add another "specialty" to their list, that of writing certificates of sexual cleanliness.

An act of the character we are considering would doubtless prevent some unfortunate marriages and spare some innocent people suffering and shame, but it would be an odious law to all classes of people coming within its provisions. Whether the limited benefits likely to flow from such an act would be sufficient ground for imposing its burden upon the people is a question which should, in my opinion, be answered in the negative.

In considering the remaining question: "What other safeguards are available?" I am equally at a loss to perceive any ground upon which I may stand and assert that here is assurance of help. I could suggest that the commission of adultery be made a crime, but such suggestion would be without hope of such crimes being punished except under certain extraordinary or unusual conditions, although I do think such an act would be a valuable addition to our statute book.

I could suggest an act requiring physicians to

immediately report and segregate cases of venereal disease coming to their treatment as they are required to do with many other contagious diseases, but it requires no vivid imagination to conceive that such an act, if it were enforced, would drive most patients to the "cure yourself" method, thus greatly aggravating the harm it was enacted to lessen.

In Michigan drastic measures have been adopted to guard against infection in the family. The Legislature in 1899 amended a previous act by adding to it a clause whereby any person who had been afflicted with syphilis or gonorrhoea, and had not been cured of the same, should be incapable of contracting marriage, imposing as a penalty a fine of not more than \$1,000, or imprisonment in the State's prison for not more than five years, or both such fine and imprisonment. To facilitate prosecutions under this act the Legislature by express enactment altered the law of evidence so that in such prosecutions the husband or wife could testify against the other; moreover, it removed the privilege of the physician who attended the offending party and made him a competent witness.

This law has been on the statute books of Michigan about seven years. Since these questions which are before us to-night were suggested to me, I have communicated with a prominent lawyer of Michigan, a man who has been in active practice in the State for many years, with a view to ascertaining the practical working of the law. The essence of his reply is: "I do not find that any case has ever been brought to the attention of our Circuit Court under these acts as amended.

The reasons for the inefficiency of such a law are apparent. The knowledge of the family contamination seldom ever comes to the attention of any person other than the injured spouse and the family physician. For the physician to instigate a prosecution would be an unheard of breach of professional ethics. The wife (it is usually she who is the injured member of the family) prefers to suffer in silence rather than instigate proceedings which, instead of improving her condition, would publish her humiliation and, if the prosecution succeeds, would either deplete the family exchequer or deprive the family of its bread-winner, or perhaps both.

For the same reason a law, making an act of family contamination *per se* ground for divorce, would seldom, if ever, have a deterrent effect upon the promiscuous habits of a spouse, while such an act would be regarded and used by many as a means of escape from his marital relations, thus aggravating the condition it was intended to relieve.

In closing, I desire to say that to contribute discouragement rather than assistance to this society in its search to find legislative aid in the noble fight it is waging is furthest from my desire. My inability at this time to suggest legal measures which seemed to me as being well

calculated to accomplish the desired purpose is a source of much regret.

I am not prepared, however, to say that measures may not be framed which will be of help, but, in my opinion, no act should be advocated by this society until it has passed the test of close and critical scrutiny and appears well calculated to accomplish the purpose designed.

THE ROLE OF PURE COW'S MILK IN INFANT FEEDING.*

By A. JACOBI, M.D., LL.D.,

NEW YORK.

(Concluded.)

The cow's milk mixture which is to be administered to infants requires sugar which makes it more palatable and less constipating, and restores, to a certain limited extent, the approximate composition of woman's milk. The latter contains six or seven per cent. of sugar, cow's milk only three or four per cent. Imagine your cow's milk mixture or dilution contains fifty per cent. of milk, so there is only $1\frac{1}{2}$ per cent. of sugar in it. This sugar is milk sugar. Now should milk sugar or cane sugar be added?

Breast milk plunges into the infant stomach directly, unchanged, and sterile. Cow's milk has to wait from one to twenty-four hours before it reaches the consumer. Its milk sugar begins to be changed into lactic acid immediately after milking. This lactic acid, together with the rennet of the stomach and the acids formed out of the fat of the milk are the final causes of curdling. If you meet with a milk that is no longer alkaline—indeed, some milks are acidulated in the udder and many more are amphoteric, that is neutral—the decomposition of the milk is very rapid. It is true, not all the sugar contained in cow's milk sent into the stomach is changed into lactic acid. Usually this change stops when one-sixth or one-quarter of the milk sugar has been so changed. Only when an alkali is present in the stomach and neutralizes the lactic acid, more of the latter is formed. Thus, indeed, the amount of lactic acid which is produced depends on the accident of an alkali being present or absent. That is why the routine use of sodic carbonate or bicarbonate may become a dangerous procedure. This fact appears to prove that a small amount of lactic acid suffices for the demands of a normal digestion. That becomes still more apparent when we learn that some of the milk sugar passes through the intestinal tract undigested. Blauberg (Studien über Säuglingsfäces, p. 55) found the dried feces of the nursling to contain from 0.22 to 0.59 per cent. of milk-sugar. This happens even to woman's milk-sugar. And Escherich found that peptones which form in milk, while in the intestine previous to normal absorption, are destroyed by acid fermentation; and concludes that for that reason

alone another carbohydrate, that means starchy food or cane sugar, should take the place of milk-sugar, in order to avoid an excess of lactic acid. Moreover, Dr. Helen Baldwin has published (*Journal of Exp. Med.*, vol. v) investigations which prove the formation of oxalic acid as the result of intestinal fermentation. Thus surely it seems to be easier to give too much milk-sugar than too little; and it appears that the careful measuring and weighing of milk-sugar are of doubtful value, even though you know, or believe you know, that the milk-sugar of the market and the milk-sugar of woman's milk are identical, which they are not. All this refers to cow's milk that is obtained and utilized when still fresh. When it reaches the baby's stomach, ten or twenty-four hours old, with quantities of lactic acid formed, Escherich's warning is still more urgent.

Please add to this what follows:

Cow's milk keeps its casein in solution by its normal percentage of calcium phosphate; this is decomposed by the lactic acid of stale milk, or when milk-sugar is added and is changed into lactic acid the casein is no longer in solution, but is thrown out and coagulated. Now cow's milk has three or four times as much casein as woman's milk and only half as much milk-sugar; this small quantity of milk-sugar allows the big mass of casein to be kept in solution; if you add the milk-sugar (or its lactic acid) of our chemical infant feeders, the casein is no longer kept in solution, and is thrown out. One of the great dangers of infant feeding is the insoluble or curdled casein. The proper quantity of milk-sugar—the hobby horse of our professional dietitians—to go with a cow's milk mixture ought to be enough, and no more, to keep cow's milk and casein in solution, but not the large percentage of milk sugar contained in woman's milk which will prove excessive in its relation to cow's milk casein. It is only woman's casein that, though in a percentage three times smaller than that which is contained in cow's milk, is not thrown out by its larger quantity of (milk sugar born) lactic acid.

All of this proves again that the casein of the cow's milk and that of woman's milk are chemically different, and that the practice of adding the weight of milk-sugar required to keep woman's casein in solution is in excess of that which is tolerated by that of the cow.

What I conclude from all this is that every cow's milk mixture contains a sufficient amount of milk sugar for the needs of digestion, and that some other sugar should be added, viz., cane-sugar—which in its chemical atoms is identical with milk sugar but is not changed into lactic acid. Indeed it counteracts the rapid conversion of milk sugar into lactic acid, and is rather a preserver of milk in its purity. You know that cane sugar is employed by the trades for the purpose of preserving foods; amongst them is condensed milk, which though reprehensible as a food when pure cow's milk can be obtained, is an indispen-

sable makeshift in the service of the hundreds of thousands of our large cities to whom pure milk is a terra incognita. I do not speak, I never spoke in its favor; but I recognize that unclean milk, fermented milk, poisoned milk, is vastly inferior to good condensed milk; and I conclude that what I and you, and all the rest, are bound to do is to facilitate the production and distribution of real, genuine, unpolluted cow's milk. The Baltimore movement in this direction will prove a great benefaction to rich and poor, to old and young.

Cane sugar is not changed to an acid in the intestinal canal. It is easily absorbed and is not detrimental. It is, according to Pavy, partly inverted into grape sugar and partly absorbed directly. Grape sugar and dextrine are absorbed equally. Only in the sick the absorption of sugar is slow; particularly in the diseases of the alimentary canal, in which there is increased fermentation in the mouth, stomach, and intestines, the ingested quantity of sugar should be diminished and diluted. The purgative effect of cane sugar—if at all appreciable—is much milder, than that of milk sugar. After all, I again urge the use of cane sugar, and not of milk sugar, in the preparation of cow's milk mixtures in infant feeding. For the same reasons a great pediatricist, Philippe Biedert, employs cane sugar in his cream mixture which under the name of Ramogen has been introduced lately into the American market.

Occasionally there is an opposite opinion. A Keller, otherwise favorably known, declares sugar to be by no means uninjurious to the newly born, and advises saccharin in its place. He has the courage of his convictions based on I do not know what, and says, "there can be no objection to saccharin." That is why he orders the first day of a baby's life "tea" with saccharin, and his reason is literally because "Jansen made experiments on newly-born calves with boiled milk, which almost always resulted in hæmorrhagic diarrhæa." Since I read that I have warned every newly-born calf to keep out of the way of Keller and Jansen.

Altogether, the amount of sugar should not be excessive, it is absorbed in certain quantities only, never more than 1-125th of the body weight of infants. Heubner and Biedert, the great German authorities, differ in regard to the weight of milk sugar administered; the recommendations of the former are repudiated by the latter. In a very recent publication (*Das Kind*, by Th. Biedert, 1906) Fritz Gernheim proposes as of equal standing grape-, cane-, milk-, and malt-sugars, and adds: "If you wish to give much sugar mix milk sugar, if you select it, with one of the others to avoid diarrhæa." Now then, I say again, be satisfied with the milk sugar contained in the cow's milk you employ, and, for the rest, pin your faith on cane sugar.

Woman's milk contains less mineral parts than cow's milk (Albu and Neuberg, p. 74), but on

account of the nature of its combinations the infant assimilates more of those contained in mother's milk. The most available one is nuclein phosphorus. Of phosphorus there is in organic combination 77 per cent. in woman's milk, with 54 per cent. nuclein phosphorus, but only 27.9 per cent. in cow's milk with 13.4 per cent. of nuclein phosphorus. It is true that the phosphorus of both milks is absorbed equally well, but that of cow's milk is not retained and utilized. That is still worse in dyspeptic infants, who absorb less phosphorus and calcium when introduced in cow's milk.

Altogether the salts of human milk are better utilized by the nursling than those of cow's milk. That is mainly so—besides phosphorus—in regard to calcium and magnesium, which are required by the growing structure of the infant body. The small percentages of mineral constituents in the organism are no proof of their lack of usefulness. Indeed, small quantities of minerals are all that is required for the building up of the human structure and the preparation of excreta, but their absence is speedily felt; upon no occasion more than towards the end of the normal period of milk feeding. For instance, the newly-born body contains six times more iron than is contained in the milk of either woman or cow. This excess of iron mostly deposited in the liver, is utilized by the growing child in the course of months. When it is exhausted milk is no longer sufficient and artificial feeding is demanded. You all know of instances of profound anæmia of the nursling caused by prolonged lactation or excessive milkfeeding, which were speedily cured by the partial or entire substitution of animal and vegetable food adapted to the age of the baby. It appears rational not to let the iron accumulated in the liver of the newly-born be gradually drained off, but to serve a new supply in the addition of cereals, fruit or animal food. The large percentage of casein in cow's milk compared with that contained in human milk—without regard to their physiological differences—necessitated the dilution of cow's milk when required for infant feeding. The material for dilution was water, the principal constituent of everything organic. Its role in the anatomy of the human body has been the subject of a thousand researches.

Fehling, Camerer and Söldner have studied the percentage of water in the composition of the foetal and infant tissues. It is 94 in the foetus of three months; after the sixth foetal month and at birth it is 69-66; and in the adult only 58. More than one-half of this belongs to the muscles, 27 per cent. to the bones, and only 10 per cent. to the fat of the body. So the tissues of the newly-born contain 10 per cent. more water than those of advanced years. Immediately after birth the excreting functions of the lungs, skin and kidneys, also the intestines, display a new activity. Unless a sufficient amount of water is furnished to the newly-born the tissues

lose their physiological equilibrium and their functions are impaired. That a baby had no new supply of water the first day or days of its life was the rule until its rights and necessities were recognized in our more thoughtful modern era. The time when the loss of 10 or 20 per cent. of the weight of a newly-born infant was considered normal is well remembered even by those of you who are quite young. Now, if there be no milk, water is the least you can give. But even if the young mother *has* milk, that milk is colostrum which contains from 3 to 5 per cent. of nitrogenous substance, more than four times the percentage contained in the milk of the second week and even afterwards. That is why even that natural baby food is better digested with than without additional water. The danger is particularly great in the milks of mothers that have been prematurely confined, for in their milk the percentage of proteids is proportionately still higher. Thus everything is against their newly-born waifs. First, kind nature expels them before they are matured; then she supplies them providentially with indigestible food, which should be corrected by ample dilution.

Do not tell me that nature knows best, and that whatever comes as a gift of her bounty is best. We are apt to mistake her for providential wisdom and goodness, and forget that her smiling face may be the gruesome veil over the buds of the spring, the roses of the summer, the shrieks as well as the laughter of our babies, and pestilences and earthquakes. The sunny sky over the Pacific shore is looking indifferently on the fragrant new buds and on the five hundred thousand terrified, impoverished, starving and shivering men, women and children. Nature is at the same time more bountiful and more unmerciful than mankind ever was. Nature's laws are iron-clad. When she does her worst, sympathetic and pitiful man, taught by terror, anguish and sorrow, has to work out his ethical and physical future.

It is admitted by the very best authorities, Biedert included, that atrophy, fat diarrhea and other diseases demand copious dilution of the food. That is a matter of experience and good reasoning. The same experience favors dilution in healthy conditions. If there were such a thing as condensed *woman's* milk, we should readily agree upon the method of dilution.

But in artificial feeding we deal with cow's milk whose proteids are not only denser but are also chemically different. The dilution of cow's milk for the newly-born should be from four or six to one, and for a baby of six months one to one. That is required to make milk digestible. There are more reasons, however, for a high degree of dilution. Our babies are not given enough water. Breast and the bottle, as mostly prepared, contain food, not water. When babies are hungry they cry, when they are thirsty they speak the same language. In either case they are given food, not drink. That is why babies should

frequently be offered pure spring or boiled water, in some shape or other, and it is easiest to add it to their food. The objection made to this plan is that it is said to lead to dilatation of the stomach. That objection has been constructed at the writing desk. I have not yet seen such a case, and the rapid muscular action of the almost vertical infant stomach, endowed with good circular fibres, and the rapid absorption of fluids containing salts or sugar from it and from the long tract of intestines with its well-developed lymph apparatus and very vascular villi renders gastric dilatation very improbable, probably impossible. It is true, water when pure, is not readily absorbed in or expelled by the stomach, but in the condition in which it is in the infant's stomach, viz., with salt and sugar, it is readily absorbed. You have, moreover, seen diabetics drink five and ten litres of water, and more, daily, for years—not mixed with sugar, or salt, or alcohol—but no dilatation of the stomach from that cause; and three or five hundred more ccm. of water given to a baby in the course of twenty-four hours are no danger. But they are a blessing in more than one way. The frequency of uric acid infarction in the newly-born, quite well known to Hippocrates and Galen, leading in many instances to the formation of stone in the kidney, which is quite frequent, to pyelitis, which is not infrequent, or to nephritis which is *very* frequent, is best corrected by flushing the kidneys from an early time. These dozens of years during which I and my pupils and others have insisted on copious dilution of the food of the newly-born and young infant, we have seen fewer colics from kidney stone and fewer cases of kidney inflammation than formerly.

What I have said of the coagulability of cow's casein and its general difference from the casein of human milk, of the dissimilar character of the fat contained in the two milks, of the dangers to digestion resulting from the excess of lactic acid in the intestine, and from the advice given by Escherich and others to replace milk sugar by some other carbohydrate, makes the substitution of a diluent more efficient than mere water, advisable. That diluent should render an additional service, that is, it should be of such a nature as to prevent the coagulation in hard lumps of the casein of the cow's milk when introduced into the baby's stomach. Normally the coagulum of mother's milk is soft and flaky; that of cow's milk, hard and firm. Means should be found to avoid the latter occurrence, but such means as will be agreeable to every infant stomach. One of the preparations of cow's milk which I was taught by Dr. I. Rudisch—at that time an assistant of mine and for a generation a highly-esteemed colleague—is as follows: Take 1 part of dilute hydrochloric acid ($\frac{1}{2}$ teaspoonful), mix with 250 parts of water (1 pint), and add thereto 500 parts of raw milk (1 quart). Shake and bring to a boil. That gives you a palatable mixture, which coagulates milk in the stomach in

fine flakes and is very digestible, and is invaluable in many cases of dyspepsia both of the young and the old invalid. But as a routine food of the healthy infant I cannot recommend it.

A very famous man, Emil von Behring, has not added to his renown by proposing to mix cow's milk with formalin to make it the universal infant milk. He was moved to give that advice by his opinion that all the tuberculosis of advanced years was really the result of tuberculous milk given to the babies. The theory is incorrect, and the mixing of milk with a rank poison is an abomination.

Many of the teachings of modern pediatrics have come whence you would not expect them. Clinicians of high repute and village practitioners knew perfectly well, even before Van Swieten, that every newly-born bears small quantities of starch with impunity, aye, with advantage; that large quantities of it however, or exclusive flour feeding, are injurious on account of its insufficient nutritive material or its fermentation, or both. Indeed, Frerichs taught us so 60 years ago (Wagner Handwörterbuch, vol. iii, p. 803). The only result of dyspepsia which does *not* follow the ingestion of carbo-hydrates is acetone and oxybutyric acid. They are formed by the decomposition of fat in the over or underfed organism, not by flours. It is important to appreciate that fact. All of this is quite well understood by the practitioner, but it appears not so by a large number of physiological chemists who construe the physiology of digestion in the test tubes of the laboratory. Even clinicians have been very slow in accommodating themselves to the lessons of their own experience. Fifty years ago I knew no physiological chemistry in spite of Lehmann; it was my experience that taught me the digestibility of small quantities of cereals. I was pushed aside until thirty-five years ago Schiffer, Korowin, and Zweifel* established beyond doubt, with the aid of simple experimentation, the diastatic function of the salivary glands even in the newly-born. Was this teaching accepted and utilized in the practice of medicine? Oh, no! it was much simpler to take no notice of it. Then, some twenty-five years later, a great periatrist† came to the con-

clusion that the gut of the baby when diseased did better with flour than without it. Flour of rice and oats was extolled for curative purposes but not yet for nutrition. Only gradually cereal decoctions were added to cow's milk in place of water, and lo and behold we are at present in a new epoch of teaching where every tyro in pediatry discovers all by and through and for himself the new gospel of the cereals.

Starch shares some of the properties of all carbohydrates. As early as 1881 Voit (*Handbuch d. Physiologie*, by Hermann, Vol. vi., i, 139), proved that during feeding with carbohydrates the consumption of albuminoids is diminished and becomes in part unnecessary. Increase of muscle goes, to a certain extent, hand in hand with the *diminution* in the food of albumin and with the *increase* of carbohydrates. That agrees perfectly with the experience Gregor had lately (*Arch. f. Kinderh.*, 1900) when he found that his infants when nourished on milk containing sufficient quantities of starch were more active and less rachitical than the average. My own observations, extending over fifty years, have been made on tens of thousands of infants in whom *not exactly large* amounts of starch but cereals containing a *small percentage* of it, were proven to add health and strength in preference to anything else when combined with milk, and with sugar and table salt in the average cases, and in cases of incipient rachitis with animal food. In place of simple cereal decoctions Arthur Keller proposed malt soup as infant food. But even he admits that dextrinized flour, that is malt, is not the best or only carbohydrate to be employed. Though using it in preference he admits that safety lies mainly in the admixture of wheat-flour to his malt-soup; the latter, when not so mixed, gives rise to diarrhea. He states distinctly that the beneficent effect in doubtful cases must be due to the starch of the wheat inasmuch as all the other constituents of the wheat are contained in the malt also. Thus he, too, attributes the principal effect to the starch.

This leads us to the consideration of starch from another point of view. Not only does it dispense with the feeding of albumin, the excess of which leads so easily to intestinal putrefaction, and permits the diminution of the quantity of albuminoids in the feeding of bottle babies; not only is it (together with other carbohydrates) the principal source of muscular force in general and of the heart in particular, mainly in acute diseases (and probably better than alcohol), but it acts as a direct intestinal antiseptic.

* Schiffer (Ub. d. saccharificirende Eigenschaften des Kindl. Speichels, *Dubois u. Reichert's Arch.* iv., 1872, p. 469, and *Berl. Klin. Woch.*, 1872, No. 29) proved the transformation of starch into sugar within from five to ten minutes in the mouth of babies, of whom one was two hours, one sixteen days, and one two months old. Zweifel (Unters. üb. d. Verdauungsapparat de Neugeborenen, Berlin, 1874) demonstrated the diastatic effect of the parotid of an infant of seven days within four minutes; even in the case of one that died on the eighteenth day of its life of gastro-enteritis there was some little diastatic action in the parotid infusion. Korowin, in his last paper on the subject (*Arch. Kinderheilk.* 1875, p. 381), says verbally: "There is a distinct diastatic influence of the oral secretion from the first minute. It increases with every month. Infusions of the parotid prepared at different periods after death will transform starch. Infusions of the pancreas of infants that died in the first three weeks had no diastatic action; it begins with the fourth week but remains feeble to the end of the first year."

†Heubner (*Berl. Klin. Woch.*, 1895, No. 10) was converted to believe in the good there is in flour feeding by the observation that infants sick with gastro-intestinal disorders bear and require flour, and that nurslings before the fourth month dextrinize and absorb it. He prefers simple flours, mainly oats and rice, to any compound. To him and to Carstens (*Verh. Ges. Kind., Lübeck*, 1895) a good deal of change in the public medical opinion

in regard to the estimation in which flours are held is due. For, indeed, my labors of 1876 and long before (*Infant Diet*, 1872 and 1875, rules and regulations of the New York Board of Health, and papers on the same subject covering the last forty years) have been forgotten and seldom enjoy the honor of being quoted in our fast-living time. At present it begins to be considered fair to accept that milk becomes more digestible by the addition of flour decoctions, and that starch is not only changed in the upper but also in the lower intestine, even of moribund infants, an occurrence which need not even depend on the presence of microbes (Miura, *Zeitsch. f. Biol.*, N. F., xiv., p. 266). I suggest that whatever is possible in the sick and moribund, is not difficult in the well.

I need not prove that, as it is a generally accepted fact. Old men in the profession—if there be any old men in the profession, which I sometimes deny—may remember that I always recommended cereals, mainly oatmeal or barley, the raw and not the dextrinized material, in such a proportion that about a tablespoonful of the powder was boiled with a little table salt in a quart of water, one-half hour, more or less, down to a pint, this decoction to be used in certain proportions with the sugared and salted cow's milk, the whole to be boiled or sterilized before using. I selected these particular cereals for the reason that they included plenty of iron and other salts, and vegetable albumin, and as *little* starch as any cereals or farinacea are known to contain.

My learned and ingenious friend, Woods Hutchinson, has lately (*McClure's*, April, 1906) come out with a diatribe against cereals, on which he admits the Scotch have been living these many hundred years. He asserts that the most convincing proof the Scotch have given of their greatness has been to live on oatmeal at all. The secret of their wonderful success, both mental and physical, lies in the fact, he says, that any nation trained to survive a diet of oatmeal and the shorter catechism could survive anything and flourish anywhere. According to the same writer "oatmeal has some value as a food, but little to compare with its capacity as a stirrer-up of acid fermentations and intestinal putrefaction." All this, and many other things which I cannot mention here, appeal to you and me as more stirringly aggressive than empirically—and even chemically—correct, not to mention the irrationality of attributing to sensible and mild decoctions of cereals, used for the dilution of cow's milk for the feeding of infants, the horrors of thick pastry messes. As an offset I beg to quote another old friend, much older than Woods Hutchinson, even older than myself. His name is Homer. Him I play off against the other. In the *Odyssey*, xx, 108, he mentions the fabrication of flour of wheat and barley and calls it "the marrow of men." I add: of those who will be the future men and women. Permit one more Homeric quotation—you have become accustomed to quotations by that greater, and philosophical and poetic physician William Osler. Plato (*Dial. III*), reports: "the hero Eurypylos, after having been wounded, drinks a posset of Pramnian wine well besprinkled with barley-meal and grated cheese."

After all, this reiteration of the same mistakes reminds me of what I have heard of their resemblance to nails: The more you hammer them, the faster they stick.

In the most recent works (whose pages are scarcely dry) you find again the warning not to use thin or thick decoctions of barley, rice, oats, or their flours, in the feeding of nurslings under four months of age, because they digest starch more or less badly. Let us say "less badly."

The digestibility of cereals by the infant,

though the pancreas may not have obtained its complete function, is enhanced by a peculiar condition of the gut of the baby. It is relatively longer and has more absorbent villi of the mucous membrane—indeed, the lymph vessels all over the infant system are more numerous and are larger.

Barley and oatmeal have an almost equal chemical composition; the latter has a greater tendency to loosen the bowels. That is why, when there is a tendency to diarrhea, the barley is preferable; when constipation, oatmeal. The whole barley-corn, ground for the purpose, should be used for small children, because the proteid is contained near the husk; moreover, on account of its percentage of iron.

Artificial feeding requires the addition of table salt (sodium chloride). According to Voit's old teaching, it improves metabolism by increasing the secretion of the kidneys. Of greater importance, however, is the fact that the chloride of sodium of the food is the source of the formation of hydrochloric acid in the gastric juice. It surely originates in the sodium chloride of the blood, for even when no food has been taken there is gastric juice in the stomach; the locality of its formation, however, is not in the blood itself, nor even in the glandular cells, but it is caused, according to Köppe, in the wall of the stomach through osmosis between the gastric contents and the blood.

In vegetables, cereals included, potassium predominates. Potassium is found in the blood as a phosphate, sodium as a chloride. They interchange so as to form sodium phosphate and potassium chloride. Both are quietly eliminated through the kidneys. The potassium being present in overwhelming quantities, too much sodium chloride is eliminated, and it must be replaced by feeding it. The Japanese require very little salt, because they eat rice which contains 40 times less potassium than, for instance, potatoes. Even the ancients, although without chemistry, knew the requirements of food. In their sacrifices to the gods the Greeks and Romans added salt to vegetables, but none to animals.

The nutritive value of a food is generally estimated by its calories. A calory is called the amount of heat required to add 1° C. to a quart of water. A gram of fat furnishes 9.2 calories; the carbohydrates, that is starch and sugar, 4; the albuminates, 4.2; woman's milk, 6.5, and cow's milk, 6.72. During the first four months a growing baby requires food enough to furnish daily 80 calories for every 2 pounds—a kilogram—of body weight; a 12 or 15-pound baby from 500 to 700 calories, and, besides, from 5 to 7 ounces (150 to 200 grammes) of fluid—that is, from 1 to 1½ quarts of fluid. This is full feeding, in most cases over-feeding.

Calories have played an important part in the pediatric literature of the last few years. I wonder how long that will last! Seventy years ago Justus von Liebig taught the differentia-

tion between the food that produced warmth—calor—and that which added to the substance of the body. At that time it was the carbohydrates alone that were credited with being calorific and fat furnishers, and the proteids supplied the rest. If calories at the present time rule our terminology, they are—if nutrition in general is to be denominated by that word—a misnomer at least.

In regard to the quantity of food, we begin to appreciate the fact that our babies, like ourselves, eat too much. We need not go the whole length of Chittenden's practice, but still be impressed with the truth of his teaching—that the minimum demand of food should be ascertained, particularly for those babies who are limited to the less digestible cow's casein. Besides, the intervals between the meals should not be too short—that of two hours is too short for even the smallest baby. Twenty-five years ago I emptied a great many infant stomachs and never found one quite empty two hours after a meal, even when it consisted of mother's milk. Cow's milk should have at least half an hour more, even in the first two months. Another question is raised in regard to the strength—the gradual increase of solids in an infant food. It has been customary to teach that the solids should increase from time to time. Amongst those erudite and positive teachers who are of an opposite opinion is Arthur V. Meigs. Still he admits that after all the final judgment rests with clinicians—that means the practical physicians of a community and the large infant institutions. My custom has been to increase gradually the strength of the milk mixture employed in infant feeding. The newly-born is given 20 or 25 per cent. of milk in a thin barley or oatmeal water; the infant of 6 months, equal parts. In the interval a gradual increase of milk takes place. Whenever there is an intestinal disorder, vomiting, or passing of curd, the milk is temporarily diminished. Observation and common sense are both more instructive and beneficial than mathematical rules. The baby is no crystal, but an organism.

If raw milk could always be had unadulterated, fresh and untainted, and as often as it was wanted, it would require no boiling. Heating might even be contraindicated, unless great care be taken, for high temperatures, beyond destroying dangerous microbes, may injure those required for normal digestion.

But moderate boiling or sterilization is by no means always a positive protection. Aërobic bacteria, the hay or potato bacilli, with their resistant spores, require sterilization of many hours before they are destroyed.

Within a few years streptococci have become of interest in their connection with milk. Beck (D. Viertelj. f. ff. Ges. 1900), found them in 62 per cent. of all the cow's milk examined by him; as they were pathogenous for rabbits and guinea-pigs, he presumed them to be the cause of infant

enteritis. Petruschky (1904), Escherich, and Brüning share that opinion. Finally Bergey, in a paper on the source and nature of bacteria in milk (Commonwealth of Pennsylvania, Department of Agriculture, Bulletin No. 125, 1904), studied the parallelism of the percentage of leucocytes and of streptococci contained in milk. His findings have been confirmed by Trommsdorff and Rullmann of Munich (*M. Med. Woch.* March 20, 1906). They are as follows: Wherever there are in a milk many leucocytes, it is also replete with streptococci. Streptococci mean pus. If the leucocytes of a milk are present in 1 p. m. it is suspicious of mastitis. If there be 2 p. m. there can be no doubt in regard to the presence of an inflammation of the udder. Bergey proves that it is not caused by the process of lactation but by extraneous infection, mostly by the hands of the milkmen. Two conclusions are inevitable and correspond with what you have been told weeks ago; first, that the greatest cleanliness in the stables and about the dairies is indispensable; second, that milk in its raw state, unboiled, is frequently a dangerous article.

Now sterilization prolonged until it kills streptococci and hay bacilli first kills the milk as a nutriment. There is no more frequent cause of infantile scurvy than this prolonged sterilization of which mothers and nurses are so proud.

That is why the lowest temperature which will destroy the usual bacteria should be preferred. The lower the temperature the more easily will the integrity and the taste of the milk be preserved. Theobald Smith (*Jour. Exp. Med.*, 1899), found that in distilled water, in physiological solution of sodium chlorid, in beef broth, or in milk, when heated to 60° C (140°F.) tubercle bacilli die mostly in from 5 to 10—all of them in from 15 to 20—minutes. The membrane, however, which is formed on milk at 60° keeps tubercle bacilli alive even after 60 minutes; that is why its formation should be prevented (or it should be removed). On the other hand, good observers found cholera, typhoid, and tubercle bacilli in sterilized milk after one or more months. Particularly is that so when they are surrounded by fat. Unsterilized butter would preserve them longer than unsterilized milk. Thus butter and rich milk would retain their infecting qualities longer than average milk with a moderate percentage of fat. Beware of fat milk (as also of over-fat children—unless they are your own).

But after all what you have been advised in former lectures remains true in the large majority of cases; pasteurization at 158°F., short boiling or short sterilization will mostly protect against the microbes of tuberculosis, diphtheria, cholera, and typhoid fever. It is worth while, however, to remember that you can never be too positive as to the character of the milk. Even breast milk and cow's milk may be tainted with dangerous microbes before they leave the maternal body. They may remain nameless here, for medical men cannot be frightened by jaw-breaking terms, and

you must not. But there is one thing that should be remembered. There is no poisonous microbe equally virulent under all circumstances. For instance, your throat and nose may be covered with diphtheria or tubercle bacilli, or the pneumonia microbe, but as long as the mucous membrane is healthy you have nothing to fear. Only when it becomes sore and sensitive and denuded of its epithelial surface, it admits the danger. Your babies are in the same condition in regard to the dangers possibly lurking in milk. It is not the poisonous milk alone that renders them sick. Microbes may pass a healthy stomach and a healthy intestine without harm—Pettenkofer swallowed cholera microbes to disprove the microbe theory, and survived—but when there is a previous catarrh after a sudden change of temperature the virulence of the bacteria will become evident. Babies taken from a hot railroad car to the deck of a Lake steamer, from a warm bed to a draughty room—doors and windows open at the same time—or left exposed in wet diapers, will develop a catarrh which will prepare the intestinal or respiratory tract for the admission of the microbic life destroyers. There is no more efficacious way in which to get rid of one's healthy baby than by reckless, unceasing summer traveling. There is such a thing as catching cold as a cause of disease. It is enthusiasts or fanatics that believe in nothing but bacteria.

The other thing to be remembered is what you have been taught this winter, and what you have promoted in your efforts to obtain pure milk. You know it all. Proper food and stabling, and clean skins of cows and men, clean pails, and bottles, and nipples—there is the main part of the salvation of the bottle fed baby. "Ceteram censeo," in the words of old Cato, "*The own mother belongs to the baby and the baby to the own mother.*"

It is true that the rich and those in comfortable circumstances have it in their power to escape the disease, if they have the wit to do so. But how about the poor,—they who, like dumb cattle are driven by their necessities into the very face of death? Consumption claims most of its victims from that class, and they have neither the power nor the knowledge to escape its clutches. Does not the Government owe them a duty? If consumption is contagious, it can be exterminated, or at least, its ravages much curtailed; it consequently behooves every Government to take up some other position in the matter than one of passive neutrality.—*Flick.*

Whilst meagre phthisis gives a silent blow:
Her strokes are sure, but her advances slow.
No loud alarms nor fierce assaults are shown.
She starves the fortress first, then takes the town.

—*Garth.*

ECHINOCOCCUS CYST OF THE LIVER

With a Report of Ten Cases Personally Observed, and a Differential Consideration of Tumors of the Liver.

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(Concluded.)

Because of the long period during which the cases drained are kept from active work, it is desirable in those cases which admit of the procedure being carried out with a fair chance of success that a partial hepatectomy be performed in order to totally eradicate the disease. (Cases III, IV and VI.) Cysts which are not very large, or in which a comparatively small amount of liver tissue is involved, may be subjected to this procedure. Great care must be exercised in selecting such cases. (Case VI.)

It is interesting in this connection to note the history of partial hepatectomy. The earliest records of the removal of more or less extensive portions of the liver relate to the operation of Frick, quoted by Nélaton, for the removal of traumatic hernia of that organ. This was followed by MacPherson's case in 1846. Massié, in 1852, removed a large portion of the right lobe of the liver for a wound of the organ. Bruns' case occurred in a soldier during the Franco-German war. In 1875 Roustan had collected 40 similar cases. All the cases prior to Bruns', with the possible exception of that of Massié, however, were extraperitoneal operations. Following experimental operations upon animals, Lins, in 1886, extirpated a solid tumor of the liver, and one year later Langenbach operated in the same manner for a floating lobe of the liver. Since that time more than 100 operations of this kind have been performed.

Operative Technique of Excision.—Palleroni (*Gazz. degli Osped.*, August 7, 1898) advocated the employment of a provisional ligature passed through the entire thickness of the liver in order to maintain that organ in the abdominal wound while the hepatectomy was in progress. Pearson, in 1896, claimed to have repeatedly used silk sutures to fix the liver both for purposes of resection and to control hemorrhage. Terrillon, of Paris, used an elastic ligature around a portion of liver affected by a number of small hydatid cysts. The portion of the liver thus strangulated was fastened into the abdominal wound. The elastic pressure caused gangrene and the diseased portion, the size of two fists, separated as a slough. Bruns successfully removed a multilocular cyst. Tansani dissected a cyst from the liver substance and sutured the resulting gap. This has also been done by Bergmann, Küster, and Eiselsberg. In 1893, C. Mansell-Moulin and Billroth each performed hepa-

tectomy for this disease. In 1890, Rozzi, of Italy, removed two inches of liver substance with a cyst attached. In 1889, Loretta, of Bologna, excised the affected portion of liver, using sutures to control the hemorrhage. Pozzi in the same year reported a successful case of excision of a pedunculated cyst in which he used sutures. Suture of the liver was advocated by Roux before the French Academy of Medicine in 1845. Potemski, in 1886, used sutures in experimental resection of the liver in animals. In 1888, Landau reported three cases.

It is our own practice to excise the necessary portions of liver with the thermocautery. This is a slow but eminently safe procedure so far as hemorrhage is concerned and, moreover, the heat seals quite effectually the biliary channels and so tends to avoid liver fistulæ.

The difficulties in arresting hemorrhage from wounds of the liver first suggested the use of the actual cautery. Broca's experience with it does not seem to have been encouraging, although Zeidler obtained good results with it in 1894. More recently cauterization by means of heated air has been suggested by H. Schneider (1898). Snéguireff, in experimenting upon animals, succeeded in arresting the hemorrhage incident to the removal of large portions of the liver by means of superheated steam. Fiore and Giancola, in 1898, repeated these experiments with some modifications, and established the feasibility of arresting hemorrhage in hepatic resection by means of steam under pressure. Further details of technic are sufficiently explained in the appended cases.

CASE I. R. B. (B. H., No. 249), male, thirty-three years of age, Italian, laborer, was seen July 8, 1896. There was no history obtainable beyond the presence for four months of the tumor and pain therefrom. The tumor was connected with the right lobe of the liver, was firmly elastic in feel and rounded in outline. Diagnosis, echinococcus cyst of the liver.

Operation, July 16, 1896 (Operator, George Ryerson Fowler).—A four-inch incision was made over the most prominent portion of the cyst. The cyst was found to be embedded in the right lobe of the liver. The liver was sutured into the incision for a space of two inches and the remainder of the incision closed. The liver was then incised with the thermocautery and the cyst opened. About a quart of clear fluid was removed and a large quantity of gelatinous, translucent cyst lining with several complete minute cysts and some bile-stained detritus. A glass drainage tube was left in the opening. The cyst cavity was subsequently irrigated at intervals with a weak iodine solution. On the forty-first day the cyst cavity had contracted to a small sinus and the patient was discharged.

CASE II. F. M. (B. H., No. 2,771), male, twenty-seven years of age, Italian, shoemaker, was seen August 2, 1899, in consultation with Dr. Accetta. For five months he had noticed a swelling in the region of the gall-bladder. This had slowly increased in size. The mass was rounded in outline, attached to the liver, was tense and elastic to the touch. It was not tender. There was pain referred to the back on the right side. Diagnosis, echinococcus cyst of the liver.

Operation, August 22, 1899 (Operator, George Ryerson Fowler).—A five-inch right rectus incision was made over the tumor. An aspirator was introduced into the cyst and a portion of the fluid contents was

withdrawn in order to relieve tension. The cyst wall was sutured to the abdominal incision for space of three inches. Remainder of incision closed. Three days later, adhesions having shut off the general peritoneal cavity, the cyst was opened and drained. Numerous daughter cysts were removed. The cyst gradually shrank and on the thirty-first day the resulting sinus had practically healed and the patient was discharged.

CASE III. A. F. (B. H., No. 131), female, twenty-eight years of age, Italian, was seen in consultation with Drs. Accetta, Desanti and Vernaglia, January 24, 1900. The patient had been three years in this country. Since childhood she had suffered from frequent micturition, with at times the passage of large quantities of urine. One year before I saw her, she had had a miscarriage at three months, from which she suffered no after-effects. With this exception she had enjoyed perfect health up to within three months of the time I saw her. At that time she had noticed a gradually increasing dragging pain in the left loin. Soon after she discovered a tumor in the region of the umbilicus. This was tender and movable. It did not increase in size, but the dragging pains, which were not constant at first, became almost continuous and much more severe. There was nothing in the history to guide in establishing a diagnosis. The physical signs alone were to be depended upon. Bimanual examination disclosed that the tumor had absolutely no connection with the uterus or appendages. It was freely movable.

Percussion revealed that the liver was of the normal size. The colon could be traced throughout its entire course, the only peculiarity being that the transverse portions seemed a little higher than normal. There was no abnormal dullness over any part of the abdomen. The spleen could not be made out. The right kidney was larger than normal and normally situated. The left kidney could not be palpated in any position of the body. The tumor was of the size of two fists. Over it lay the transverse colon. It was smooth in its lower part, elastic to the feel, in its upper part solid. It felt and acted like a movable cystic kidney. Malignant disease was ruled out, as there was no loss of weight or strength, as one would expect with a malignant tumor of such dimensions. The tumor could not be traced to the liver in the neighborhood of the gall bladder; in addition, the tumor was not pear-shaped, nor had there been any symptoms of jaundice or gall-bladder disease. The tumor did not perceptibly move with respiration. Moreover, the colon overlay the tumor. It was noted, however, that the colon moved with the tumor. A provisional diagnosis of movable cystic kidney was made. The diagnosis was founded on the following facts: The tumor did not move with respiration; it was of the size and shape of a cystic kidney; the colon was in front of it; it was freely movable, and the left kidney could not be palpated in any position of the body. Nevertheless, I was doubtful of my diagnosis, and advised laparotomy, so that, in case the tumor should not be a kidney, the operation need not be prolonged. I might say that, previous to my examination, another consultant had diagnosed the case as one of cystoma of the ovary.

Operation, January 27, 1900 (Operator, Russell S. Fowler).—A four-inch median incision above the umbilicus was carried through the abdominal wall and the peritoneal cavity opened. The colon presented in the incision. This was pushed downward, exposing the tumor and also the left lobe of the liver. The case was plainly one of echinococcus cyst of the under surface of the left lobe of the liver, which by its weight had dragged the left lobe downward, causing the condition known as partial floating kidney. The lower rounded portion of the cyst had become adherent to the anterior layer of the lesser omentum, and had adhered to this and to the colon in such a manner as to cause the colon to overlie it. The cyst was separated from the colon and anterior layer of the lesser omentum, and was then easily delivered through the abdominal wound, which was enlarged for the purpose. The extent to which the cyst was attached to the liver was approximately six

inches by two inches. The case seemed a suitable one for hepatectomy. The liver substance was incised with the thermocautery, and the cyst removed entire without rupturing. There was but one point on the liver surface, which bled rather profusely. That was in the neighborhood of the transverse fissure, probably one of the larger branches of the portal vein. A circumsture sufficed to arrest the hemorrhage at this point. The liver was replaced and a strip of iodoform gauze packed against the cauterized surface. It was noted that the liver was hyperemic and friable. The round ligament was shortened and stitched to the abdominal wall with formic catgut, thus fixing the liver in its proper position. Gauze was packed between the liver and the diaphragm to produce irritation and favor adhesions to aid in support of the organ. The wound was closed, except at the upper angle, at which the ends of the gauze strips emerged. Half the packing was removed on the second day, the remainder one day later. The first few dressings were bile-stained, but this discharge of bile soon ceased. Final recovery was uneventful. Six months after the operation the patient was in perfect health.

CASE IV. J. B. (B. H., No. 589), female, twenty-five years of age, Italian, was seen April 9, 1900, in consultation with Dr. Accetta. The tumor had been in existence for three years. There was pain referred to the left side and back. Examination disclosed a rounded, tensely elastic tumor connected with the left lobe of the liver. There was pain on pressure over the tumor. Diagnosis, echinococcus cyst of the liver.

Operation, April 10, 1900 (Operator, George Ryerson Fowler).—A six-inch incision was made in the median line beginning at the ensiform. A cyst the size of a grape-fruit was found attached to the left lobe of the liver. The attachment to the liver, a space of about four inches, was gradually cut through with the thermocautery and the cyst removed entire. The cyst ruptured when almost removed, but as the peritoneal cavity was well protected by laparotomy pads no soiling occurred. The cauterized liver surface was packed with iodoform gauze and, except for the small space where the drain emerged, the abdominal wound was closed. The wound healed kindly and the patient was discharged, cured, on the twenty-second day.

CASE V. M. B. (B. H., No. 497), female, thirty-two years of age, Italian, was seen March 20, 1905, in consultation with Dr. Accetta. She had suffered continuous pain in the right upper abdomen for the past six years. For the last two months the pain had been severe and she had noticed a swelling which rapidly increased in size. There was present a large cyst continuous with the right lobe of the liver and reaching to the pelvis. The mass was not tensely elastic but fluctuated somewhat. Diagnosis, echinococcus cyst of the liver.

Operation, April 8, 1905 (Operator, George Ryerson Fowler).—A six-inch median incision, beginning at the ensiform. The peritoneal cavity was guarded with laparotomy pads and the cyst aspirated. Eight quarts of bile-stained fluid were withdrawn. The cyst lining was removed, with a large quantity of broken-down daughter cysts, evidently destroyed by the entrance of the bile from the liver. The loose fibrous cyst was now drawn into the wound and for the most part amputated. The small remainder of the fibrous wall was sutured into the upper portion of the wound. The rest of the abdominal wall was closed. The wound healed slowly, but entire healing was effected on the fifty-sixth day, and the patient was discharged, cured. The long time in healing was due to sloughing of the part of the fibrous cyst wall sutured in the wound.

As a matter of record the result of the blood examination in the case is reported: Hemoglobin, 65 per cent.; W. B. C., 6,800; polymorph., 49 per cent.; lymphocytes, 49 per cent.; eosinophiles, 1 per cent.; basophiles, 1 per cent.

CASE VI. P. A. (G. H., No. 6,617), male, twenty-four years of age, Italian, was seen in consultation with Dr. Giovinco, March 10, 1905. The man had suffered for three months with attacks of severe pain over the

right lobe of the liver. These attacks would continue for two or three hours and would then gradually subside. Examination showed a tender tumor the size of a large orange attached to the right lobe of the liver in the neighborhood of the gall-bladder. The tumor was differentiated from a gall-bladder by the shape, absence of fever, and the fact that the enlargement was greatest toward the ensiform and not toward the umbilicus. It was not movable. The overlying portion of the right rectus muscle was rigid. The mass felt firmly elastic, was palpated with difficulty, was rounded in outline and dull on percussion. Diagnosis, echinococcus cyst of the liver.

Operation, March 20, 1905 (Operator, Russell S. Fowler).—A five-inch right rectus incision was made over the most prominent portion of the cyst. The cyst was found adherent to the gall-bladder, stomach and duodenum. These adhesions were freed without difficulty and the cyst peeled out of the liver substance. There was slight bleeding from the raw liver surface. This surface was cauterized with the thermocautery and a strip of iodoform gauze packed against it. The abdominal incision was closed except for the emergence of the drain. The duration of the operation was forty minutes and the patient did well under the anesthetic. After recovering from the anesthetic profound shock developed and in spite of all effort the patient died at the end of thirty-six hours. There was no post-operation hemorrhage. Any autopsy further than an examination of the wound was refused.

CASE VII. L. F. (G. H., No. 7,496), female, twenty-seven years of age, Italian, was seen in consultation with Dr. Giovinco, August 7, 1905. The patient had suffered from pain over the liver for the past three months. Examination showed a movable liver which could be made to descend to the umbilicus. The right lobe of the liver was markedly enlarged. There was a rounded tumor of the anterior half of the dome of the right lobe. Diagnosis, echinococcus cyst of the liver with movable liver.

Operation, August 11, 1905 (Operator, Russell S. Fowler).—A three-inch median incision was made, part of the incision being above the ensiform. The liver was palpated and showed a deep-seated cyst of the right lobe. The round ligament of the liver was sectioned, the liver repositioned against the diaphragm and the round ligament shortened and sewn into the abdominal wound, which was closed. A trap-door was then made by removing a portion of the eighth and ninth ribs on the right side over the site of the cyst and the liver sutured into the wound. The wound was then packed with iodoform gauze, as the patient was not doing well. The patient reacted poorly and it was not until September 6, 1905, that it was deemed expedient to complete the operation. On this date the liver was punctured through the lateral wound and a quart or more of clear fluid withdrawn. The liver substance was then incised and a large number, some seventy, daughter cysts were removed. These varied in size from a marble to a large orange, the larger ones requiring rupture before removal. The cavity was curetted and packed with plain gauze. Two days later a rubber drainage tube was inserted and the cavity washed out with mild iodine solution. There was at no time a large amount of drainage. The cavity gradually contracted under repeated mild iodine irrigations and on the thirtieth day the case was discharged, cured. In January, 1906, the woman was in good health and the liver was maintained in the normal position.

CASE VIII. M. C. (G. H., No. 7,986), female, twenty years of age, Italian, was seen in consultation with Dr. Giovinco, November 6, 1905. There was a syphilitic history. The woman had miscarried three times, had a double interstitial keratitis, and numerous scars over the chest and shoulders. There was a cyst, the size of a child's head, attached to the right lobe of the liver. This cyst was elastic and somewhat movable. Pain in the back and side had been complained of for one year. Diagnosis, echinococcus cyst of the liver. Gumma was

ruled out by the rounded shape of the cyst and the elastic feel.

Operation, November 10, 1905 (Operator, Russell S. Fowler).—A four-inch right rectus incision was made over the most prominent portion of the cyst. The cyst was not adherent to the surrounding structures but on account of its relation to the portal fissure it was not deemed best to remove it. The cyst wall was sutured into the wound and the remainder of the wound was closed. Tension was relieved by the aspirator. About a quart of clear fluid was withdrawn. The cyst was then opened with the scissors and found to be of the unilocular type. A rubber drainage tube was inserted. Subsequently the cyst was irrigated daily with mild iodine solution. The cyst rapidly shrank under this treatment and on the twenty-seventh day the patient was discharged with a small sinus. This rapidly closed and she is now well.

CASE IX. C. La M. (G. H., No. 8,318), female, fifty-three years of age, Italian, was seen in consultation with Dr. Giovinco, January 11, 1906. The patient was always well until nine months ago when her present trouble began. There was a feeling of distress in the epigastrium. Her physician at this time made out some enlargement of the liver. Five months later the enlargement connected with the liver became prominent enough for the patient to notice it. At this time jaundice began, which later increased. The patient became weak and the tumor increased rapidly in size. December 15, 1905, she was obliged to stop all work. Operation was advised at this time but was not consented to by the patient. Examination showed a cyst the size of the adult head connected with the right lobe of the liver. The cyst was firmly elastic. The patient was jaundiced. The stools normal in color. There was great emaciation. This was the only case in which I was able to get a history of dogs sharing the room of the patient for a greater part of the day. This woman kept four dogs. The cyst was quite fixed and appeared to be adherent to the stomach, colon and duodenum. Diagnosis, echinococcus cyst of the liver.

Operation, January 12, 1906 (Operator, Russell S. Fowler).—A four-inch rectus incision was made over the most prominent portion of the tumor and the cyst was sewn into the wound for a space of three inches. The remainder of the abdominal incision was closed. The cyst was aspirated sufficiently to relieve the tension and then opened with scissors. Between seventy and eighty daughter cysts were removed, varying in size from a marble to a small orange, the larger ones requiring rupture before they could be removed. The cyst lining was removed in large pieces, the cyst irrigated thoroughly with saline and explored with the finger. The cyst was then inspected, sponged dry and a drainage tube inserted. There was daily a large discharge of bile from the drainage tube, though the jaundice remained the same and the stools continued normal in color. Now comes, to me, the most interesting feature of this case. On the tenth day following the operation a small daughter cyst washed out with the mild iodine solution used to irrigate the cavity. Twenty-two days later a daughter cyst occluded the tube. Four days later the tube was again occluded by a daughter cyst and two days later five daughter cysts were washed out. From that time until March 3, 1906, some forty of these daughter cysts were removed, some entire and some ruptured. The discharge of bile gradually lessened and on March 8, 1906, the entire discharge from the small remaining sinus was but two drams for the twenty-four hours. The woman's general condition improved considerably but the jaundice still persisted. I am so sure of having cleaned the cyst thoroughly that it would appear to me that on the tenth day there occurred a rupture of a deeper seated cyst into the one which I had opened and drained.

CASE X. I. P. (G. H., No. 8,753), male, thirty-four years of age, was seen in consultation with Dr. Giovinco, April 2, 1906. The patient had complained of stomach distress ever since eating a large meal of hard-boiled eggs four weeks before. Previous to this he had

always been in good health. When the stomach distress was first noted there was not noticed any tumor, but shortly thereafter the right lower ribs were found to be more prominent than the left and this appearance of swelling rapidly increased. A few hours before my visit an exploring syringe had been introduced and about a pint of clear, watery fluid withdrawn. My examination disclosed a cyst of the right lobe of the liver.

Operation, April 3, 1906 (Operator, Russell S. Fowler).—At the time of operation the patient was already suffering from spreading peritonitis due to the escape of cyst contents through the exploratory puncture. The cyst occupied the dome of the right lobe. Portions of three ribs were resected, the peritoneal cavity dried of two pints of fluid, cavity packed off, the liver secured in the wound with two silk sutures, the liver surface cut through and the cyst cavity entered with the thermocautery. Four pints of bile-stained fluid were evacuated from the cyst and the lining membrane removed in one piece. This was white, three-sixteenths of an inch thick and quite friable. There were no daughter cysts. In the course of the operation the pleural cavity was accidentally opened by a retractor. The opening was immediately sutured. The liver wound was sutured to the parietal peritoneum. A rubber tube was placed in the cyst cavity. The remainder of the wound was closed with crossed silk-worm gut sutures. Wound healing progressed uneventfully.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By JAMES J. WALSH, M.D., Ph.D.,
NEW YORK.

(Continued.)

PART II.

CHAPTER II.

FURTHER LEGAL REGULATION.

As might very well have been expected the law of 1806 did not prove sufficient for the legal regulation of the practice of medicine. The attempt had been very bravely made to settle a difficult problem but the details had not all been thought of and in practice the act proved defective. Accordingly the next year the Legislature was appealed to for a further enactment, and this seems to have been obtained without much difficulty. It was passed a year later almost to the day, April 3, 1807. There were a number of interesting features in this new law. It created four classes of members from each district, one class of which was to go out of office annually so as to secure a proper succession and rotation in the representatives from the County Medical Societies to the State Society, and thus prevent any monopoly of medical influence. This constituted the most important part of the law, and introduced a feature that was to remain prominent in the Society for many years of its history.

While the previous law of 1806 had determined how the license to practice medicine should be obtained, it had not made any provision to punish those who practiced medicine without a license except that they were debarred from collecting their debts by process of law. It was realized even in the course of a single year that this penalty would not be sufficient and accord-

ingly a penal clause was introduced into this new law. To the modern mind the penalty enacted does not seem to have been very stringent. A man who practiced medicine without a license was to be fined five dollars for every month that he had practiced, one-half of which was to go to the informer. Even with the triple value that money bore at the time, this will scarcely appear a punishment likely to prove deterrent, and yet it seems to have been reasonably successful in the accomplishment of the purpose for which it was intended.

Toward the end of the act, however, there are some clauses introduced, the full significance of which seem not to have been realized perhaps by the members of the State Society who had the legislation in hand. At least one of these peculiar provisions bears very much the character of what would be called in modern parlance a "rider," introduced into the bill during its progress through the Legislature by some one who did not wish the profession of medicine well and who perhaps held a brief for some other parties. It may seem premature in the history of legislation to consider that such a device was successful. There is plenty of evidence, however, to show that the legislators of the olden times, even a hundred years ago, were not so much better than those of the present day as not to know how to accomplish a latent purpose and introduce unfortunate clauses into legislation that spoiled the effectiveness of expected reform of methods.

One of the obnoxious passages in the bill was that which provided that the penalty to be incurred should not be considered to extend to any apothecary nor to any person administering medicine who does not follow the practice of medicine as a profession. This left it free to the apothecary to prescribe almost at liberty so that many of the unlicensed practitioners found it advisable to open drug stores and do their prescribing over the counter. Some of the traveling quacks succeeded in evading the law under the pretext that they did not practice medicine as a profession because at certain intervals they applied themselves to some other occupation for a while and only set themselves to curing people of their ills when they found themselves in a new neighborhood where the people did not know even the ordinary popular remedies.

The most seriously defective paragraph in the act, however, and one which Dr. James McNaughton, subsequently a President of the State Society, did not hesitate to say practically nullified its effectiveness as a penal measure, was the last one, according to which nothing in the act was to be construed to debar any person from using or applying for the benefit of any sick person any roots or herbs, the growth or produce of the United States. This left the field completely open for the herbalists and indeed gave them a certain amount of State encouragement since this paragraph as much as declared that herbal medicines were harmless and that at least no evil

could be worked by their administration. According to Dr. McNaughton this provision was taken advantage of very generally throughout the State, and there were a great many herb doctors who supposedly prepared their own medicines and who were thought, by at least the ignorant among the population, to possess many secrets that the ordinary practitioner of medicine had never had the opportunity of learning since they came from experience with plants and not from books.

The historical interest of this second law is indeed mainly concentrated in these considerations with regard to its nullifying provisions. We are accustomed to think of legislative sharp practices as mainly a thing of the recent times. With regard to medical laws particularly the general impression undoubtedly is that the Legislature would be either willing or unwilling to grant certain privileges and legal restrictions or else frankly to refuse them. There would be little thought of the possibility of supposedly favorable legislation turning out to have such provisions in it as gave added opportunities for the unlicensed practitioner of medicine to ply his avocation. We have in this legislative enactment, however, a very definite example of the opposite state of affairs, and so the act has a social as well as medical historical interest.

Because of this it has seemed worth while to quote the Act of 1807 in its entirety as a warning example, to legislative committees in the new century, of how carefully innocent looking amendments, supposedly meant to prevent infringements of individual liberty, must be scrutinized before definitely being accepted for enactment.

AN ACT TO AMEND AN ACT, ENTITLED, "AN ACT TO REGULATE THE PRACTICE OF PHYSIC AND SURGERY,"
PASSED APRIL 3, 1807.

I. Be it enacted by the people of the State of New York, represented in the Senate and Assembly, that the members now composing the Medical Society of the State of New York, shall at their next annual meeting, divide the members of said Society from each of the four great districts into four classes, and one class of each of said districts shall go out of office annually; and the said Society shall by lot determine which class shall first go out of office, and so for each and every class; and the class whose seats shall first be vacated in each of the said districts, shall be called the first class, and the class whose seats shall next become vacated, shall be called the second class, and the seats of those which shall next become vacated shall be called the third class, and the seats of the members which shall last become vacated shall be denominated the fourth class; and the members now composing the said Society shall continue and remain members of the same until their seats shall become vacated in the manner above described, and until others shall be chosen in their places.

II. That it shall be the duty of the Secretary of the Medical Society of the State of New York whenever the seats of any of the members shall become vacant by the preceding section of this Act, to give information of the same to the respective County Society, to the end that such County Societies may supply such vacancy at their next meeting.

III. And be it enacted that in case there shall be

an addition to the number of persons composing the Medical Society of the State of New York, that in that case it shall be in the power of the said Society at any of their annual meetings, and as often as they shall judge necessary, to alter and vary the classes to be established at their next annual meeting in such manner as that one-fourth of the members from each of the great districts as near as may be, shall annually go out of office.

IV. And be it further enacted that if the seat of any member of the Medical Society of the State of New York shall be vacated either by death, resignation or removal from the county, it shall be the duty of the Medical Society of such county to fill such vacancy at their next annual meeting after such vacancy shall happen.

V. And be it further enacted that if any person not authorized to practice physic or surgery at the time of the passing of the Act hereby amended, or if any person since the passing of said Act shall have commenced the practice of physic or surgery without being legally authorized, every person who shall so continue to practice unauthorized shall forfeit and pay the sum of five dollars for every month such unauthorized practice is continued, to be recovered with costs of suit before any justice of the peace of the county where such penalty shall be incurred, by any person who shall prosecute for the same, the one moiety of which when recovered, shall be paid to the person prosecuting for same, and the other moiety to the overseers of the poor of the town where the person incurring the penalty shall reside, for the use of the poor of such town; Provided, that the penalty to be incurred by the preceding section of this Act shall not be considered to extend to any apothecary or to any person administering medicine who does not follow the same as a profession, nor shall any prosecution be commenced by virtue of such section unless it shall be within thirty days after the penalty incurred. Nor shall the second prosecution be commenced or recovery be had in less than thirty days from the date of the first recovery; and Provided, Further, that nothing in this Act contained shall be construed to debar any person from using or applying for the benefit of any sick person, any roots or herbs, the growth or produce of the United States.

CHAPTER III.

RELATION OF THE STATE MEDICAL SOCIETY TO THE COUNTY MEDICAL SOCIETIES.

The best idea of the relationship considered to exist between the State Medical Society and the several county medical societies can be obtained from the following circular communication, addressed to the county medical societies in 1809. It seems probable that most of this communication was the result of Dr. Stearns' efforts to secure co-operation between the central body and the county organizations. It was he who had first thought of legally establishing a county medical society, and then broadened his ideas to recognize the need for a State organization. While showing the independence of the various societies, this letter also serves to demonstrate how closely they were related and how carefully an effort was being made to secure the fulfilment of the purpose of the law under which all the various societies were created. Special stress is laid upon the scientific objects of the medical societies and their possibilities for helping the development of practical medicine and the diffusion of scientific knowledge among their members.

CIRCULAR COMMUNICATION FROM THE MEDICAL SOCIETY
OF THE STATE OF NEW YORK, TO THE SEVERAL
COUNTY MEDICAL SOCIETIES. FOR
THE YEAR 1809.

To the President of the Medical Society of the County
of _____

Sir—The Medical Society of the State of New York, view with much satisfaction the organization of the several Medical Societies of the Counties, by virtue of the law of the 4th of April, 1806, for regulating the practice of Physic and Surgery; and they entertain no doubt but due exertions will be made by every incorporated Medical Society, to satisfy the just expectations of the Legislature and of the public, respecting these Institutions.

This law not only contemplates the establishment of such regulations, in the practice of Physic and Surgery, as may give respect to the Medical profession, and promote the public good; but also such as tends to improve our knowledge of the healing art, and encourage professional education. The Society do not doubt but that the powers with which the County Medical Societies are invested, will be exercised with moderation, and that nothing will be done to give offence to the public: they will recollect that Medicine has been justly considered one of the liberal professions, and that this character can be supported only when it is exercised on principles just and liberal.

The Medical Society of the State, at their first institution, deemed it expedient to invite their members to such scientific investigations, as would be interesting to the profession, and important to the public.

In a new county, many of whose resources are still unknown, superior beneficial effects must result from favouring scientific researches; and though the pecuniary means of the Society have been limited, yet they have offered premiums to encourage such inquiries as might be useful and interesting.

Few exertions have yet been made to examine and record the various productions of vegetable nature throughout the State; nor has much been done to investigate the several objects connected with the mineral kingdom, with the formation of the earth, and the aspect of its surface.

These subjects the Medical Society of the State earnestly recommend to the attention of your Society; and they make no doubt but a spirit of investigation will be duly encouraged.

As the Medical Profession can only be respectable in a well informed community, and as the ignorant and illiterate are only dupes of empiricism, the County Medical Societies will see the usefulness of exerting their influence to promote education, and to unite their efforts with the Regents of the University for such purposes.

The Science of Medicine comprehends almost all the sciences and useful arts, which contribute, in some form or other, to preserve health, and to prevent and cure disease; it is, therefore, requisite that the County Societies should unite their efforts with the Agriculture and other Societies of the State, to aid in their labors the promotion of the useful arts.

It may also be useful for the Medical Societies to collect and reward such historical facts as are connected with the settlement of their respective counties, and such other circumstances as will elucidate the history of the State.

Whatever relates to the causes, the nature and the cure of diseases, will obviously claim the attention of every Medical Society; and they will no doubt invite their respective members to the due exercise of their professional duties, as well as to those observations which may contribute to extend the usefulness and add to the importance of the profession.

The Medical Society of the State cannot conclude this circular communication without affording assurances of their perfect disposition to promote the respectability of the several County Societies, and to exert their efforts to extend the usefulness of the Medical Profession.

By order of the Medical Society of the State of New York.

JOHN STEARNS, M.D., Sec'y.

Albany, Feb. 6, 1809.

(To be continued.)

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Editorials.

THE SURGICAL TREATMENT OF PUERPERAL SEPTIC THROMBOSIS.

ONE of the most valuable contributions offered at the last meeting of the American Medical Association was the Introductory Address on Surgery, delivered by Professor Trendelenburg, of Leipzig.* This distinguished surgeon devoted his address to the consideration of septic venous thrombosis, with especial reference to puerperal pyemia.

The earliest surgical treatment of these conditions referred to is that of John Hunter, who suggested that the extension of a suppurative thrombosis might be combatted by compression of the efferent vein. He also refers to Lee, who, in 1865, obtained a cure in two cases of pyemia, following cellulitis of the hand, by ligation of the cephalic vein. Following this there are a number of reports of cases of proximal ligation and resection of veins for infective thrombosis. Lives were saved in Billroth's and Langenbeck's clinics by amputation in these cases.

Now that pyemia, resulting from surgical wound infection, has about disappeared, thrombotic infections still occur in otitic and puerperal disease. The first of these infections was treated surgically by Zanzal in 1884, by exposing the thrombosed transverse sinus and cleaning it out. This now has become a recognized

and indispensable treatment of this disease; and the results have been most gratifying.

Trendelenburg has suggested the same surgical principle in dealing with puerperal pyemia, which belongs to precisely the same class of cases. The clot formation is the same, and metastatic deposits originate in the same manner; the bacterial findings are similar; and in all of these cases an abscess and infection of the perivenous tissues may occur. The majority of these puerperal cases die without operation, the mortality ranging from 72 to 85 per cent.

Sippel first suggested that in doing hysterectomy for puerperal pyemia the adjacent thrombotic veins might be removed. Freund, Bumm and Trendelenburg were the first to perform ligation of these vessels without hysterectomy. Thus, operations have been done upon the internal and external iliac veins and the ovarian veins. Most of the operations have been performed upon the chronic cases, that is, the cases in which the thrombi have required many days or several weeks for their development; and of these Trendelenburg reports seven, all of which recovered. These thrombi extend from the ovarian vein into the internal iliac, and thence, especially in the acute cases, into the common iliac and often into the femoral vein and vena cava. These thrombi are not necessarily accompanied by evidences of stasis, and at the time of operation the surgeon may be surprised to find a thrombus extending into the vena cava where none had been suspected.

Trendelenburg says that it would seem feasible, in thrombosis of the vena cava, to ligate this vessel above the site of the process and thus stop the progress of the disease. He advocates early operation, when the disease is still confined to the ovarian vein and the internal iliac, before it has reached the vena cava. He, personally, prefers the extraperitoneal operation, while Bumm operates through the peritoneum. It seems not to be necessary to open the veins, simple ligation proximal to the thrombus suffices. This stops the current of blood flowing towards the heart over the infected clot. If the vein is opened in the presence of the exposed peritoneum there is much danger of contaminating it.

The hope offered to this class of cases by this procedure is very promising; and every surgeon can recall patients whom he has seen perish, whom he now believes could have been saved by operation.

**Journal of the American Medical Association*, July 14, 1906.

THE FRESH AIR TREATMENT OF DISEASES OF THE LUNGS.

AFTER a long period of education and observation the value of fresh air in the treatment of pulmonary tuberculosis has become generally recognized, and with this recognition has come the decadence of the drug treatment of that disease. The treatment of other diseases of the respiratory tract is now undergoing the same change, the most important of which is pneumonia. This disease has been increasing to an alarming degree in the cities where people are crowded into narrow apartments and where men spend the working day in offices and workrooms, heated by steam radiators, and from which the circulation of outdoor air is excluded. It is a very natural and reasonable thing to suppose that pneumonia should be on the increase among these people; and it is equally natural and reasonable that, if vitiated air has been a contributing cause of the disease, the unfortunate victim should not only be removed from its malign influence, but should have the benefit of fresh air at least until he is well. The best place to save a drowning man is on the dry land, out of the water.

In an admirable article on this subject in the *Medical Record*,* James M. Anders says that it is to be hoped that no passionate infatuation of the professional mind for new therapeutic remedies will in future proffer a substitute, or lead to the neglect of a practice so efficient as outdoor living. He believes that one of the principal reasons for the slow progress that has been made in the treatment of pulmonary tuberculosis up to within a comparatively recent period, and still is being made in the case of lobar pneumonia, notwithstanding the voluminous and ever-increasing literature on the subject, is ascribable to the foundationless and misguided hopes, which are too often based on the products of the manufacturing pharmacist, instead of recognizing the curative value of natural elements everywhere available. Absolute rest, fresh air, sunshine and appropriate food, he says, are the therapeutic measures of value; and we may, on reasonable grounds, count this professional propensity to ring in a long list of drugs in the treatment of this disease, as most unfortunate, "the majority of which rest on nothing tangible,

but are, like Mohammed's coffin, suspended in mid-air."

The desirability of admitting fresh air to patients suffering with pneumonia has been placed upon a scientific footing. It remains for the general practitioner to apply its principles. Its benefits rest not only in the peculiar virtues of fresh air, but in acute pneumonia the breathing of cold air seems of especial value. Northrup, who has studied much and practiced this method of treatment, says, in speaking of bronchopneumonia, "nothing stimulates the heart better than a current of fresh, cool air upon the face. Fresh air stimulates the heart, reddens the blood, quiets restlessness, favors sleep, improves secretions and digestion; in short, meets most of the indications for treatment of pneumonia in infants."

The idea of all this is not exactly in the line of treatment, but is largely to give the patient a chance to get well.

THE BRITISH MEDICAL ASSOCIATION.

WE welcome to our hospitable shores the British Medical Association, which will hold its seventy-fourth annual meeting at Toronto, August 21 to 26, 1906. A program of much interest has been prepared, and all indications point to a meeting of great profit and usefulness. There will be a large attendance from the British Isles, the colonies will be well represented, and Canada will send delegates from every province. We learn with much pleasure that a large number of representatives of the medical profession of the United States will be present, and all of the sections will have the opportunity of listening to papers and discussions by them. The preliminary program shows that New York will be represented by a good number of her most advanced men.

This meeting will give our British visitors an opportunity to see something of the great country which stands between them and starvation. It will enable them to come in touch with medicine of the western world. And still more, it will help to cement the close and sympathetic bond which already exists between the British and Republican members of the great American medical profession.

The University of Toronto, already held in high esteem both on this continent and in Europe, will be appreciated for its splendid medical department as never before.

*The Fresh Air Treatment of Acute Respiratory Diseases, with especial reference to Pneumonia, July 7, 1906.

Much good to the art and science of medicine will come out of this meeting; and, while welcoming our English visitors to America, we assure them of our esteem, and before returning to the old country, we bid them pay a visit to some of the medical centers of the Republic. New York bids them welcome.

Observations.

When a man is found who orders his life pretty close to the ideal, it is well to take cognizance of him. The Observer knows a man, a practitioner of medicine, young and strong at sixty-two, who lives the normal life—at least as nearly as it is possible for a practitioner of medicine to live it, surrounded by a community of violators of the code of Nature's ethics. He sees as many patients each day as time will permit, giving each one as much attention as though he were the only case he had. He saves time by choosing his friends among the most congenial, not among his patients. He never makes a companion of a patient for policy's sake. He "sits around" neither in the sick-room nor in the drug store. He prefers not to be called where he is expected to entertain the family or consult with the grandmothers. He chooses his companions among the well. He is one of the best posted men that I know; and his judgment and learning make him sought by many a colleague who desires to get at the heart of a case. His library is well stocked with the best current medical literature and books of reference. Usually he has a young practitioner associated with him. In a small laboratory, connected with his office, the finer details of diagnosis receive attention. He has the newest apparatuses of accuracy, but whenever possible he prefers to depend upon the old and tried blunt methods. He can hear almost as much with his naked ear as with the stethoscope. However, he keeps his associate pretty busy making microscopic examinations.

Although this man received much of his early medical education under the masters of Europe thirty-five years ago, he attempts no specialty; even minor surgery he delegates to some one else. He keeps well posted, however, upon the advances in the specialties, and *knows what they can do for his patients*. He sees a comparatively large number of patients each day, and possesses a wonderful store of formulated knowledge, based on experience. Unfortunately, he has written but little upon medical subjects. He is a regular attendant at his medical societies, where his discussions are always models of clearness and scientific thought. He thoroughly enjoys his work, and still finds as much pleasure in getting at a diagnosis as he ever did in his student days. He still regards himself in every sense a student.

So much for this man at work: he is not so very different from many of our high-class practitioners; but at play he is, for I know no man who brings such a happy philosophy into all the hours of the day. He is one of the sweetest, most courteous and fragrant characters; and in every sense a gentleman. Above all, he is original. He insists that his family, and even himself, are a part of the community which is entitled to his best thought and attention, as well as the sick. The sick summon him because they regard him as the best doctor to get them well; but his own call him because they love him. For certain hours during the day this good man devotes himself to the well. I know that he himself practically prepared one of his sons and a daughter for college; and they all thought it was just play. At the present time he has a class in biology and natural history, and the two oldest pupils are himself and his grandson, aged eight. I met them coming in from the suburbs one morning before breakfast with a can of tadpoles and a half dozen frogs in an old medicine bag. I do not know where he got them, but he said that he was taking them to his Sunday school.

He is one of the boys with the boys. I saw him once with three grandchildren on his back, playing in the very middle of the day, and his wife threatened with apoplexy from laughter; and I happened to know that at that time there were four people trying to find him. When he is not in his office his servants know that he is not in; and when he is occupied with his family he is just as occupied as though he were with the sick. He recognizes his duty to them and to himself, and he claims that it makes him a better doctor. By doing well by the well he is better able to do so by the sick. He has a garden full of flowers, a house full of happiness, and a heart full of love for all the things in nature. The curious part of it is that each day in the seven is the same, and he has never taken a vacation because he needed it.

The work of this good man is among all classes of people—from the very rich to the very poor. To whomever he goes he gives his best thought, and faithful and conscientious service, whether paid in money or in some better currency. He is loved by all of these, and respected and honored by his profession. Gradually an undesirable class of patients has become estranged from him—those who want to take medicine—for he is one of the few men in his community who often see a case through an illness without resorting to the drug store at all. This, together with his disinclination to spend time over the trivialities with unprofitable people, has kept his practice down to a comfortable working basis. Most of the men who were his contemporaries in early practice have passed away, and during their last few years many of them were inefficient from overwork. This man is a better doctor to-day than he ever was. He is like an oak which

buffets the storms, and basks in the sun, and is the same from day to day. He has no ups and downs, because he is always up.

Now, for the strangest thing of all. The one class of people, who profess love and charity, shrug their shoulders when asked about this man, and many have no good word for him, except that they hear he is a good doctor. Good doctor, forsooth! What better can be said of any man? He is, indeed, a good doctor; his rewards he reaps each day; and he is paving a path to immortality, strewn with flowers of sweetest perfume, and echoing with the music of the voices of children.

Items.

DR. EMMET'S LIBRARY.—It has been announced that the medical library of Dr. Thomas Addis Emmet has been donated to the Medical Department of Fordham University.

BUFFALO ACADEMY OF MEDICINE.—At the annual meeting of the Buffalo Academy of Medicine the following were elected officers: Dr. Chas. S. Stewart, President; Dr. W. I. Thornton, Treasurer; Dr. G. W. Wende, Trustee.

THE SHORE HOSPITAL FOR TUBERCULOUS CHILDREN IS TO BE BUILT.—The \$250,000 ocean front hospital for children suffering from tuberculosis of the bones and glands will be built by the Association for Improving the Condition of the Poor, which has been superintending the raising of the fund. John D. Rockefeller gave \$125,000, and the other \$125,000 has been raised. The hospital will be built somewhere on the Brooklyn water front.

THE BROOKLYN CENTRAL DISPENSARY, 29 Third Avenue, Brooklyn, has created the department of gastro-intestinal diseases, which department will be under the supervision and direction of Dr. Mark I. Knapp, of New York. Clinical lectures on gastro-intestinal cases will be given by Dr. Knapp every Wednesday afternoon at three, instead of Thursday, as heretofore. To these clinics and demonstrations all physicians are welcome. Cases may be brought for diagnosis also by outsiders.

Regular post-graduate courses in gastro-intestinal diseases will be given at the above dispensary by Dr. Knapp, commencing in the fall of this year.

MEDICAL LEGISLATION.—At the annual meeting of the Medical Society of the County of Albany Dr. A. G. Root, Chairman of the Legislative Committee of the State Society, said that it might not be known to many of the members what a difficult year this had been concerning legislation on medical subjects. He also felt that many of the members did not and could not appreciate the amount of work which was necessitated by every local committee and also by the

committee from the State Society. The year had been one of the most trying in the eleven years that he had served upon the Legislative Committee; the crop of special bills, legislating into the profession men entirely unfitted for its duties, special bills for the licensing of men in special subjects which were purely medical, and bills to endeavor to destroy the present enactments, had been large. Two of these bills narrowly failed of passage. It was thought that last year's fight against the osteopaths was a serious one, when the bill failed of passage in the Senate by only one vote. This year the bill actually passed the Senate and in the Assembly was referred to the Committee on Public Health, where, fortunately and with much labor, it was kept until the end of the term. At the end of the term all bills lying in special committees are referred to the Committee on Rules, and here this bill remained until the session was closed. The Optometry Bill was only at one time in danger of passing and this danger was caused by the inactivity of the profession throughout the State. In fact, the greatest danger is the passiveness of the profession in matters which directly interest it. If from all parts of the State physicians manifest their opposition to any measure, that opposition will be completely effective.

One bill was reported from the Committee on Public Health which would solve the entire difficulty. This bill gives the most explicit, concise and exclusive definition of the practice of medicine, and, at the same time, provides for one State Board of Examiners to be appointed by the Regents, which shall be composed of nine members, and before this State Board shall come all applicants for medical licensure, whether regular, homeopathic or eclectic. This bill also failed of passage because of the inactivity of professional support and at the same time because of opposition on the part of homeopaths and eclectics. The bill, however, will be re-introduced at the next session, and it is trusted that the profession will become sufficiently alive to the importance of this matter, and by their support secure its enactment. He recommended that the Society place itself on record in favor of this bill and advocate its passage.

DR. FERGUSON, OF TROY, N. Y., was given a dinner recently by his colleagues of the Medical Association of Troy, and presented with a loving cup. Dr. Irish said that it was well to pay a tribute of respect to such a man while yet in active practice and in full mental and physical vigor, instead of waiting until it was too late, that it was the hope and earnest desire of all his colleagues that Dr. Ferguson might long continue actively engaged in the practice of his profession, for they needed the example of his life and wished still to enjoy the benefits of his wise council and the ripe experience which time alone would give.

DR. JOHN G. ORTON, and his wife, of Binghamton, N. Y., celebrated the fiftieth anniversary of their marriage at the family residence, June 27th, surrounded by their children and grandchildren. Dr. Orton is one of the oldest members of the State Medical Society, and one of the ex-Presidents of the State Medical Association.

Two years ago the medical profession of Binghamton presented him with a loving cup on the occasion of the fiftieth anniversary of his entrance in the practice of medicine in that city.

RESOLUTIONS ADOPTED BY THE PORTLAND MEDICAL SOCIETY.—The following resolution was offered by Dr. Henry Waldo Coe, at the meeting of the Portland City and County Medical Society, and adopted by a rising vote: "*Resolved*, That this Society hears with pleasure of the returning health of our esteemed friend, fellow member and an ex-President of this Society, Dr. Andrew J. Giesey, and sends him a greeting of good will and an expression of hope that he may speedily return to us 'safe and sound.'" —*Medical Sentinel*, June, 1906.

There is more virtue in such actions as these than in a volume of posthumous resolutions.

THE ASSOCIATION OF MEDICAL LIBRARIANS, under the Presidency of Dr. A. Jacobi, held its ninth annual meeting at Boston on June 4 and 5, 1906. One of the great works being accomplished by this association is that of harmonizing the medical libraries. It has brought the libraries of this country into close sympathy with one another. It conducts an exchange bureau through which the deficiencies of one library are supplied out of the duplicates of another. It is a great power for promoting and fostering the permanency of medical literature.

PHYSICIANS OBJECT TO PUBLICITY.—The Medical Society of the County of Grant in Indiana has passed a resolution declaring that the members of the Society desire that their names shall not appear in any newspaper in connection with a statement of any medical or surgical treatment rendered by them to any of their patients. A list of the members has been sent to the newspapers in the county.

THE STATE BOARD HAS THE POWER TO REVOKE LICENSES.—In Indiana the Supreme Court has ruled that the State Board of Medical Registration has the power to revoke licenses granted to physicians after the hearing of charges. This disposes of the old idea so dear to the quack, "once a licensed physician, always a licensed physician."

PHYSICIANS IN THE RUSSIAN DUMA.—There are sixteen physicians, in a membership of 460, in the Russian Duma, which has lately come before the world as the most observed of deliberative bodies.

FRENCH CONGRESS FOR THE SUPPRESSION OF

ILLEGAL PRACTICE.—A congress to discuss ways and means for the suppression of illegal practice of medicine was held in Paris and largely attended. Many laymen took part in the discussions. Papers were read and resolutions were passed, directed to the legislative departments: A central office for the Protection of the Public Health Against the Illegal Practice of Medicine was organized. This office is to centralize the work, collect data, and diffuse education on the subject. A motion was also carried to organize a directory of all the legal practitioners in France.

It does not appear whether or no it was pointed out that the best way to suppress quackery is by improving the medical profession and by educating the public to an appreciation of the science and art of medicine.

THE BRITISH MEDICAL ASSOCIATION, organized in 1832, has a membership of 20,000, and, according to the *Canadian Journal of Medicine and Surgery*, "is considered the largest and most influential medical association in the world." Its organ, the *British Medical Journal*, has a circulation of 23,000.

The American Medical Association, organized in 1848, has a membership of 24,000, and, according to the NEW YORK STATE JOURNAL OF MEDICINE, "there is no better index of the development of medicine in the United States for the past half century than the transactions of this Association." Its organ, the *Journal of the American Medical Association*, has a circulation of 46,000.

VENEREAL PROPHYLAXIS IN BERLIN.—The Berlin branch of the German Society for the Suppression of Venereal Diseases is promoting its work by the organization of courses of public lectures. Special classes of people are assembled for special lectures. The first was given at the Langenbeckhaus, and was addressed to the students of the University.

A GENERAL SURGICAL CLINIC IN VIENNA has been established at the General Hospital, which is open to all practitioners of medicine to present cases either for diagnosis or as matters of scientific interest. Discussions are limited to five minutes. The surgical faculty of the University gives its co-operation.

A SEMMELWEIS MEMORIAL.—A committee has been appointed to collect funds for a monument to be erected in Vienna to Ignatz Philipp Semmelweis, the founder of the knowledge of the etiology and prophylaxis of child-bed fever. It was in Vienna that Semmelweis worked and fought for the establishment of the great truths which have resulted in the saving of countless thousands upon thousands of mothers, and the physicians of that city purpose to honor his memory in this manner.

BAD MEAT IN ENGLAND.—The investigations of the meat packing industries in America have

led to similar investigations in Great Britain. Dr. Thresh, an English health officer, has stated that less attention is paid to food inspection in England than in any civilized country; and that the worst food in England is prepared in England itself. The health officer of Stepney, Dr. Thomas, is said to have stated that during the last five years his department has destroyed as much as a ton a day of rotten tinned food, consisting not of American goods, but of colonial meats, fish and fruits. Dr. Cooper, M.P., Chairman of the Public Health Committee, says that he finds a large traffic in England in dying and diseased cattle, which are slaughtered and sold for food, many dealers being solely engaged in buying for market animals which are about to die, and which are hurried to the markets without hindrance from inspectors.

ABDOMINAL TUBERCULOSIS IN GREAT BRITAIN.—In an admirable paper read before the National Society for the Prevention of Tuberculosis at its last meeting in Washington, D. C., Dr. David Bovaird called attention to the infection of the alimentary canal with tuberculosis, and that primary intestinal and mesenteric tuberculosis is comparatively rare in Germany, France and America, but most common in Great Britain, Scotland reporting as high as 30 per cent. of primary intestinal infections. The great prevalence of these diseases in Great Britain is borne out by clinical as well as pathological findings. He said, "Two years ago, under the guidance of Dr. John Thomson, I was shown in a single morning in the Edinburgh Children's Hospital more cases of abdominal tuberculosis in children than I had seen in ten years work in hospitals and dispensaries in New York City. Abdominal tuberculosis is an every-day experience with them—a rarity with us."

THE LIMITS OF A DRUGGISTS' RESPONSIBILITY.

The following editorial appeared in the *New York Evening Sun*, July 16, 1906, and bears upon a question in which the medical profession, as the guardian of the health of the public, has a deep interest. It is to Dr. W. J. Cruikshank that both the profession and the public are under obligations for a persistent effort to secure for them a reasonable measure of justice in this case.

Apart from the immediate question of the injuries alleged by the plaintiff in the case of *Laturen vs. the Bolton Drug Company*, the application for permission to appeal made by Mr. James Taylor Lewis, counsel of the Medical Society of this State, is of extraordinary interest not only to the medical profession, but to the public generally, for it involves the large and important question of an apothecary's responsibility in filling a physician's prescription.

The prescription in this case called for *Elixir Pinus Comp. cum. Heroin (Merrell)*. According to the testimony, the druggist, or his assistant, finding that he had none of this preparation, resolved, according to a not unknown tradition of retailers, to supply something "just as good." He had upon his shelves Merrill's

Elixir Pinus Compositus, and seems to have argued plausibly to himself that the addition of heroin in the proper proportion was all that was necessary to effect a perfect fulfilment of the doctor's and patient's requirements. He therefore proceeded very conscientiously to find out exactly how much heroin was contained in each dose of the preparation prescribed, and having satisfied himself on this head added the requisite quantity. According to the doctor's testimony, the patient shortly after taking the medicine began to show marked symptoms of opium poisoning. Upon communicating with the druggist he learned what had happened, and to his mind the mystery of his patient's condition was satisfactorily accounted for. For, in the unqualified *Elix. Pinus Comp.* a certain quantity of the acetate of morphia is contained in each dose, whereas in the preparation prescribed by him, heroin is substituted in place of the morphia.

Now, the question whether the plaintiff in this case suffered as a consequence of the obvious error of the compounder or from some other cause is a matter of minor importance. What concerns the public is the right of a druggist to ignore a physician's orders and offer a substitute for a preparation which he does not happen to have. Moreover, the learned arguments of Judge Gaynor, who dismissed the complaint, have but a curious interest in consideration of the main issue. From a legal point of view, for instance, it may be very important that the doctor wrote "with" for *cum*, or *vice versa*, but this we beg leave to call a cavil. It is perfectly clear that his prescription called for a certain known preparation containing no morphine; it is perfectly clear that the druggist supplied a preparation that did contain morphine; it is perfectly clear that, according to Judge Gaynor's decision, the druggist was justified in doing so, that in effect he was justified in adding morphine to a prescription which did not provide for any. Here is the whole matter in a nutshell, and considering the effects that might follow substitution of this kind where morphine and other drugs are concerned, we say that apart from the consequences in this particular case the application for appeal is of singular interest to the public.

Medical Society of the State of New York.

The attention of members is called to the following resolution, passed by the House of Delegates on May 19, 1906:

On and after October 1, 1906, no member of the Medical Society of the State of New York shall receive the *Directory*, the *NEW YORK STATE JOURNAL OF MEDICINE*, nor be entitled to malpractice defense until his County dues and State assessment have been paid.

It is not merely a fancy of the romancer, but a statement saturated with practical sense, that the past lies upon the present like a dead giant's body, so that it is as if a young giant were compelled to waste all his strength in carrying about the corpse of an old, an atavistic giant. We sleep in dead men's houses, bacillus-ridden as they are; we are sick of dead men's diseases; we live in dead men's lives; as these sentiments are taken from a dead man's book. And it is equally true that future generations must inevitably be affected by the disposition, physical or otherwise, of the lives of individuals in the present.—*Huber*.

Progress of Medicine.**PRACTICE OF MEDICINE.**

EDITED BY

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**THE TREATMENT OF CHRONIC BRIGHT'S
DISEASE.**

Samuel West, speaking of the diet in chronic parenchymatous nephritis, says that there are certain articles that should be avoided in all cases of kidney disease. One is alcohol in all forms, another is meat extracts, whether in the form of soup or broths, or of the much advertised and popular extracts of meat; so also fruits and vegetables which are rich in irritating salts—*e.g.*, tomatoes, asparagus, gooseberries—and for a similar reason, salted and preserved meats. Why eggs are tabooed he cannot understand, for they are composed of a very easily assimilated form of albumen and are an excellent supplement to milk. Nor does he see any reason for the prejudice which exists against red as distinguished from white meats, unless it be that some patients may find the one more easy of digestion than the other. Red meats contain no more extractives than white. In both cases boiled meats are better to begin with than roast, as in boiling some of the extractives are dissolved away. The patients often crave for a little red meat and he does not know of any good reason for refusing them their wish.

Regarding the treatment of granular kidney in its latest stage, when symptoms are pronounced, the same author says that, in the later stage of granular kidney the arterial tension gives many useful indications for treatment. A patient with granular kidney ought to have an arterial tension which is above normal. The patient would be better without granular kidney, but having granular kidney he is best with a moderately raised tension. From this pathological to normal the tension may vary by way of excess or defect; it may be too high or too low. If too low it must be raised. This is the rationale of the use of digitalis, which, besides raising the tension stimulates the heart and improves the circulation; but if the tension be not low, still more if it be really excessive, digitalis can do nothing but harm. Other drugs which may be used to raise the tension are adrenalin and ergot, supplemented by a more liberal diet and some stimulant. If the tension be excessive it must be lowered. With this object the diet may be reduced, all stimulants cut off, a purge given, and the skin made to act freely by baths and diaphoretics.

Of drugs, he says that nitro-glycerine is useful and may be given regularly two or three

times daily, supplemented it may be by full doses of iodide of potassium. If it be desirable to increase the quantity of urine caffeine or theobromine and its combinations, such as diuretin, are useful as having a stimulating effect upon the heart as well as on the kidney. Of all the drugs for chronic renal disease he thinks pilocarpine is the most useful. He cannot understand the prejudice that seems to exist against it in some quarters. He has used it very largely and has never seen any disadvantage follow its administration; on the contrary, nothing but good. Apart from its general action many of the symptoms are distinctly controlled by it. Thus, headache and the exhausting restlessness so common in the latest stages of the disease may be relieved by pilocarpine more immediately and persistently than by any other means, and even threatened uræmia staved off. He considers it the most useful renal remedy of all. He generally gives it by the mouth two or three times a day in a dose of one-sixth of a grain of the nitrate. *Subcutem*, one-twelfth of a grain is enough to begin with. This produces nothing more than a gentle action of the skin. The profuse sweating or discharge from other parts of the body described is not produced by such doses, even when repeated two or three times a day, nor has he ever seen anything like collapse or fainting follow them—*Lancet*, London, April 14, 1906.

THE DIURETIC ACTION OF THEOPHYLLIN.

Karl Thienger presents a series of cases, in which the new diuretic, theophyllin, has been used. In this drug, the author maintains, has been found an efficient and useful diuretic. In no case in which it was used, he says, was albumen found in previously albumen-free urine, and in albuminous urine was no increase in the total amount of albumen discovered. There was also never an occurrence of blood or of other evidences of fresh kidney irritation when these had been lacking before theophyllin was administered. Without doubt the drug has an influence upon the nervous system, principally consisting in an increase in reflex excitability. Increased salivary flow, abdominal pains, muscular unrest, and vomiting have been observed by some after very large doses or in especially susceptible patients, but the author gives it as his experience and as that of several other investigators that when the drug is commenced in moderately small doses and is increased with careful observation of the patient, no untoward symptoms have ever been produced. Theophyllin is given best in an aqueous solution, or in an infusion of adonis vernalis, as recommended by Schlesinger. At first from 0.1 to 0.15 grams of the drug are given every three or four hours. If this is well borne and diuresis is not sufficient the interval may be diminished to two hours, the maximal daily dose reaching

0.6 to 0.9 grams. With continued administration copious diuresis can be maintained during a period of many days, as shown by the author's cases. Experiments have proven that excretion of the chlorides is greatly increased, thereby removing from the body a substance which recent investigations have shown to be most undesirable. Though unfavorable results have been reported in several cases Thienger believes he has found in each case some other factor which was not the fault of the drug. He believes that theophyllin will prove very useful as it becomes better understood.—*Muenchener Medizinische Wochenschrift* March 20, 1906.

THE FIGHT AGAINST TUBERCULOSIS.

The Noble lecture on "How the Fight Against Tuberculosis Now Stands," delivered by Professor Robert Koch at Stockholm on December 12, 1905, is just published for the first time in English. It is an intensely interesting summary of conditions as seen by that master of science who has been most closely of all connected with that struggle of which he speaks. "If we look back on what has been done in the last few years in the combatting of tuberculosis as an epidemic disease," he says, "we cannot but get the impression that an important beginning has been made. The fight against tuberculosis has not always developed in accordance with the rules of science. It has emanated from the people themselves who have rightly recognized their deadly enemy at last. It is pressing forward with elementary force, sometimes in a rather wild and disorderly manner, but gradually striking more and more into the right paths. If it goes on in its vigorous style, victory is sure."

Koch calls attention to the very considerable decrease in death rate from tuberculosis in many countries. In England, he says, the decrease has been going on for about forty years. Strange to say, in Scotland the decrease is less than in England, and in Ireland there is no decrease at all. In Prussia the decrease from twenty years ago is more than 30 per cent., so that in spite of the increase in population the number of people dying annually from the disease is 20,000 less than before the fight began. The state of affairs in many other localities is illustrated by the city of Stockholm, where the decrease in death rate from tuberculosis has been 38 per cent.

In connection with the combatting of tuberculosis Koch takes into account only the tubercle bacilli emanating from human beings, declaring his theory as to the harmlessness of the bacilli of bovine tuberculosis to man proven by the inoculation experiments of Spengler and Klemperer. In fighting human tuberculosis he recognizes only the "open" form, where patients suffer from laryngeal or pulmonary tuberculosis and give off bacilli to those around

them. The "closed" form, where patients give off no bacilli, is to be regarded as quite harmless. Even those who suffer from open tuberculosis are harmless so long as the bacilli expelled by them are prevented by cleanliness and ventilation from infecting. The patient becomes dangerous only when he is personally unclean or becomes so helpless in consequence of the far-advanced disease that he can no longer see to the suitable removal of the sputa. For the healthy the danger of infection increases with the impossibility of avoiding the immediate neighborhood of a dangerous patient, as in densely inhabited rooms, and quite especially if these rooms are also badly ventilated and inadequately lighted.

The effective methods against tuberculosis which are in force in Germany where Koch knows conditions best, he enumerates with many interesting comments and suggestions. The starting point, he asserts, is *notification*, in which, however, the purpose can be fully attained if limited to patients with open tuberculosis under hygienically unfavorable circumstances. What then to do with such patients is the problem, for it would require more means than could be obtained to lodge them all in hospitals. But if all cannot be so taken care of, he states that by placing in *hospitals* as many as possible great results may even then be accomplished. For patients in the incipient stage the *sanatoriums* are doing active and efficient service. Koch calls attention to the fact, however, that when patients are merely improved but not cured, there has been no prophylaxis, for later they again become sources of danger. The best results from the sanatoriums are obtained when only incipient patients are received, and when these are retained under care for a long time cure is assured.

For those patients to whom the hospitals and sanatoriums are out of reach, yet who must be taken into account, the *dispensaries* have been established. They are intended to serve not one particular class only, but all helpless tuberculous patients in every way. The patient is visited in his dwelling and both he and his family are given instructions and advice as to cleanliness and treatment of sputum. The dispensary itself does not undertake the medical treatment of patients, but acts rather as a "care-station," proving, as Koch believes, the most powerful means of combatting the disease. Finally, he says, all these stronger weapons of defense must be aided with *instruction* as to the danger of tuberculosis, keeping the interest of the masses awake by popular publications, lectures, exhibitions, and other such means. To all these efforts the State can add by enacting and enforcing laws as to obligatory notification and in bettering unfavorable domiciliary conditions.—*Lancet*, London, May 26, 1906.

THE DIGESTION OF CATGUT IN SAHLI'S TEST.

Max Einhorn, of New York, in the *Journal of the American Medical Association* for May 12th, takes exception to the value of Sahli's desmoid test of the stomach functions. Sahli's method, published in 1905, consists in placing methylin blue or iodoform in a little rubber bag and tying it lightly with thin raw catgut. The test is based upon the fact that the catgut, being raw connective tissue, is digested only by the gastric juice and not by the pancreatic secretion. The catgut digested, the bag falls open and methylin blue can be demonstrated in the urine or the iodoform in the saliva. Einhorn gives four cases of achylia gastrica in which a positive result with the desmoid bag was obtained. From these results, together with previous experiments in the digestion of catgut, he concludes that the desmoid reaction is unsuitable for the examination of the stomach functions, because catgut is digested in the bowel as well as in the stomach. In the *Deutsche Medizinische Wochenschrift* for May 31st Alexander and Schlesinger also draw conclusions as to the impracticability of this test, stating that they have found that catgut is digested in the stomach in the absence of free hydrochloric acid.

QUANTITATIVE SUGAR ANALYSIS.

H. Gidionsen reviews the various practicable methods for quantitative sugar analysis. According to this author the practitioner obtains most quickly and accurately a knowledge of the percentage of sugar in a urine if he uses simultaneously a chemical test, such as that of Pavy-Sahli, and a control test with the Lohnstein saccharometer. The Pavy-Sahli method, which cannot be described in full in this review, is really a modification of the method of titration with Fehling's solution where recognition of the end reaction is so extremely difficult. The solution for the Pavy-Sahli test is so changed by the addition of the definite quantity of ammonia that the reduced copper hydroxid is held in solution, thereby enabling the end reaction to be much more easily recognized by simple decolorization of the blue copper sulphate solution. The Lohnstein saccharometer applies the principle of the fermentation of a certain amount of glucose by compressed yeast, the carbon dioxid forcing upward a column of mercury and registering up to 10 per cent. upon an adjacent scale. This instrument can be placed in an incubator, or can be partially submerged in warm water. The directions accompanying the instrument state that at a temperature of about 95 degrees to 100 degrees the fermentation will be at an end in three to four hours, but Gidionsen advises a longer observation for the best results. The results obtained with this instrument, observing necessary precautions, are especially accurate, and its use is becoming widespread.—*Medizinische Klinik*, March 25, 1906.

PERFORATING ULCERS OF THE STOMACH AND DUODENUM.

Byron Bramwell, of Edinburgh, in a clinical lecture discussing perforating duodenal and gastric ulcers, says that in his experience perforating ulceration of the duodenum far more frequently causes fatal hemorrhage than perforating ulceration of the stomach. In simple perforating ulcer of the stomach profuse and recurring hemorrhages are extremely common, but fatal hemorrhage is rare. He has seen and recorded many cases in which very large bleedings occurred from the stomach; in some of these cases the patients were completely blanched by the bleeding; in some of them repeated large bleedings occurred; in all of them, almost without exception, recovery took place. It is extremely rare for a young woman to die from hematemesis of this kind. This fact should, he thinks, make one hesitate in too hastily advising operative interference for gastric hemorrhage in young women. It is a very different state of matters when one has to deal with hemorrhage due to simple ulceration of the duodenum; then the hemorrhage is very frequently fatal. It so happens that during the last two months Bramwell has seen four cases of simple ulceration of the duodenum, three of which died from hemorrhage. That is a remarkable and lamentable experience which profoundly impressed him.

With regard to cases of acute peritonitis due to the perforation of a gastric or duodenal ulcer, he says that immediate operation is imperative; every hour that passes without operation diminishes the patient's chances of recovery. He is strongly convinced from personal experience that in cases of this kind the patient's chance of recovery largely depends upon two things in particular—one is early operation and the other is quick operation. Every hour that elapses between the occurrence of the perforation and the operation diminishes the hope of recovery, and the quicker the operation (other things being, of course, equal) the greater the chances of recovery. He says that if he were to develop peritonitis in consequence of the rupture of a gastric or duodenal ulcer, he would have an operation at the earliest possible moment, and would ask the surgeon to perform the operation as quickly as possible.—*British Medical Journal*, April 7, 1906.

THE IDENTITY OF TABES AND GENERAL PARALYSIS.

In the second of the Lumleian lectures on tabes dorsalis, delivered before the Royal College of Physicians in London by David Ferrier, attention is directed to the fact that in tabes, as well as in general paralysis of the insane, from the earliest to the latest stages, there is a marked lymphocytosis of the cerebro-spinal fluid, a fact which Ferrier has in several instances relied upon in establishing a diagnosis of general paralysis before there were any marked physical signs of the disease. He believes in the essential patho-

logical identity of tabes and general paralysis, and that although not the same in clinical manifestations, the morbid process underlying both is identical. The primary lesion in both is a dystrophy of the neurones and their connections, the sclerosis of membranes and blood vessels being only a secondary result of the parenchymatous degeneration.—*British Medical Journal*, April 7, 1906.

ADAMS-STOKES DISEASE.

The Adams-Stokes Disease is the subject of a comprehensive article by Hermon C. Gordinier, of Troy, N. Y. In his definition the author says that the Adams-Stokes disease, also called by Gibson recurrent bradycardia, is a symptom-complex usually associated with arteriosclerosis and myocardial changes, characterized by true or false bradycardia of a permanent or temporary character, and allorhythmia. Vertigo and synopal attacks with or without epileptiform convulsions or pseudo-apoplectiform seizures, unaccompanied by paralysis, together with dyspnoea, Cheyne-Stokes breathing and vaso-motor instability, are among the more common nervous manifestations of the disease.

Gordinier says it is much disputed whether the bradycardia, associated with the Adams-Stokes syndrome, is due to a veritable heart block, the result of myocardial changes in the auriculo-ventricular bundle of His, or as suggested by Huchard, to a bulbar arteriosclerosis, with changes in the vagi centers and a consequent vagus inhibition. From careful experimental study Dr. Erlanger, of Johns Hopkins, believes that all the symptoms can be explained by a lesion of the auriculo-ventricular bundle of His, and that there seems to be no need for calling in the cardiac nerve centers to explain the condition. Osler divides the condition into three distinct types. 1. A post-febrile type following the infectious diseases. 2. An arterio-sclerosis type with marked vascular and myocardial changes. 3. A neurotic type, due to gross changes in the brain, bulb, or spinal cord. The reviewer would here state that he has never seen a typical heart block following the infectious diseases, though he has often seen bradycardia, but without sufficient accompanying symptoms to diagnose true heart block. Gordinier says that it is very probable that most if not all cases presenting the Adams-Stokes syndrome are due to a definite heart block, *i. e.*, independence between auricular and ventricular beat more or less complete, and are the result of changes of a sclerotic nature partially or completely destroying the bundle of His. The author gives the history of three interesting cases which have come under his own observation, and concludes with a condensation of the report of Adam's original case in the *Dublin Hospital Reports* for 1827, as follows:

"The most remarkable example which I have yet seen of the degeneration of the heart into fat

is preserved in the Richmond School of Anatomy. It is the heart of a man whose case is described by Mr. Adams in the *Dublin Hospital reports*. He was 68 years of age, of a full habit of body, and subject for many months preceding his death to attacks of an apoplectic nature, before each of which he was heavy and lethargic, with loss of memory. He would then fall down in a state of complete insensibility. When they attacked him his pulse, which generally ranged at 30 in a minute, would become even slower than usual, his breathing becoming stertorous. He died in one of these attacks.

"Upon examination of the body the condition of the heart particularly attracted attention. The right auricle was much dilated. The right ventricle presented externally no appearance of muscular fibres, it seemed composed of fat of a deep yellow color throughout its whole substance. The reticulated lining of the ventricle which here and there allowed the fat to appear between its fibres, alone presented any appearance of the muscular structure. The left ventricle was very thin, and its whole surface was covered with a layer of fat. Beneath this the muscular structure was not a line in thickness; it had degenerated from its natural state, was soft and easily torn, and a section of it exhibited more the appearance of a liver than a heart."—*Albany Medical Annals*, June, 1906.

HODGKIN'S DISEASE WITH EOSINOPHILIA.

A fatal case of Hodgkin's disease with general eosinophilia is reported by Warfield T. Longcope, of Philadelphia. Shortly before death the eosinophilia reached 13.2 per cent. Death resulted from strangulation caused by the enlarged glands. Histological study of the organs after autopsy showed enormous numbers of eosinophiles in the tumor nodules, which has been found to be a characteristic phenomenon. The heart, lungs, spleen, liver and kidneys showed intense congestion without any other definite changes. Longcope, from a study of his case, concludes that the eosinophilic leucocytes were not produced in the tumor nodules but were brought there from the blood, and that they were formed from the eosinophilic myelocytes in the bone marrow, where they were found to be present in abnormally large numbers. The increased demand for eosinophiles gave rise to an increased production with hyperplasia of the eosinophilic myelocytes of the bone marrow from which the polynuclear variety is formed, and a resulting general eosinophilia.—*New York Medical Journal*, May 19, 1906.

VERONAL POISONING.

The frequent use of veronal by the laity for its hypnotic properties leads Dr. Franz Ehrlich, of Stettin, to report two cases of suicide by means of this drug. In one case the dose was 15 grams, and in the other 11 grams. Death followed in both cases in twenty hours. The symptoms were unconsciousness, cyanotic features, superficial

and irregular breathing, coldness of extremities, pin-point pupils and weak pulse. The author protests against the general sale of the drug without a physician's prescription, which is so common in Germany at present.—*Muenchener Medizinische Wochenschrift*, March 20, 1906.

GRAVES' DISEASE AND ACUTE RHEUMATISM.

W. E. Robinson calls attention to a frequent seeming relationship between Graves' disease and acute rheumatism. A case in his own practice, together with numerous cases from the literature are cited. Robinson proposes these interesting queries, whether the Graves' disease is due to a rheumatic diathesis or to toxins produced by acute rheumatism, or whether it is an alternative set of symptoms to the more usual acute rheumatism. The author praises the routine use of sodium salicylate in cases of this kind.—*Lancet*, London, April 14, 1906.

DIAGNOSIS OF RENAL FUNCTIONS.

Richard C. Cabot, of Boston, presents some interesting ideas, in a short article entitled, "The Diagnosis of Renal Functions." He distinguishes three sets of phenomena: 1. Renal irritation, showing itself in the presence of albumen and casts. 2. Renal insufficiency, which may exist with or without albumen and casts, showing itself in the physical characteristics of the urine and in the condition of the rest of the body (oliguria, dropsy and uræmia). 3. Nephritis, which shows itself in the post-mortem appearances of the kidney. The author emphasizes especially that the evidence of irritation—albumen and casts—is not evidence of nephritis, which may or may not be present. It is folly, he says, to send urine to a urologist for diagnosis, or for any more than a description of what is to be found. Time is the most important aid to the diagnosis of nephritis. Cabot concludes that: 1. Functions, not histological appearances, are what we should strive to recognize in kidney disease. 2. Albumen and casts alone never prove the existence of nephritis, for they may or may not accompany it. 3. The physical characteristics of the urine, the visceral evidence of uremia, dropsy and cardiac involvement, are, with time, our best help to functional diagnosis of kidney disease. The dilution test, the concentration test, and the quantitative estimation of the kidney's capacity to excrete particular substances, may be valuable.—*New York Medical Journal*, May 12, 1906.

DOUBLE HEMIPLEGIA.

Four cases of double hemiplegia (syphilitic encephalitis, cerebrospinal syphilitis), with autopsy, are reported by John H. W. Rhein, of Philadelphia. As the author states, double hemiplegia, if not uncommon, is certainly not frequently described. From a study of these cases and of the literature he draws the following conclusions:

1. In brain syphilis small microscopic foci of softening may occur in the cortex, the result

probably of the cutting off of the blood supply. These give rise to hemiplegic symptoms and mental disturbances.

2. Syphilitic inflammatory encephalitis, while described comparatively rarely, may occur, and is probably due to inflammation originating in the small vessels of the cortex by the syphilitic poison circulating in them.

3. In brain syphilis the change in the blood vessels is not always uniform. Sometimes the intima is more intensely involved, and sometimes the adventitia.—*American Journal of Medical Sciences*, May, 1906.

THE LENHARTZ TREATMENT OF GASTRIC ULCER.

The Lenhartz treatment of gastric ulcer at the Eppendorfer Krankenhaus in Hamburg, Germany, which has of late proven of so much interest to the profession in Germany, is well described by J. Victor Haberman. The method of Lenhartz differs widely from the so-called Leube treatment where the stomach is at first given almost complete rest, and nourishment is furnished by means of rich nutrient enemata. Lenhartz strongly protested against this "starvation regimen," and proposed a concentrated egg-albumen diet as a more rational treatment of gastric ulcer for the reason that the chief cause of the persistence of the ulcer is the hyperchlorhydria almost invariably present, and that clinical experience has determined that egg albumen is the most efficient food that will "bind" HCl, and thus neutralize the existing hyperacidity. This treatment at the same time reinforces the enfeebled and anemic state of the patient. So successful have been the results that this Lenhartz method has become routine in the Eppendorfer Krankenhaus, and is finding trial in many of the other noted German clinics.

The treatment, in brief, consists in absolute rest in bed for four weeks, with an icebag upon the stomach almost continually during the first two weeks. On the first day, even where a hematemesis has occurred, the patient receives between 200 and 300 c. c. of iced milk, given in spoonfuls, and two to four eggs. Bismuth subnitrate is given two or three times daily for ten days. The allowance of milk is increased 100 c. c. daily, and at the same time one additional egg is given, so that at the end of the first week the patient is receiving 800 c. c. of milk and six to eight eggs. Both foods are continued in this same amount per day for the following week. No more than one litre of milk a day is ever allowed, for fear of over-filling the stomach and stretching its walls, thus preventing a contraction of the ulcer and again offering the danger of a renewed bleeding. At about the sixth day 35 gm. per day of raw chopped meat is given in small divided doses, the next day this amount is doubled, and is gradually slowly increased. Soon the patient can take small quantities of rice and softened zwieback, and by the third week quite a mixed diet is tolerated. During the first week,

and sometimes even until the end of the second, absolutely no attention is paid to constipation, and the bowels are not to be moved, thereby avoiding peristaltic irritation and permitting the reabsorption of blood that may have passed into the intestine. For anemia iron in the form of a soft preparation of Blaud's pill is given, beginning soon after the end of the first week. Arsenic is added in severe cases. From the tenth day and until the sixth week bismuth compositum is substituted for subnitrate, and is given t. i. d. before meals. The patient is usually allowed up on the twenty-eighth day, and is dismissed in the sixth or tenth week.

Haberman reports that in Hamburg before the Lenhartz method was employed the records of 100 cases showed a recurrence of hemorrhage in 20 per cent. of patients. Under this treatment a series of 135 cases showed such a recurrence in only 8 per cent. of patients. In no case, he says, was it manifest that any unfavorable effects were produced by the treatment.—*Medical Record*, June 16, 1906.

ORTHOPEDIC SURGERY.

EDITED BY

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THE OPERATIVE TREATMENT OF INFANTILE PARALYSIS, WITH ESPECIAL REFERENCE TO NEUROPLASTY.

R. T. Taylor, Surgeon-in-Chief of the Hospital for Crippled and Deformed Children in Baltimore, reports two cases subjected to neuroplasty for the relief of infantile paralysis, and gives in addition an interesting review of the literature of the subject. The first patient was five years of age, and was suffering from a paralytic talipes equino-varus. The child was unable to walk, but could crawl around the floor with fingers much flexed and using the balls of the hands as pads. The reflexes were abolished in both legs and there was no response to faradic stimulation on the anterior and lateral aspect of the left leg and it was weak on the right. The toes on both feet could be flexed.

The operation was performed on November 9, 1904. The left external popliteal nerve was exposed, severed at the bifurcation of the sciatic and sutured with silk longitudinally in a slit in the internal popliteal at the center of the popliteal space. The skin wound was closed by a subcuticular continuous silver wire suture.

February 8, 1905, the child could dorsally flex the toes to a slight extent, and in July showed a distinct gain in power.

The second patient was twelve years of age and was suffering from a left talipes equino-varus and paralysis of the peronei, anterior tibial and extensor groups of muscles which had no power nor irritability to electric stimuli (slowly interrupted faradic). Deformity was of the second degree, and could be partially corrected manually. There was no power of abduction,

dorsal flexion, nor extension of the toes. The reflexes were abolished.

The operation in this case consisted of tenotomy of the tendo achillis, plantar fascia, abductor pollicis, and tibialis anticus and a division of the external popliteal nerve, which was transplanted centrally into a portion of the internal popliteal, end to end. Three months later there was slight power of abduction, dorsal flexion and extension of toes. The response to a slowly interrupted faradic current was sluggish.

From these results and from a study of the literature Taylor concludes that neuroplasty for infantile paralysis does yield after three months some positive results, provided we get good coaptation, without tension or hemorrhage. The paper does not claim perfect cure for nerve anastomosis, but as the class of cases upon which one would operate are of a type most difficult to relieve by surgical procedures, and as there is practically no danger in the procedure, it is worthy of trial.—*New York Medical Journal and Philadelphia Medical Journal*, July 7, 1906.

A CLINICAL AND ANATOMICAL STUDY OF RESISTANT FORWARD SHOULDERS.

This interesting and valuable contribution by G. W. Fitz, of Boston, is based upon original dissections and experiments upon the cadaver, nearly one hundred in number. He determined, by cutting away part after part, the amount of resistance offered by each part in the movements at the shoulders, downwards, forwards, upwards and backwards. The various results are carefully tabulated and the subject most exhaustively treated. The conclusions are as follows:

1. Resistant forward shoulders are symptomatic of anatomical conditions.
2. The commonly accepted statement that tight pectoral muscles are the cause is not tenable.
3. The most common factor in forward shoulders is the tightness of the serratus muscle.
4. An occasional factor usually associated in extreme cases with the above is shortness of the coraco-clavicular and acromio-clavicular ligaments whereby the union of clavicle and scapula is made so rigid as to prevent full backward and downward movements of the shoulders.
5. Systematic examination of forward shoulder cases is necessary in order to identify the definite causes of restriction of motion.
6. The early recognition and treatment of pronounced cases is important since self-correction is unusual, and the reflex moral effect is serious.
7. When stretching and muscular development fail, it is possible to incise tight coraco-clavicular ligaments, and thus free the shoulder from rigid interference.
8. The term "round shoulders" is misleading. Forward shoulders (postural or resistant) is far more definite, but should be accompanied by a definite statement of the cause of resistance.—*Boston Medical and Surgical Journal*, April 19, 1906.

THE TREATMENT OF PARALYTIC CLUB FOOT BY ARTHRODESIS.

W. R. Townsend reviews the operative work done at the Hospital for Ruptured and Crippled on paralytic club foot since 1894 to date, and recommends arthrodesis in all cases where there is complete loss of power in both the anterior and posterior leg and foot muscles, or where the power is so slight that a tendon transplantation would probably be of little value. The failures attributed to the operation he believes to be due to faulty methods of operating, to the fact that it is so frequently done on children that are too young, as in these cases cartilage is opposed to cartilage and not bone to bone, and that the after treatment is not properly carried out. He recommends that braces be worn for at least a year after operation.

The primary dressings are left on for about three months, and if at the end of that time there is no ankylosis, but free motion, the operation may be considered a failure and should be done over or some other form of treatment carried out. Once motion is present, it is apt to increase, and prolonged rest will be only time wasted in these cases. Absolute firm bony ankylosis, however, is not absolutely necessary for a good result, partial ankylosis may suffice. The good results are very satisfactory, as in most instances the patients walk well without the aid of apparatus. The article gives X-rays and full histories of nine successful cases.—*The American Journal of Orthopedic Surgery*, April, 1906.

END RESULTS IN CONGENITAL DISLOCA- TION OF THE HIP IN CHILDREN OVER SIX YEARS OF AGE.

Nové-Josserand and Petitjean, of Lyons, report the final results on this interesting condition in 38 patients, which they have been able to study, out of 52 that they have operated on. In this number there were 52 hips treated. The perfect reductions amounted to 16, or about 30 in a hundred; 4 unilateral, 3 bilateral, and 6 bilateral with perfect result on one side. In all instances their best anatomical results were in children from six to seven, showing that the age of seven was about the limit at which one could expect a perfect reduction, unless under exceptionally favorable circumstances. In all the unilateral cases the shortening was entirely overcome. There are 12 cases which they term pseudo-reductions, characterizing under this head those in which reduction was first apparently perfect, and in which, later, it was not maintained. Of these 12, 7 were unilateral, and 5 bilateral, and in the last cases the secondary displacements only occurred on one side. This condition of affairs is less rare in young children than in those of an older age, and is explained by them in the following manner:

In some instances they believe it due to a thickening of the soft parts of the joint, which makes it difficult to ascertain the exact condi-

tion of affairs; and in others they believe that there is a certain amount of twisting of the femoral neck and head, and in others a true displacement after the joint had been reduced. The reduction is maintained as long as the limb is held in abduction, but as soon as the bandage is removed, displacement again occurs. This brings up the interesting question as to whether it is wise to diminish the length of time of treatment or not. Their opinion is rather against a short period of treatment—five or six months—and is rather in favor of a period lasting a year.

In 17 cases the femoral head was found displaced on to the inguinal region, which should be added to the 11 cases in which reduction was not maintained, making 53 out of 100 in which was found an anterior displacement. This transposition of the head, however, gives a better functional result, less shortening, and marked improvement as compared with the previous condition. The oldest of the children operated on was ten and a half years, which seems to be about the limit at which the non-bloody operation can be performed.

An interesting point in their review is that in children operated on late in life, functional result was interfered with for a long time by stiffness. This stiffness is not benefited by forcible motions under anesthesia, in those cases where it may be due to traumatic-arthritis. Rest, massage, and gentle movements often, in time, show a great improvement. Even if the reduction is not perfect, and in cases of anterior displacement, the limping was in most instances markedly relieved. In one instance, although the reduction was not maintained, and there was a shortening of 8 centimeters, with a raised shoe, the limping was almost imperceptible. In the bilateral cases the limping was also markedly reduced.

The absence of limp is easily explained in those cases where the head is approximately in the acetabular cavity, and where the shortening is at a minimum, but they well remark that there is no exact parallelism between the anatomical result and the functional result, the only explanation being that in the manœuvres for reduction the position of the head is brought into such relation with the capsule and the tendons about the joint that these tissues give it a relative stability that it did not possess before.

Their conclusions are that anatomical reduction is rare after the seventh year. That where the reduction is not maintained the head is transposed more anteriorly, and generally remains fixed, and that the shortening, which is less, does not tend to increase with age. The shape of the body is improved, and that the limping is markedly diminished. The stiffness following reduction disappears in about one-fourth of all the cases, and is insignificant in three-eighths of those which persist, and the patients are not as easily fatigued. The amount of stiffness following

treatment has no relation to the length of time that the limb is kept immobilized, and the short immobilization tends rather to a secondary displacement of the hip. Cases on which these conclusions are based are reported in full.—*Révue d'Orthopédie*, July, 1906.

NEUROLOGY.

EDITED BY

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INTRACRANIAL LESIONS AS SEQUELS OF CHRONIC PURULENT OTITIS MEDIA.

M. A. Starr discusses such complications, their symptoms and surgical care. He includes acute encephalitis as an occasional sequence; here the symptoms "are very similar to those described as occurring in abscess;" in fact, they are but an incipient stage of the latter that does not go on to pus formation. The cerebrospinal fluid in meningeal complications shows microorganisms present and a great increase in the number of leucocytes, while in simple abscess such is not the case.

The leucocytes of the blood are much more increased numerically in meningitis and brain-abscess than in simple acute media otitis, and in meningitis the count goes higher than in abscess. Furthermore, "a rapid rise in the ratio of polymorphonuclear leucocytes to other elements in the blood" indicates "cerebral complication."—*Medical Record*, March 10, 1906.

THE QUESTION OF HYSTERICAL FEVER.

Few of the finer points of diagnosis are a matter of such uncertainty as that of the occurrence of rise in body temperature of purely neurotic (psychic) origin, and this is more particularly in question where hysteria is the presumed cause. Here, however, two distinct possibilities call for consideration:

1. Reports of Hysterical Fever usually refer to cases of irregular and at times excessive rises in temperature, often with slight evidence otherwise of bodily disorder.

This form is doubly considered in the last number (March 22) of the *Deut. Ztschr. f. Nervenheilkunde*. In an article by Voss of St. Petersburg he accepts the reality of this form, gives two cases (questionable however), and draws the following conclusions: (1.) Rise of the body temperature to hyperthermia belongs to the symptom-picture of hysteria. It occurs almost exclusively in severe cases and often as an accompaniment of convulsive attacks. (2.) The febrile phenomena are a primary symptom, and not a sequence of the increased muscular activity during the seizures. (3.) All the phenomena of

the vasomotor diathesis (fever, œdema, polyuria, skin affections) can be most readily attributed to a lesion of the resp. cortical centers. (4.) The diagnosis of hysterical fever is only to be made when no organic disease is present that might occasion the rise in temperature.

Stimulated by this article, the editor, Strumpell reviews the subject anew (partly on the basis of his earlier warning, *Ibid*, vol. 2, p. 353-4). He very properly holds that proof of the reality of such a fever is entirely lacking. In suspected cases the doctor should employ a tested thermometer, himself insert it in the rectum, and watch it every instant there. In many of these cases one should be suspicious in view of the patient's good general condition, unaffected pulse and respiration, the not specially hot skin, etc. He sets up as a criterion, somewhat novel, that at least as many of these cases must be proven to be true beyond suspicion as have been shown to be frauds, before the reality of such a thing as hysterical fever can be accepted as demonstrated. He grants that he has not always been able to find how the febrile rise was simulated. A sudden pressure on the bulb of the thermometer may, he suggests, be one way. Several cases of his own observation are given, all of which proved to be fakes. He also urges skepticism in relation to all unusual symptoms in hysterics.

II. The other possible form is of a different character. Nor is the reality of the fever usually as open to question as in form I; the uncertainty here is in its interpretation. In these cases is found a more or less continuous and slight elevation in the temperature, that goes on for weeks or any longer or shorter period. The amount of rise is rarely more than a degree or two, with some intercurrent variations. The more careful the determination the more definitely is the fact of a rise established; in fact only observers who are exact on this point become aware that there is any rise at all.

If there is such a form as this, little is known of it. Sarbo (*Arch. f. Psycht.* vol. 23) touches upon it. The assumed cause is here more difficult to disprove than in form I. The question can only come up if at all when such rise is noted in individuals presenting an essentially hysterical group of symptoms with an absence of any other discoverable explanation.

Science is, I believe, nothing but trained and organized commonsense, differing from the latter only as a veteran may differ from a raw recruit. The vast results obtained by Science are won by no mystical faculties, by no mental processes other than those which are practiced by every one of us in the humblest and meanest affairs of life. The man of science, in fact, simply uses with scrupulous exactness the methods which we all, habitually and at every moment use carelessly.—*Huxley*.

Society Transactions

SOCIETY OF SANITARY AND MORAL PROPHYLAXIS.

STATED MEETING, held at the NEW YORK ACADEMY OF MEDICINE, April 12, 1906.

PRINCE A. MORROW, M.D., Chairman.

DR. MORROW, in introducing the subject of the evening, said that some criticism had been passed upon the policy of the Society in confining its work thus far strictly to the study and discussion of the educational aspects of the problem. About a year ago it was decided by the Executive Committee to confine the work of the Society, for the time being, to educational subjects, and to exclude those that were foreign to that line of inquiry.

It should be borne in mind, Dr. Morrow said, that the education of the public in sexual matters constituted a new departure from established methods, and it was first necessary to study the situation thoroughly and determine upon the best means to follow. While the education of the public was simple enough in theory, yet its practical application was by no means easy, and in attempting to carry it out, we were confronted not with a theory, but with conditions which represented real, practical difficulties.

In the education of the general public we had to encounter and overcome in the first place the fact that the general public was indifferent, and in certain quarters actively hostile. Then, the ordinary means of communication with the public were not available. The newspapers and magazines, which had been such powerful agencies in the enlightenment of the public in regard to tuberculosis, were closed to the importance of the work of this Society. Indirect methods of communication had to be sought, and the work was now being carried on along the lines of least resistance on the part of public prejudice.

In the education of the youth, the existing system made no provision for imparting this particular knowledge. It was therefore necessary to enlist the co-operation of the teaching fraternity, and get the advice of the best pedagogists as to how this feature of the work could be best undertaken. A large majority of the teachers were heartily in sympathy with the work, as was evidenced by the numerous communications received from teachers, instructors in physical training and the heads of various settlements.

Dr. Morrow said the Society had not yet been able to reach the general public to any effective extent, but proof was not lacking that there were a large number of serious-minded men and women in this country who recognized the real importance of this work. There was a constantly increasing demand for more knowledge; for more light upon this social plague, which had hitherto always been covered up or concealed. In medical circles this movement was undoubtedly gaining in strength and influence. The work in Wisconsin had already been referred to. Two weeks ago a Society with these objects in view was organized in Philadelphia, and its meeting, which was held under the auspices of the Philadelphia Medical Society, was the largest and most enthusiastic in the history of that body. The subject had also been taken up in Chicago, and the formation of a Society along similar lines was contemplated there. In the city of Syracuse the formation of a Society was also being projected, and it would shortly be inaugurated under the auspices of the Syracuse Academy of Medicine. From many sections there were evidences of the growth of this movement, which was doubtless destined to do a great work in the interests of preventive medicine and of humanity.

SHOULD LEGISLATIVE AID BE INVOKED TO PENALIZE THE TRANSMISSION OF SEXUAL INFECTION IN MARRIAGE?

JUDGE WILLIAM LINDSAY, Ex-U. S. Senator, discussed this phase of the subject. He stated that he had

frequently sympathized with distinguished members of the medical profession, who, when called upon to testify as expert witnesses in courts of justice, were at times cross-examined by counsel who knew little or nothing about the medical or surgical questions involved, but who had been primed, perhaps the evening before, by other medical men, and who were thus in a position to propound questions which could not be answered offhand. This, the speaker said, was very much the position in which he felt himself to-night. He was present to talk on a subject about which he had very little knowledge, and concerning which no one knew very much, unless he happened to belong to the medical profession, or else, perchance, was the unfortunate victim of one of the diseases under discussion.

Should Legislative aid be invoked to penalize the transmission of sexual infection in marriage? That was the question he had been called upon to answer. It was a great question. It was a proposition that deserved consideration by every right-thinking person. However, it was a question that looked rather to the education of the people, which education could be received from no other source than the medical fraternity. Therefore, humanity was to be congratulated that the medical profession had turned its attention to the educational features of this subject, which was so necessary for the good of society, and so absolutely necessary in order to drive out the great evil which has resulted from a laxity of morals in regard to the sexual relations.

Judge Lindsay said he was not surprised that the question had arisen in the medical mind whether or not this great work could be reinforced by legislation. The truth is, there is a very common feeling that all the evils of society can be, if not cured, at least minimized by an act of Legislature. Law is beneficial to society just in proportion to the degree it is sustained and influenced through public opinion. In fact, there are no laws excepting those dictated by public opinion and influenced through the pressure of public opinion. The common idea is that we can make a law by the enactment of a statute. We can crystallize public opinion into the shape of a statute, but that statute is not a law unless public opinion stands behind it and sees to its enforcement. It is wonderful how many supposed laws are now on the statute-book that are inoperative; they are not self-enforcing, and public opinion does not enforce them; and, although they were in the shape of statutes, they carry no weight. The laws of the State of New York are embodied in three large volumes, covering over 4,000 pages. Each one of the sections included in those 4,000 pages declares the right to impose a certain rule of action or provides for some penalty, and yet Judge Lindsay said he was prepared to say, without fear of contradiction, that not one out of 50,000 persons in the State of New York were acquainted with the statutes embodied in those three volumes, nor were they capable of becoming acquainted with them without the aid of a competent lawyer.

The Revised Statutes of the United States, compiled thirty years ago, embraced over 5,000 sections, and one could safely say that not one person out of 50,000 in the entire United States is acquainted with the provisions of those statutes or capable of becoming acquainted with them without the active assistance of a practising lawyer. In a celebrated work known as "Utopia," written by one of the most distinguished lawyers of his age, the statement was made, that in the imaginary land known as Utopia, there were but few laws, and but few were needed. The people in that land very much condemned the action of other nations with laws so numerous and bulky that the subjects of those nations were not even acquainted with them, yet they were supposed to obey them. If our laws had to be read and understood by everyone of the good people of the State of New York, Judge Lindsay said he could safely make the assertion that not even a single lawyer in the State, however learned he might be, however much experience he may have had, would be able to say that he came within the description of the author

of Utopia. In spite of this superabundance of laws, we are constantly clamoring for more. In this State the Legislature meets every year; in some of the Southern States it meets every other year, and in one or two of the States of this country it meets once every four years. There is scarcely a commonwealth or State in the American nation whose laws do not equal in number the laws of the great State of New York.

Coming back to the question under discussion, Should legislative aid be invoked to penalize the transmission of sexual infection in marriage? the speaker asked how could the Legislature give the medical profession and the community the assistance they demanded? What should be the character of the legislation, and, that being determined on, could such legislation be enforced? Laws that deserve to be enacted are to a great extent self-enforcing. The courts are only occasionally called upon to see that a law which deserves to exist should be enforced, because all good laws are self-enforcing. To emphasize this fact, Judge Lindsay read an extract from an address made by the late Mr. James C. Carter, one of the most distinguished members of the New York Bar. If the Society of Sanitary and Moral Prophylaxis could be instrumental in the passage of a law that would come within the description given by Mr. Carter, a law that would enforce itself because it was a good one, then by all means we should have such a law on the statute books; but if it was to consist merely of a declaration of the Legislature, unsustained by public opinion, then it would be apt to do more harm than good.

Judge Lindsay said his attention had been called by the Chairman to a statute enacted, and, he supposed, enforced to-day in the State of Michigan. It provided that any person who had been afflicted with syphilis or gonorrhoea, and who had not been cured of the same, and who married, should be guilty of a felony, and upon conviction thereof in any court of competent jurisdiction he should be fined not less than \$500 nor more than \$1,000, or imprisoned, or both fined and imprisoned, at the discretion of the court.

The difficulty, if not the impossibility, of carrying that law into execution by ordinary means evidently dawned on the members of the Legislature, for they added the following clause: "In all prosecutions under this act, the husband shall be examined as a witness against his wife, and the wife as a witness against her husband, whether such husband or wife shall consent or not, and providing that in all such cases arising under this act, any physician who has attended or prescribed for any husband or wife for either of the diseases mentioned shall be compelled to testify to any facts found by him from such attendance."

Under this act, the sanctity of the confidence reposed by the patient in his physician is to count for nothing, for the physician is to be compelled to go on the witness stand and furnish the testimony which would bring the accused man or woman to public disgrace. Further than that, the law virtually dissolves the marriage relation. It compels the wife to testify against her husband, and the husband against his wife. It breaks down those confidential relations that society universally recognizes and respects between the man and the woman who have taken each other for better or for worse until the end of their lives. It doubtless is necessary, in the enforcement of a law of this character, that the husband should testify against the wife, and the wife against the husband, and that the attending physician shall be made a witness against his patient; but the changes it involves are very radical, as under the common law the interests of the husband and wife are always regarded as identical. About sixty years ago an eminent English authority promulgated the law that "the husband and wife cannot be witnesses for each other, for their interests are identical; nor against each other, on the grounds of public policy, for fear of creating distrust, sowing dissension between them and causing perjury." So important was this ruling that the law would not allow it to be violated, even by agreement. The principle was so very

comprehensive that it was even adhered to after the marriage tie was dissolved by the death of either of the parties, or after divorce for adultery.

The statute enacted in the State of Michigan, Judge Lindsay said, placed the husband and wife at arm's length; it compelled each to testify against the other for the purpose of establishing a fact which, if established, branded not only the husband and the wife, but also the innocent offspring. Those were considerations that must apply when we came to answer the question of whether or not the Legislature should be invoked to aid the great work which the medical fraternity has undertaken. The speaker doubted whether any statute could be so framed as to avoid the cruel necessities embodied in the Michigan law, and at the same time answer any useful purpose in assisting the medical fraternity in this work. As an educational factor it would prove a failure. Statutes do not educate. Unpopular statutes irritate, but never educate. This great work interests, first of all, the medical profession. The physicians can impart the necessary information to their patients. This knowledge belongs peculiarly to the medical man, and he can best impart it to his patients and fellowmen. Many women are now engaged in the medical profession, and they can impart the necessary facts to the young women that come under their care. The dissemination of this knowledge belongs peculiarly to the medical fraternity, and they should appeal to the Legislature only when they find that they cannot succeed without legislation, and when they are prepared to suggest legislation in such a form that will be of practical assistance in eradicating the evil, rather than bringing about a state of affairs that is worse than that which we now have to contend with. They should guard against any legislation that would sever the marriage relation or weaken the marital tie. Our civilization, for its preservation, depends on the family. There can be no family life unless the husband and wife have implicit confidence in each other, and any statute, especially in the shape of a legislative enactment that tends to weaken the marital tie, tends to create an evil greater than the one we seek to remedy. The speaker doubted whether any legislative action would be of any practical value. Other means for the propagation of this great movement, however, would not fail. The people have more confidence in the judgment of their medical advisers than in that of any other class of men and women, and for that reason the movement set on foot by this Society for the suppression of this form of social evil will surely succeed.

DR. EGBERT H. GRANDIN said that after the very thorough review of this subject by Drs. Wyeth and Fordyce, and in view of the fact that his own convictions had been expressed on several occasions at previous meetings of the Society, he felt some diffidence in opening the discussion.

In spite of Judge Lindsay's opening remark that he had little or no knowledge regarding this subject, he had thrown much light upon it from a legal standpoint. One statement he made was that there were now more laws on the statute books of the State of New York than any of us were familiar with. It would be better, perhaps, Dr. Grandin said, if there were fewer laws and more common sense, and that applied particularly to the subject under discussion to-night. If the legislator and the preacher and the lawyer understood just what the words syphilis, pox, gonorrhoea, clap meant to the family, to the innocent man and woman, to the child, the legislator and the preacher and the lawyer would join hands with the physician in awakening the force of public opinion towards the eradication of those diseases. If the work of educating the sexes regarding the character of these diseases began before marriage, then there would be no necessity for the enactment and enforcement of a law which compels the wife to testify against the husband, and the husband against the wife. Let girls know what it means to mate with a man who has gonorrhoea or syphilis, and such marriages will not take place. The speaker said

he could not conceive of any sane man or woman mating with a syphilitic or gonorrhoeal patient after his or her eyes had once been opened to the possible dangers of such a union.

Under the Constitution of the United States, the speaker said, we are guaranteed life, liberty, and the pursuit of happiness. When Lincoln, the great emancipator, suddenly gave the slaves their liberty, they at once thought that liberty meant license. Man from the very start had been a sexual animal. In the third chapter of the Book of Genesis, when Adam was asked, "Hast thou eaten of the tree, whereof I commanded thee that thou shouldest not eat?" he answered, "The woman whom thou gavest to be with me, she gave me of the tree, and I did eat." Milton echoed the same thought, showing that man was a coward from the start; and he is a coward to-day. To-day *he* was the one who gave the woman syphilis and gonorrhoea; she did not give it to him. It was not the prostitute who suffered most from the effects of these diseases; it was the innocent, pure young women. Dr. Grandin said he made this assertion after practicing for nearly twenty-five years, chiefly among women. It was man who acquired these venereal diseases and inoculated the woman; and he contended that man has no more right to go around and inoculate a woman with syphilis or gonorrhoea than he has to disseminate smallpox. If that man became infected with scarlet fever or measles or even whooping cough, the attending physician would be compelled to report the case to the Board of Health; but with gonorrhoea and syphilis, diseases which sap the very vitality of the race, diseases which are responsible for 45 per cent. of sterility in the female and at least 40 per cent. in the male, diseases which are responsible for at least 25 per cent. of the cases of total blindness—in dealing with those diseases no report to the Board of health is necessary. Neither smallpox, typhoid fever, diphtheria, measles nor whooping cough are responsible for anything like the direful results caused by the venereal diseases, but while the health authorities hold the physician to a strict accountability for failure to report any of the former infections it pays no attention to the latter. The great mistake is that gonorrhoea and syphilis are regarded as secret diseases. The persons who become infected with them are ashamed of the fact. Let us forget that they are secret diseases, and call them instead acute infectious diseases. Let us consider them in the light of diseases, and then, instead of law, common sense and public opinion will rule. Then, as always, public opinion, fighting for the right, would be victorious.

MR. WILLIAM A. PURRINGTON said that Judge Lindsay had already emphasized the fact that a law had no value unless it could be enforced, and no law is going to be enforced unless it has some one to set it in motion. The only way in which a law of the kind under discussion could be enforced would be for the Society to employ some one to seek out violators of the statute and proceed against them. This was the method practically pursued by the State Dental Society and the County Medical Society in their efforts to weed out illegal practitioners, and even in the enforcement of laws regulating medical and dental practice great difficulty has been experienced, especially in the rural districts, where the person prosecuted is popular in his community. Suppose a law were enacted penalizing the transmission of sexual infection in marriage, who would report such cases, in the first instance? Who is going to make the law operative? Who is going to compel the husband or wife to testify? Such a law would simply prove a nullity and might afford an opening for blackmail.

The proposition to compel persons contemplating marriage to secure a medical license might be more practical if license to marry were refused to those refusing to submit to examination. Such a measure, if carefully framed, might, perhaps be enforced in some degree, but even that is doubtful, as is evidenced by the lax enforcement of the present sanitary laws requiring the reporting of contagious diseases. An ap-

peal to the Legislature, therefore, to assist the Society in carrying on such work, at this time, would not only be undesirable, but also ineffective.

MR. FRANCIS L. STETSON said that though, as suggested by Senator Lindsay, perhaps no law should be passed until it is clear that without a new law the medical profession could do nothing, he was inclined to believe that some law might be passed which would be of service in the direction of educating the public regarding the nature of the work that has been undertaken by this Society. Personally, he felt considerable confidence in the educational power of a law, provided it should not be unnecessarily intrusive and irritating. For example, suppose that a law were to be passed compelling physicians to report to the Board of Health the fact of each case of venereal infection coming under their care, without, however, giving the name of any patient. The mere accumulation of such statistics with the revelation of the vast number of such cases in itself would prove an object lesson. In doing this, the physician would betray no confidence, but he would be the means of collecting and preserving for proper study and use most impressive material. There would be no interference with personal liberty; there would be no infringement of the right of privacy, but the statistics thus accumulated doubtless would prove a powerful factor in the amelioration of this great and I am led to believe this growing evil.

Mr. Stetson said he was firmly convinced that the youth of the United States compared favorably with the youth of other countries, and he was of the opinion that the busy commercial life in this country, which was so often frowned upon and criticised, is a saving factor, for it engages so much of the young men's attention that those who are busy with affairs have little time for dissipations. The line of Dr. Watts' that "Satan finds some mischief still for idle hands to do" has not yet ceased to be true, and a young man fully absorbed in useful pursuits is less likely than the idler to indulge in vagrant and corrupting imaginations.

When a quarter a century ago Commodore Gerry inaugurated his wholly admirable Society for the Prevention of Cruelty to Children, he began by having a law passed which has since proved of inestimable benefit to the community, and it would seem that a similar effort might be usefully made in connection with the work of this Society. The main factor, however, is discreet education; and education not only of the young men, but also of the young women. If the elder women could select that happy moment in a girl's life before the development of a dangerous self-consciousness, and indicate to her what she is entitled to know concerning the perils to her life and happiness from the permitted addresses of seniors, lacking in personal rectitude or moral responsibility, a corrective would be furnished for the most dangerous cases, those where the young men are notoriously profligate. The idea of marrying a rake to reform him would not be entertained by a romantic young girl if she knew the peril to herself in the process, and no deterrent would be more effectual with young men than probable inability to win young women of good sense.

But in anticipation of that ideal state when matrimonial alliances shall be regulated, though not inspired by intelligence, it is desirable that without invading the right of privacy the number of cases of the several diseases of this general class should be ascertained and published by the Board of Health under a law requiring physicians and hospitals to report cases, but not name.

DR. GRACE PECKHAM MURRAY said that it was necessary to point out practical measures which could be understood and carried out in solving the great problem which presents itself to this Society.

In this connection three points suggest themselves. First, the education of young men. This should be begun sufficiently early in life. Many collegians acquired venereal diseases, and young men while in the inactive stage married, unconscious of the great wrong that they were inflicting upon their wives and their offspring.

Secondly, there should be a return to the old-fash-

ioned custom of obtaining consent of the parents or guardians of the young women whom the men sought in marriage. Fathers should learn whether their prospective sons-in-law were in a fit condition to be entrusted with their daughters. Men are usually frank with each other in these matters, and if the father did not feel equal to such an interview he could entrust it to the family physician.

Thirdly, the Society could do a very practical and important work in circulating among physicians tracts containing rules which should govern them in instructing those who applied to them for such knowledge. Those who are specialists in venereal diseases do not realize how bewildering it is for the general practitioner when he tries to obtain from the literature upon the subject definite ideas. Such literature is in a chaotic state. It is true that these difficulties are inherent in the subject, wide variations occurring in individual cases, but still accurate and well-defined rules could be laid down in regard to the times and conditions when it would be safe for one suffering from venereal affections, either gonorrhoea or syphilis, to marry, and the treatment and regimen to be observed to attain this end.

THE VALUE OF EDUCATION AND TREATMENT AS A SAFEGUARD.

JOHN A. FORDYCE, M.D., read a paper with this title, for which see page 311.

IN VIEW OF THE GRAVE INJURY TO THE FAMILY AND RACE FROM VENEREAL INFECTION, SHOULD NOT SAFEGUARDS BE THROWN AROUND MARRIAGE?

JOHN A. WYETH, M.D., read a paper with this title, for which see page 313.

LEGAL MEASURES TO PREVENT VENEREAL DISEASE.

MR. ARTHUR N. TAYLOR read a paper with the above title, for which see page 314.

DR. L. DUNCAN BULKLEY said that about ten years ago in his book on "Syphilis in the Innocent," he had first suggested a law bearing on this subject which he thought would at least prove an opening wedge in the right direction, and against which he had been informed by lawyers whom he had consulted regarding it that no legal objections could be raised. The law he had in mind would practically stipulate that syphilis and gonorrhoea should be included among the list of diseases of which the Health Department took cognizance, and that it should be made a misdemeanor to communicate the disease wittingly. By this also the keeper of any house in which such an infection occurred would be liable to punishment. This would render the keepers of such houses careful as to the physical condition of the inmates, and they would consequently examine the males. This would deter many from entering, and thereby diminish prostitution.

DR. A. JOSEPHINE SHERMAN said that the answer to the first question is, unquestionably, yes; and safeguards should also be thrown around the long-suffering public from accidental infection of this nature—public baths, toilets, drinking cups, etc. She believed, however, this subject of accidental infection is not included in the present discussion, although so intimately connected with it.

The second question, the value of treatment, no one will underestimate. The result of neglect of treatment is appalling. But the fact remains that for centuries these diseases have been combatted only by sporadic attempts at treatment. They have not been reported and isolated as other infectious diseases are; and the resulting statistics are startling the civilized world. The education is coming, and we cannot escape it; it is a compulsory one. There are two ways which our young people can learn about this subject. One is by precept, the other by experience. There can be no doubt as to what is the best method of teaching these facts. Surely you do not want your sons and daughters

to learn by experience the sad fate of the victims of this plague. The idea of shielding the young and innocent from all knowledge of vice, vicious influences and consequences is very alluring, but, with the present sociological conditions, this is impossible. At a recent symposium at the Academy of Medicine a representative body of physicians and surgeons of New York and Washington gave and accepted the following statistics: 60 per cent. of males have gonorrhoea at some time of life, 90 per cent. in the large cities; 60 to 90 per cent. of all abdominal operations are due to this infection; 30 per cent. of all blindness is due to the same cause. This percentage, of course, includes the innocent and accidental sufferers. This being the case, and we cannot question this authority, will treatment and education be sufficient to check these terrible ravages upon the human race? The victims of the volcanic eruption excite the sympathy of the world, yet this is but a side show compared to the terrible scourge of venereal diseases. It is universal; it invades the home, and goes on to cause suffering for future generations, and is the great cause of so-called "race suicide." Mother and child are the greatest sufferers. Education and treatment alone will not abolish these diseases. The infection is too widespread. We must pay the penalty of long neglect. Education will arouse public sentiment. There will be a demand for the necessary sanitary supervision. This will call for the isolation of dangerous cases and the careful supervision of all by the Board of Health. The crusade against tuberculosis was opposed vigorously at first because of the great number suffering from the disease and the very great hardship to these individuals that the necessary isolation made unavoidable. The same is true of the diseases under discussion, and to a much greater degree because of the widespread infection due to long years of neglect.

These reforms can only be brought about by legal force or by voluntary effort. Voluntary effort cannot be depended upon. Public opinion is strong and will prevail, but we must remember that our laws are made by the very men of whom we have just been told a majority would be severely inconvenienced by these same reforms. Can you suppose them to vote for their own removal from the body politic as a source of infection? The position of the physician is one of great delicacy and responsibility. The idea of professional knowledge of the individual case being confidential is something we do not willingly change. The details of these cases are very sad, and secrecy must be observed. Many a wife is kept in ignorance of the real cause of her suffering. It would be a needless revelation with sensational results. The confidential relations with both husband and wife are often sufficient for all that is possible in the present sociological conditions, but the menace to the race cannot be overlooked. Let the father say to the young man, you cannot have my daughter for your wife unless you present a clean bill of health, and let that be from a reliable source, not one capable of being bribed.

The young woman should also prove herself worthy to be the mother of his children. Then in the future, Utopian dreams may be fulfilled—an aristocracy of mental, moral and physical health. That would be a nobility to be proud of.

Sometimes it seems as though all the forces of nature are arrayed on the side of evil, and the fact remains that society is honeycombed with vice and vicious tendencies.

The problem is a very serious one, but truth—clear, unvarnished truth—is mighty and will prevail.

We cannot chloroform all who fall below the standard of physical and moral perfection.

If the number were smaller we might even consider this, but it is too late now.

There is no other plan possible than to hold human life sacred, respect the rights of those in danger of physical injury from violence or infection, and to elevate the public ideals of moral and physical standards.

Then let each human being live out his own life to its uttermost possibilities, not alone for work, but for

years, and for the perfection of individual existence, each according to his own capabilities and limitations.

It will not do to set one standard for all. We cannot interfere too much with individual liberty, but no person has a right to injure another by violence, or, what is worse, by avoidable infection.

Let us approach this question sensibly, with due consideration for the individual, but use every scientific method to stamp out the disease. It is not so much a question of giving instruction as of withholding it. What right have we to withhold this knowledge from those who are so exposed to danger from ignorance.

Knowledge is power. The inalienable right to life, liberty and the pursuit of happiness is the true American idea, and it has stood the storm of severe tests. It will stand this if the moral standards are preserved.

Many of the world's finest characters have been handicapped by physical ills; and some very fine intellectual strains have been preserved in these hand-to-hand conflicts with heredity.

County Societies.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

ANNUAL MEETING, May 8, 1906.

It was ordered that subscriptions be received and forwarded to the San Francisco Medical Society.

The President of the Society, Dr. G. G. Lempe, read the annual presidential address.

Dr. G. G. Lempe was elected president for the ensuing year.

Dr. Montmarquet, of Cohoes, was elected vice-president; Dr. A. T. Laird, secretary; Dr. W. H. George, treasurer; Drs. S. B. Ward, H. E. Mereness, A. Vander Veer, Craig, and Curtis, censors.

MEDICAL SOCIETY OF THE COUNTY OF GREENE.

The quarterly meeting of this Society was held at Catskill, N. Y., July 10th, at which time was commemorated the one hundredth anniversary of the organization of the Society.

Dr. Willard read an historical sketch of the Society.

MEDICAL SOCIETY OF THE COUNTY OF ONEIDA.

THE CENTENNIAL MEETING OF THIS SOCIETY WAS HELD AT UTICA, N. Y., on July 10, 1906.

Scientific Program.

"The Vital Process," Dr. William M. Gibson, Utica.

"Prostatectomy," Dr. James H. Glass, Utica.

"Radical Cure of Femoral Hernia," Dr. William B. Coley, New York.

"Historical Address," Dr. Smith Baker, Utica.

MEDICAL SOCIETY OF THE COUNTY OF WYOMING.

The regular quarterly meeting of this Society was held at the Castile Sanitarium, Castile, N. Y., July 10, 1906, the Society being the guest of Dr. Greene.

Dr. L. M. Andrews, of Warsaw, was elected to membership.

Program.

Dr. C. C. Frederick, of Buffalo, presented a paper on "Ectopic Gestation."

Dr. E. J. Meyer, of Buffalo, read a paper on "Movable Kidney."

Dr. M. J. Wilson, of Warsaw, gave a report of the meeting of the American Medical Association, held at Boston.

Correspondence.

THE FIFTEENTH INTERNATIONAL CONGRESS OF MEDICINE AT LISBON.

Editor New York State Journal of Medicine.

SIR: That the Fifteenth International Congress of Medicine was a success is the verdict of all who attended. Unfortunately the preceding Congress, held three years before in Madrid, did not favorably impress the foreign delegates, and the unsavory reputation of that meeting kept many away from Lisbon. Spain and the Spaniards and Portugal and the Portuguese are very different countries and peoples. The contrast is most striking when one crosses the Portuguese frontier, and the comparison is greatly to the credit of the Portuguese. I wish this were the place to linger over the beauties of Portugal, for it is a country little known in America, and altogether too infrequently visited by our tourists. No more picturesque spot could have been chosen for the Congress than Lisbon. The wide expanse of the Tagus, forming a land-locked harbor, capable easily of accommodating the combined navies of the world, the seven hills covered with buildings of imposing architecture, and the wide boulevards with beautiful flowerbeds, trees in blossom, and many fountains, all combine to impress and to charm the visitor. The people were most hospitable and made us feel we were welcome. Nature, too, was at her best, for the sun shone each day; flowers were in bloom everywhere, and fragrance from the orange and lemon groves pervaded the air.

The headquarters of the Congress and the meetings were held in the new School of Medicine. This building deserves a special letter. It was finished a few days before the opening of the Congress, and was christened by this cosmopolitan gathering in the interests and development of the science which is destined to be unfolded within its walls.

The Medical College of Lisbon was opened in 1556, this being the fourth building. It is large and of imposing architecture, with a large courtyard in the center and an annex in the rear, in all containing ninety-five rooms. In close proximity are the bacteriological laboratory and the large general hospital.

Dr. Bourbarda, the General Secretary of the Congress, had been hard at work for many months, and had systematized and arranged the thousand and one details so that there was not a hitch. Over two thousand delegates were registered, besides many guests, and it required great executive ability to get the huge machine started and to keep it running smoothly. To each delegate who qualified before the Congress opened was sent a *carte d'identité*. Those from the various countries were assigned in separate groups. Thus the delegates from the United States comprised Group E, and were directed to booth E, where they registered and received all the printed matter which had been placed in a large envelope bearing the name of the delegate, so that it was but the work of a moment for the clerk to deliver to the proper person. This envelope contained the large official program, a medical guide to Lisbon of two hundred and fifty pages, with an excellent map of the city, a pocket program of the social fêtes, a condensed daily program of the general Congress and of the various sections, invitations to the various social functions, and the official insignia. The insignia was designed by Paul Richer, of Paris, and was of silvered bronze, oblong in shape, about one and a half by one inches. The medal was the same for everyone, but the ribbon attached signified the class of delegates to which the wearer belonged. The Government delegates had a gold ribbon, delegates from scientific societies a silver ribbon, and the ladies and other delegates a blue and white ribbon.

An official bulletin had appeared from time to time during the last year, but from the 19th to the 26th of April, while the Congress was in session, it was published daily. This bulletin gave the official notices, the minutes of the proceedings in the general session and

separate sections, and the list of the papers to be read on the day of issue.

Notwithstanding the effort of Dr. Ramon Guitéras, Secretary of the American Committee, not quite fifty American physicians were in attendance. Those holding Government credentials were Drs. Senn, of Chicago; VanderVeer, of Albany; Chase, of Boston; Major Richards (U. S. A.) and Commander Wise (U. S. N.), of Washington, and A. E. MacDonald, L. L. Seaman and Ramon Guitéras, of New York.

The opening session held on April 19 was a brilliant social occasion, for the King and both Queens, with their attendants, were present, as well as the élite of Lisbon. The King made the opening address and a delegate from each country represented gave a short address. Major Richards, of the United States Army, did the honors for the United States and made a dignified and impressive speech.

The proceedings of the scientific sessions were reported in the medical journals, so I shall not attempt to discuss in an informal communication this the most important feature of the Congress. The medical work was divided into twenty different sections which met separately in the mornings. A general session was held each afternoon when papers were read by men of renown. The close proximity of the meeting places and the issuing of a daily program made it possible for a delegate to listen to papers of interest to him in different sections. Each section had some special excursion or entertainment. For instance, the pediatric section spent one day visiting a maritime hospital for scrofulous children near Setubal, a charming spot about thirty miles from Lisbon.

The official language of the Congress was French, and all the printed matter appeared in that language, but in the sections English and German were permitted as well.

The hotel and lodging arrangements were in charge of a special committee, and there was no difficulty in securing accommodations. A bureau was established at the Central Station, where a list of hotels and rooms in private families was kept, with the price inclusive for eight days of the Congress. Incoming delegates could secure lodgings at the rate they wished to pay, and paid the committee for all accommodations, not the place where they stopped. It was a hard, thankless task for the committee, but a decided convenience to the delegate who could not be imposed upon by an unscrupulous landlord.

The social entertainments were most delightful. On the opening night the President of the Congress gave a reception at the *Ecole de Médecine* to all the delegates. The next afternoon we were all taken out to Cintra, a beautiful suburb, and tendered a garden party by the Marquis de Monserrate on his magnificent estate. A State banquet was given by the King and Queen to the Governmental delegates, which was an elaborate affair. One afternoon we were taken in special boats about fifteen miles up the river Tagus to Villa Franca. This small village was gorgeously decorated and swarmed with peasants in their picturesque costumes. The object of the trip was to witness an especially arranged bull-fight and other sports. Every care is taken in a Portuguese bull-fight that the bull, horses and men are uninjured, and it differs greatly from the brutal ones of the Spaniards. The King and Queen, with their young sons, occupied the royal box, and the whole performance was carried out in the manner and costumes of the Middle Ages. I can but mention a concert in the Zoological Garden, a garden party at the Royal Palace, presided over by the King and Queen, two large receptions and a ball. The life of a delegate in Lisbon was a continual round of gaiety.

Not one of the American delegates will forget the kindness and hospitality of the American Minister, Hon. Charles Page Bryan, who occupies one of the finest palaces in Lisbon. He gave a dinner one evening at which fifty Americans were present, and not a day past but that several physicians were his guests for lunch or dinner.

The next Congress, in 1909, will be held in Budapest, Hungary. The place of meeting is determined by the officers of the Congress, the Executive Committee and Governmental delegates. New York came very near having the honor of the next Congress, and, in fact, Budapest only received about ten more votes. The delegates from Austria, Germany, Italy, Japan, Norway and Sweden, and North and South America, all voted for New York, and had all of our voting delegates been present, New York certainly would have been selected. The Hungarian Government has appropriated forty thousand dollars towards the expenses of the Congress, and as the Hungarians are notably an hospitable people, the success of the Congress is assured.

Judging from the Fifteenth International Medical Congress it would be wise to begin planning to attend the Sixteenth Congress in 1909.

HENRY L. K. SHAW.

New Books.

ABDOMINAL OPERATIONS. By B. G. A. MOYNIHAN, M.S. (London), F.R.C.S. Philadelphia and London, W. B. Saunders and Company, 1905.

Moynihan's wide experience in abdominal surgery is sufficient guarantee that this volume is up to the standard of the best in surgical literature. The success of his former publications on various abdominal conditions insures equal success for the present volume.

The first chapter deals with the bacteriology of the stomach and intestines, which contains much valuable information and serves to emphasize the great stress which the author lays upon thorough cleansing of the mouth before all operations. The greater part of the volume is devoted to operations upon the stomach and intestines. Operations upon the kidney and bladder, as well as all gynecological operations, are not considered. There are excellent chapters on appendicitis, peritonitis, intestinal obstruction, diseases of the liver, gall-bladder and spleen. The chapter on the surgery of typhoid perforation gives an analysis of the able and exhaustive paper of Harte and Ashurst, of Philadelphia. The chapter dealing with the complications following gastro-enterostomy is not the least important part of this volume. The author is at his best in the chapters dealing with gastric and duodenal ulcers and diseases of the pancreas. In describing the various operations the author lays greatest stress upon those which he found from an extensive personal experience to be the best. He omits descriptions of the various mechanical aids used in anastomosis operations and shows his preference for the suture, using Pagenstecher celluloid thread. Operations are described in detail and are made more clear by many new and well executed half-tone illustrations.

The book is printed on heavy enameled paper, profusely illustrated, and is a credit to the book-maker's art as well as a valuable addition to the library of every surgeon.

SEXUAL NEURASTHENIA (Nervous Exhaustion). Its hygiene, causes, symptoms and treatment, with a chapter on diet for the nervous. By GEORGE M. BEARD, A.M., M.D., edited, with notes and additions by A. D. ROCKWELL, A.M., M.D. Sixth edition. New York, E. B. Treat and Company, 1906.

This sixth edition indicates the popularity of this work. None of the essential features has been modified. Attention is called to the symptom of incontinence of urine in its relation to neurasthenia and its method of treatment. Dr. Beard's large experience and power of analysis peculiarly fitted him for the consideration of the important topics here discussed.

MAN AND HIS POISONS. A practical exposition of the causes, symptoms and treatment of self-poisoning. By ALBERT ABRAMS, A.M., M.D. (Heidelberg), F.R.M.S. New York, E. B. Treat and Company.

The subject is one about which we know little, yet intestinal self-poisoning is sufficiently understood for

its successful treatment. Man is exposed to the danger of poisons generated within his system, the human body being the receptacle and laboratory of poisons. Nervous and mental diseases are often dependent on poisoning from the alimentary canal. Treatment, based on this, is convincing. The symptoms of self-poisoning, being mainly objective, are overlooked by patient and physician. Special attention is directed to the action of the sinusoidal current, and repeated reference is made to the principles of psychotherapy. The author says, "the mind is an important factor in influencing the body for weal or woe."

BLOOD PRESSURE AS AFFECTING HEART, BRAIN, KIDNEYS AND GENERAL CIRCULATION. A practical consideration of theory and treatment. By LOUIS FAUGERES, BISHOP, A.M., M.D. New York, E. B. Treat and Company, 1905.

This book considers the clinical relations of blood pressure from clinical, scientific work. In limiting the term scientific to the research workers, experimenters in chemistry and others, the author has added a useful treatise on blood pressure. The question of the physics of circulation and the alterations of pressure in the blood vessels, in patients suffering from serious disease, presents one of the intensely interesting problems in clinical medicine. The strain of modern life is evident in the circulatory diseases, as the statistics of disease of the heart and kidney show. The importance of treatment in the early stages of arterial degeneration are sufficient reasons for the publication of a clinical work upon this subject.

THE SUBCONSCIOUS. By JOSEPH JASTROW, Professor of Psychology in the University of Wisconsin. Boston and New York, Houghton, Mifflin & Company, 1906.

Although devoted to an abstruse subject, this is really a most fascinating book, and instructive, too. If the reader once passes the first sentence and is not discouraged, he will find himself in a most attractive literary field; it was, however, unwise of the author to set up this barrier to the entrance into his very excellent book: "The purpose of this essay in descriptive psychology is to provide a survey of a comprehensive aspect of human psychic endowment."

The book deals with the subconscious, not as a rare phenomenon, but as a matter of everyday life. The author says that it should be a homely term, and its place is close to the hearth of our psychological interests. He discusses it in its relation to the normal life as well as in the abnormal.

The illustrations of subconscious functions are apt. The author shows that often we are able to do successfully in unreflective response to a natural stimulus what we fail to do when we strenuously try to succeed.

"The centipede was happy quite,
Until the toad for fun
Said: 'Pray, which leg comes after which?'
This wrought his mind to such a pitch,
He lay distracted in the ditch—
Considering how to run."

GENITO URINARY AND VENEREAL DISEASES. By J. WILLIAM WHITE, M.D., and EDWARD MARTIN, M.D. *Sixth Edition.* Philadelphia, J. B. Lippincott Company.

This has become one of our standard works upon genito-urinary and venereal diseases. The authors have always kept in mind the practical side of the work. It fully covers all the ground of the subject. There are no conflicting views or theoretical discussions.

The first two chapters are given to diseases of the penis and the urethra. The plastic operations are well illustrated and described.

In the discussion of gonorrhoea the authors do not accord to the irrigation treatment of acute gonorrhoea the merits which many writers claim for it.

The subject of strictures is treated in the light of the most advanced knowledge and the authors eliminate many of the traditional notions regarding this condition.

Diseases of the bladder are discussed in this book in a

manner which shows an appreciation of the needs of the student and practitioner. The methods of making examinations for diagnosis are clearly presented.

The chapter on prostatic hypertrophy is excellent. No dogmatic statements are made. The various operations are described. The authors contend that the experience and aptitude of the operator with the method to which he is accustomed is of far greater importance in determining the choice of procedure than the character of the prostatic enlargement.

The book is illustrated with three hundred engravings and fourteen colored plates. The frontispiece is a beautiful picture of the *spirocheta pallida*.

THE PRACTICAL MEDICAL MEDICINE SERIES. Vol. I. General Medicine. Edited by FRANK BILLINGS, M.S., M.D., and J. H. SALISBURY, A.M., M.D. Vol. II. General Surgery. Edited by JOHN B. MURPHY, A.M., M.D., LL.D. Series 1906. Chicago, The Year Book Publishers.

These books, published under the general editorial charge of Dr. G. P. Head, present a most useful résumé of the progress of medicine. They take up the subjects which have been under discussion, and which have been dealt with in original articles in current literature, and present résumés of these articles, bearing upon the subject.

The value of such works as this depends much upon the judgment used in selecting material. This, we may say without reserve, is most excellent in these volumes.

This work is of much practical value to the general practitioner. The specialist and the author will find it useful for reference.

Deaths.

PALMER C. COLE, M.D., of New York, died suddenly, July 4, at the age of 71 years. He served as surgeon during the Civil War.

ISAIAH DEVER, M.D., died at Clinton, N. Y., on Sunday, June 24; aged 72 years.

ROLLIN A. GOODELL, M.D., died in Homer, N. Y., on Sunday, July 1; aged 65 years.

ORLANDO F. GREENMAN, M.D., died at Elmira, N. Y., on Tuesday, June 26; aged 82 years.

DAVID B. HORTON, M.D., died in his office in Walcott, N. Y., July 9, from the effects of carbolic acid poisoning. He was formerly president of the Wayne County Medical Society.

JOSEPH LEWIS HOWELL, M.D., formerly of Newton, N. J., died at Avoca, N. Y., July 9th, of typhoid fever; aged 38 years.

SAMUEL HUNTER JAMESON, M.D., died in New York from senile debility, July 5; aged 85 years.

HENRY H. KANE, M.D., of New York City, died at Saranac Lake, N. Y., June 28, from tuberculosis.

CARL HENRY KENROTH, M.D., died in the French Hospital, New York, July 2, from nephritis; aged 70 years. He was a graduate of Erlangen University, Germany; a lieutenant in the British Army during the Crimean War, and for many years a teacher of languages in New York City.

HERBERT JAMES LITTLE, M.D., died at his home in New York City, June 25; aged 32 years.

WILLIAM M. LIVELY, M.D., a colored physician of Brooklyn, N. Y., and a founder of McDonough Hospital, New York City, died suddenly in Allentown, N. J., June 18; aged 58 years.

ROBERT H. THEYSON, M.D., of New York City, died at St. Luke's Hospital, June 20, after an operation for appendicitis. He was 49 years old.

CHARLES A. WICKER, M.D., of New York, died suddenly of heart disease on July 11; aged 51 years.

EDWARD G. TUFFS, M.D., died suddenly, June 20. He had been in poor health for about six months. Dr. Tuffs was born 55 years ago in New York City.

HARRIS E. WEBSTER, M.D., died in Rochester, June 16; aged 64 years.

WILLIAM RICHARD KEYES, M.D., of Glens Falls, N. Y., died at his home, of tuberculosis; aged 42 years.

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Original Articles.

THE PORTALS OF ENTRY AND SOURCES OF INFECTION IN THE TUBERCULOSIS OF CHILDREN.*

By DAVID BOVAIRD, Jr., M.D.,
NEW YORK.

I N venturing to attempt the task of filling the gap caused by the absence of Dr. Jacobi, the reluctance natural to such a situation is heightened by the fact that the theme to be discussed is not a new one. On the contrary, it has been often discussed in the writings of scientific men and the various views of individuals have been presented with earnestness, yet no general harmony of understanding has been reached. The very fact that discussion of the subject is still appropriate bears eloquent witness to the truth of the aphorism of Hippocrates, with which Osler prefaces his "Practice."

"Experience is fallacious and judgment difficult."

However, bearing in mind that the purpose of this Society is eminently practical, that we must seek not so much scientific accuracy as definite result and that the field of our labors is to be, not Europe, or Asia, but our own country, I shall endeavor briefly to put before you the views to which some years of observation and study have led me.

From the days when the experiments of Villemin proved the transmissibility of tuberculosis it has been accepted that the inoculation of tuberculosis would result in a definite succession of events in the affected animal. First of all, there would be a local lesion of the cellular tissues or skin in cases of subcutaneous infection, of the peritoneum if the infective material were injected into that sac, of the intestines in cases of feeding experiments, of the lungs when infected dust was inhaled. Then the lymphatic glands in closest relation to the original focus would become diseased, one gland becoming involved after another till a whole chain would be affected, and finally the deep thoracic or abdominal glands would give way and the disease would invade the viscera or by way of the veins would be transmitted everywhere throughout the body by the blood stream.

This same course of events has been observed in thousands of animals, of many different species—rabbits, guinea pigs, dogs, cats, pigs, horses, sheep, goats, etc., etc.,

The belief that the same course would follow in man seemed, therefore, fully justified, was unreservedly adopted and for many years has served as criterion for the interpretation of the tuberculous processes of man. But within a few years doubt has been thrown upon this belief and confusion spread as to the soundness of interpretations founded thereon. Some feeding experiments have resulted not in abdominal, but in pulmonary tuberculosis. In some cases the local lesion of skin or intestine was found lacking. Some inhalation experiments have failed, others have resulted in abdominal tuberculosis.

Particularly influential in this way have been the experiments of Ravenel in producing pulmonary tuberculosis in monkeys and cows by intestinal inoculation.

The doubt thus thrown upon our methods of interpretations has resulted in leaving us in great uncertainty as to our knowledge of the portals of entry for tuberculosis in man.

It was, therefore, with great satisfaction that I recently read the masterly treatise of Cornet (in Nothnagel's Encyclopedia) on this theme. Without attempting to reproduce his evidence or line of argument permit me to quote the following conclusions:

1. Tubercle bacilli which have invaded the organism regularly develop at the site of invasion, or in the next set of lymph-glands.

2. The further dissemination is gradual, so that the pathological findings ordinarily furnish a clue to the site of invasion.

3. The theory of a special predilection on the part of the lung for the tuberculosis poison finds no experimental confirmation. The lung is first involved and shows the most advanced changes only in cases in which the infection travels by the air-passages; it is the organ last and least invaded in cases in which it is furthest removed from the primary seat of infection.

In brief, as the result of this masterly study by Cornet, the older methods of interpretation of the findings in tuberculosis in man are reestablished as entirely trustworthy.

With that understanding, therefore, let us turn to the clinical and pathological data at hand to determine what are the avenues by which the tubercle bacillus obtains entry in man.

There are five different routes by which tubercle bacilli may obtain entrance to the body:

*Read at the meeting of the National Society for the Prevention of Tuberculosis, held at Washington, D. C., May 19, 1906.

1. By the placental circulation.
2. By contact with the surface of the body, the skin, the eye, the ear, etc.
3. By the respiratory tract.
4. By the digestive tract.
5. By the genito-urinary tract.

Infection through the placenta is possible. Tuberculosis in the mother may be transmitted directly to the child; but such transmission is so rare that from the standpoint of prevention it may, for the present, be disregarded. Wollstein, in her recent review of the subject, finds that there are reported in literature 20 cases of such placental infection, in which the facts given are sufficient to prove the case. This rarity of hereditary tuberculosis in man is fully borne out by the infrequency with which such transmission occurs in the lower animals.

Infection through the genito-urinary system is practically unknown in childhood. Tuberculosis of the kidney, bladder, ureter, etc., when it develops at this age is, in nearly all cases, simply part of a generalized tuberculosis with portal of entry elsewhere. We may, therefore, omit further discussion of this avenue of infection.

Infection through the skin is also of minor importance. Unquestionably in some cases tubercle bacilli obtain admission to the system through wounds or abrasions of the skin, through eczematous areas, etc., and taken up by the nearest lymph nodes give rise to a glandular tuberculosis. Infection produced in this way accounts for a small part of the cases of tuberculous adenitis, especially in the neck. It is also possible that in rare instances joints may be involved by extension from the skin or adjacent glands, but such processes play no role in the production of the tuberculous joints with which we are all familiar.

With the skin infections we may class the cases of primary tuberculosis of the conjunctiva or eye, of the ear and of the external genitals in which the disease is produced by direct contact with tuberculous material of any kind. Reports of such cases are common enough in literature to indicate that the danger of infection in this manner is real. The infective material in these cases may be the sputum of tuberculous patients, the organs of tuberculous cattle, even in some cases the milk of such cattle, or any other matter, human or animal, which contains tubercle bacilli.

It has long been assumed that some wound or lesion of the skin or surface was essential to the lodgment of the tubercle bacillus. Cornet has, however, demonstrated that the bacillus may make its way through the uninjured integument.

But with this fact admitted we all know that surface infections by tuberculosis play an insignificant part in the ravages of the disease. Only under especially favorable conditions can the bacillus effect lodgment on the surface, and even though it does live and develop in a surface

lesion it rarely or never passes the adjacent lymph nodes. Surface lesions regularly remain local. A few cases of pulmonary disease following such lesions are recorded, but they are too few to be important in the great totals with which we have to deal.

We are therefore reduced to the consideration of the infections by the respiratory and digestive tracts. These are the two great portals of entry in the tuberculosis of children, and by one or the other route the great majority of cases of tuberculosis in childhood with which we have to deal is to be accounted for. The chief aim of this paper is to indicate to you the relative importance of these two avenues of infection and it seems to me that this can best be done by discussing briefly their relations to the more important clinical types of tuberculous disease in children, namely:

1. The glandular.
2. The pulmonary, including bronchial lymph nodes.
3. The intestinal, including the intestines, mesenteric lymph nodes and peritoneum.
4. The osteal, including bones and joints.
5. The meningial.
6. General military tuberculosis may be omitted, being always secondary to one of the above types.

1. As to the glandular type. The great majority of these cases affect the cervical lymph nodes or glands, 93 per cent. of 430 cases analyzed by Wohlgemuth. That cutaneous infection plays a small part in the production of these cases has already been stated. It is, however, to infection through the upper respiratory tract, the nose and nasopharynx, or the upper alimentary tract, the mouth and pharynx, that we must look for the causation of much the greater part of these cases. In this relation it is evident that the pharynx and tonsils may be classed either with the alimentary or the respiratory tract and may be infected by either avenue. Whether the cervical nodes are more often infected through bacilli inhaled, that is by the respiratory tract, or by organisms admitted by the mouth, especially with the food, is an open question. At present there is no means of definitely deciding the matter. Many recent articles emphasize the importance of naso-pharyngeal adenoids and tonsils as the primary foci of such cervical adenitis. Wood (*Jour. A. M. A.*, May 6, 1905) has presented an excellent résumé of this subject. Involvement of tonsils or adenoids may be either primary or secondary. Considering the exposure of these parts which must be present in every case of pulmonary tuberculosis the secondary involvement is strikingly rare, just as is tuberculosis of the mouth under these conditions. The apparently primary disease of tonsils and adenoids is, on the contrary, of great importance. Not to weary you with statistics, I will quote only Wood's summary. In a total of 1671 adenoids or tonsils examined (no tuberculosis elsewhere), tuberculosis

was found in 88, or approximately 5 per cent. It is apparent, therefore, that these lymphoid structures constitute an important source of infection for the cervical lymph nodes. But years ago Jacobi pointed out that it was not so much to the tonsils or adenoids as to the lymph follicles in the nasal passages or the walls of the pharynx that we must look for the infection in tuberculosis of the cervical nodes, and that belief he still holds firmly. That these nodes do respond most quickly and certainly to inflammatory processes of any kind in the nose or nasopharynx, and but slowly to processes limited to the tonsils, is a matter of almost daily clinical experience. Clinicians will, therefore, be likely to favor the view that infection of the cervical nodes is in most cases air-borne, but as already stated we have at present no information which enables us to decide what proportion of cases of tuberculous cervical adenitis is to be referred to inhalation, or to infection through the mouth. We must admit that the bacilli may enter in either way and from the standpoint of preventive medicine regard the two portals of entry as of equal importance.

2. As to the pulmonary and bronchial gland tuberculosis. In this category falls the great mass of all our cases of tuberculosis in children. In 125 autopsies on tuberculosis children in the Foundling Hospital Northrup found the bronchial glands tuberculosis in all—the lungs being also involved in most of the cases. In a second 125 cases in the same hospital the writer found tuberculosis in the lungs or bronchial nodes of all. The same is true of 119 cases reported by Holt. In 115 autopsies reported by Hand the bronchial lymph nodes were involved in 81.7 per cent., the lungs in 78 per cent. of the cases. The most striking fact in the autopsy findings in tuberculous children is, therefore, the almost constant involvement of the bronchial lymph nodes, or lungs.

Not all of these are primary infections of the respiratory tract. It will be readily understood that in many instances the tuberculous processes are so widespread and so advanced in different parts that it is quite impossible to determine the location of the primary disease. Combining the observations of Northrup, Holt, Hand and myself, we can, however, say that in nine-tenths of all cases of tuberculosis in children in which the primary focus is determinable it is found in the bronchial lymph nodes or lungs. The question which most interests us to-day is, whether such location of the primary focus indicates that the infection is respiratory in these cases or not. Within the last few years the results of certain experiments made by Ravenel have cast doubt upon this subject. Ravenel, in two monkeys and one cow, produced tuberculosis of the lungs and bronchial glands, without mesenteric or intestinal lesions, by inoculating the food with tubercle bacilli. Failure to produce lesions of the lungs or bronchial nodes in inhalation experiments performed by other investigators has increased this

doubt. But if one reviews the inhalation experiments of Villemain, Koch, Tappeiner, Thaon and, finally, of Cornet, he will be thoroughly and quickly convinced of the reality of inhalation tuberculosis with its primary focus in the lungs or bronchial lymph nodes. Tappeiner's assistant, Thaon, is said to have died of a tuberculous broncho-pneumonia, contracted during his experiments in this line. In 47 out of 48 guinea pigs exposed to the inhalation of dried tuberculous material, as nearly as possible in the manner in which human beings are exposed to such infection, Cornet has produced typical tuberculosis of the lungs and bronchial lymph nodes, and to quote that investigator's own words: "These results destroyed the very foundation of Baumgarten's skepticism concerning the frequency of inhalation tuberculosis." They may likewise satisfy any doubts on our part. Of the bearing of Ravenel's experiments on this subject, I am not at present sure. The results are so exceptional, so at variance with those of many hundreds of other feeding experiments, that, until they are supported by further observations, I think it best to suspend judgment concerning them. From all the evidence at hand it seems to me that we can safely say that in nine-tenths of the cases of tuberculosis in children in America, where the primary focus is determinable, that focus is in the bronchial lymph nodes or lungs, and it is the evidence of an inhalation tuberculosis.

3. Intestinal tuberculosis—including tuberculosis of the intestines, mesenteric nodes, and peritoneum—is frequently met with in children. In Hand's series of 115 cases, for example, the mesenteric lymph nodes were involved in 46 per cent., the intestines in 28 per cent., the peritoneum in 18 per cent. of the cases. In most instances all three structures are involved at the same time. The difference in the ratio of involvement of the intestines and mesenteric nodes reflects a fact with which we have all now become familiar, namely, that in infection by the alimentary tract, the bacilli may pass through the intestinal wall without producing a local lesion. The same fact has been demonstrated experimentally by Cornil and Dobroklonski and others. Passing the intestinal wall, however, they are regularly taken up by the mesenteric lymph nodes and in them they regularly leave the evidence of their progress. That has been the almost universal experience of experimental work on intestinal infection with tuberculosis.

Thus Nocard remarks: "By adding to the drinking water of young cattle tuberculous pus, or carefully diluted caseous material, one gives them to a dead certainty tuberculosis of the abdominal organs. These facts have been everywhere confirmed, notably by Saint Cyr for cattle, by Toussaint and Peuch for pigs, by Leisering for sheep, by Bollinger for goats, by Vincent for cats, and by Jöhne for most of the different species."

These facts constitute ample ground for regarding the unusual results of Ravenel's experiments as requiring further confirmation.

The intestinal tuberculosis of children is, however, accounted for in most cases not by the ingestion of bacilli with the food, but by the swallowing of bacilli in matter coughed up from the lungs. The fact that young children do not expectorate is well known. In the light of their habit of swallowing whatever they cough up into the pharynx, the wonder is that all cases of pulmonary involvement are not complicated by intestinal lesions. The fact that the intestines sometimes escape, even when the pulmonary involvement is marked, points to the action of very potent protective agencies. What these are, there is no time to develop.

The important point at this moment is the rarity of primary intestinal tuberculosis in children in America. Estimates on this point vary considerably.

Northrup found 3 cases in 125 tuberculous children.

Holt found no case in 119 tuberculous children.

Hand found 10 cases in 115 tuberculous children.

The writer found 2 cases in 125 tuberculous children.

Fifteen cases in 484—3 per cent. approximately.

That percentage may, therefore, be set down as probably caused by the ingestion of tubercle bacilli in or with the food.

Let me very briefly refer to the two final clinical groups.

a. Of bones and joints.

b. The meningeal.

These types are of peculiar interest because at autopsy they often afford us the best opportunity of judging of the source of primary infection. Theoretically we must concede that the meninges may be involved by extension of a tuberculosis process from the nose, the ear, or the cranial bones, from foci in the bones or joints, or from any other tuberculous focus in the body, but practically such extension is very rarely seen.

I have hastily gone over the autopsy records of the Foundling Hospital for three years. In that time eleven cases of tuberculous meningitis had been thoroughly examined. In one of these cases the primary focus was intestinal, in one it was indeterminate, in the remaining nine it was in the bronchial lymph nodes or lungs. (In passing I may say that I have also seen a case of tuberculous meningitis in which no other tuberculous lesion could be found in the body—a fact which has also been noted by Hand.)

I venture to quote the result of such a brief series of observations only because I am convinced that if all the cases in the Foundling Hospital records were studied the results would not be materially different from those given. Of the osteal tuberculosis seen in New York almost the

same words may be used. When the primary focus can be demonstrated, it will in the great majority of the cases be found in the lungs or bronchial lymph nodes.

To recapitulate:

Glandular tuberculosis (cervical lymph nodes) may be produced either by inhalation or ingestion of the bacilli—probably most often by inhalation.

Tuberculosis of the bronchial lymph nodes or lungs is regularly an inhalation tuberculosis.

Tuberculosis of the meninges or bones and joints in the great majority of cases (9-10) has its primary focus in the bronchial nodes or lungs, and is therefore probably an inhalation tuberculosis.

Tuberculosis of the alimentary tract is primary (*i.e.*, produced by the ingestion of the bacilli) in a very small percentage of cases.

With reference to the sources of the bacilli which may infect children I shall be very brief, my views being already foreshadowed by my understanding of the routes of infection.

For evident reasons inhalation tuberculosis will regularly mean infection from other cases in man, an ingestion tuberculosis may be either of human or other origin.

The unity of tuberculosis in man and animals is established beyond question. Theoretically, therefore, one must grant that tubercle bacilli, whether from man or animal, set free in whatever way from the body of the original host, may convey the disease to children. Experience has, however, already demonstrated that tuberculosis is not easily transmissible in any case, and we are, I believe, satisfied that the discussion of this theme may at once be narrowed to the question whether the tuberculosis of children is derived in toto from previous cases in man, or in part produced by tubercle bacilli present in the milk of diseased cows.

Koch's declaration of the quality of human and bovine tuberculosis has been buried under a mountain of proof that the human disease can be transmitted to cattle. The demonstration of the presence in cases of tuberculosis in man of bacilli corresponding in every way to the bovine type of tubercle bacilli has established beyond question the communicability of the disease in the reverse direction. The theoretical aspect of the question is settled. Practically, however, it remains to be determined to what extent transmission from cattle to man influences the prevalence of the disease among children. For myself I am convinced that the part played by the bovine disease in this regard is a minor and for the present unimportant one. The reasons for this conviction are:

1. The rarity of primary intestinal tuberculosis in children. It will, I think, be conceded by all that if the ingestion of milk containing tubercle bacilli produces tuberculosis, in the great majority of such cases the lesion should be most marked in the intestines, mesenteric nodes and peritoneum.

It need hardly be pointed out that human bacilli may, by means of dirt on the hands, playthings, etc., of children, be ingested and may at times produce abdominal tuberculosis. Indeed, the observations of Preissich and Schütz who found tubercle bacilli under the finger nails of a number of children not in direct contact with phthisical patients suggest that such a train of events is not infrequent.

We may, however, omit consideration of that factor for the present. The rarity of primary intestinal or mesenteric tuberculosis, as established at autopsy, has already been stated. On that point, as I have pointed out in a previous paper, French, German, and American observers are in practical accord. In Great Britain alone is any considerable proportion of such cases found in post-mortem work, observers in England and Scotland reporting as high as 30 per cent. of primary intestinal infections.

The justice of explaining such discrepancy of results on the basis of different interpretation of pathological findings has never appealed to me. Any tendency in that direction was checked by learning that the discrepancy is borne out by clinical observations. Two years ago, under the guidance of Dr. John Thomson, I was shown in a single morning in the Edinburgh Children's Hospital more cases of abdominal tuberculosis in children than I had seen in ten years' work in the hospitals and dispensaries of New York city. Abdominal tuberculosis in children is an every day experience with them; a rarity with us.

These differences in clinical and pathological observations are not to be explained by greater prevalence of tuberculosis in cattle in Great Britain, and they seem to me to indicate the working of some influences which have not yet been pointed out.

2. The paucity of cases in which the development of tuberculosis in children can be reasonably referred to the ingestion of the milk of tuberculous cattle. Five years ago, after a careful search of literature, the writer was able to gather together hardly a score of such cases. Careful watch in the intervening years has failed to add materially to that number.

It may readily be urged that infection with tuberculosis is regularly so slow and insidious that there would naturally be great difficulty in proving a case. While admitting some weight to this objection, it does not seem to me to satisfactorily explain the facts, if there is any great danger from milk. There are on record observations by veterinarians of herds of cows in which 50, 60, even 90 per cent. of the animals were tuberculous. The distribution of the milk of many of these herds must have been known, and if its consumption had resulted in the production of any considerable number of cases of tuberculosis among children, the facts should have been capable of demonstration. So far as is known, no such demonstration has ever been given. On the contrary, a number of instances

are on record where the milk of tuberculous cows has been consumed by families or groups of individuals, including children, for long periods of time without untoward consequences. Doubtless such instances are known to some of you.

3. Finally, the most conclusive argument against the influence of milk as an agent in the communication of tuberculosis to man is to be found in the careful studies of Biedert and Ganghofner. Biedert, in Upper Bavaria, and Ganghofner, in Bohemia, have made most careful comparison between the numbers of tuberculous cattle and the number of deaths from tuberculosis in man in the several districts of the country.

They could discover no relation between the factors, and both conclude that while bovine tuberculosis is transmissible to man, such transmission plays no important part in the prevalence of tuberculosis in man, and more particularly in children. From that conclusion in the light of our present knowledge I see no escape.

The source of the bacilli which convey tuberculosis to children is, therefore, to be sought in other cases of human tuberculosis. More particularly for reasons already suggested, the danger lies in the expectoration of consumptive patients. The tuberculous sputum, dried and pulverized, pollutes the air and inhaled by children, or carried by their hands, or other means to their mouths, reproduces the disease in them. As Comby put it years ago, "Les crachats, c'est l'ennemi!"

The sputum is our enemy. In it lurk the messengers of death. Control or conquer that source of infection, and tuberculosis among children in this country, if not entirely removed, will sink into comparative insignificance.

PREPARATION FOR THE COURSE OF MEDICAL STUDY.*

By CHARLES F. WHEELOCK, LL.D.,

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Education Department.

THE education of any individual is a whole. It consists of all the training and all the information acquired in kindergarten, primary school, high school, college and professional school. Each succeeding part of this education depends upon that which goes before. It follows then that any adequate consideration of a medical curriculum necessarily involves also a consideration of the course of study preparatory to entering upon the strictly professional course.

While considering this subject we must bear in mind the fact that there are two quite distinct classes of physicians: the specialist and the general practitioner. The general practitioner must

*Read before the Confederation of State Examiners, at Boston, Mass., 1906.

be familiar in a general way with the entire field of medical science and medical art. To him the great majority of cases come in the first instance. He must be able to determine whether the services of the specialist are required or not in any given case. He is the *family* physician—a title that is of right second in honor to no other. He comes into the most intimate relations with us. He is much more than simply "Doctor"; not infrequently he is friend, counselor, guide, in matters quite outside his strictly professional field. He comes very close to us in all the crises of our lives from the very beginning to the very end.

A rational medical curriculum must include all the subjects that are essential for the general practitioner. It cannot in the nature of things aim at the training of specialists. It must be a minimum curriculum, not a maximum.

The curriculum leading to the degree of Doctor of Medicine is the outline of the course of study for the preparation of this general practitioner. The physician must be first of all a broadminded, trained man. Mere knowledge of the minute details of anatomy, physiology, chemistry, *materia medica* and of the other so-called medical subjects is not a sufficient preparation for his calling. Training in scientific method until that method becomes a fixed habit is of more importance than quantitative analysis. The training that enables one to grasp all the conditions of a given problem and to hold these conditions in mind while he traces the effect of each upon the final result is of more importance than a knowledge of the mere facts of minute anatomy.

I would not give the impression that I hold the study of the facts of medical science to be unnecessary; far from it; there is a large body of fact that the physician must have ever present in his mind; he must be ready for emergencies. But we all know how rapidly much of the accurate knowledge of details of such a subject as anatomy leaves us. How frequently one hears a physician say after ten or fifteen years of practice that he is not prepared to pass an examination in the details of medical science. Facts not continually used will go. They may be recovered when needed. Power—scientific method—is needed always. It will remain when once acquired; it is fundamental.

If the view expressed above is correct, the course preparatory to the study of medicine should be planned with reference to this training value more than to the acquisition of facts. Where subject matter that bears directly on the medical course can be made the means of training, such subject matter should, of course, be employed as far as possible in the preparatory work; but in such subjects the method is of more importance than the matter.

In my opinion the preparatory high school course should be built about a skeleton of English, classics and mathematics: the English, be-

cause the necessity for exact expression is constant; the classics and mathematics, because of their demonstrated training value. These subjects should be supplemented by at least one physical science—preferably physics—and one biologic science.

I have very little respect for many of the modern, elective courses of study in the modern high schools. That a student has spent four years, and that he has covered a long series of unrelated subjects, such as civics, economics, commercial geography, bookkeeping, botany, a year of French, a year of German, a year of English, business correspondence, etc., does not prove that he is either trained or informed. My preference would be for a somewhat rigid course in the high school, made up of subjects no one of which has been studied for less than one year and most of which have been studied for two or three years. I would have not less than four years of Latin, and if a modern language is in the course, not less than two or three years of such modern language. I still believe that Greek is worth more than French or German to the medical student.

New York State has been the pioneer among the States of this country in making statutory requirements in this direction. Our statute has required up to the present time four years of high school work without regard to the subjects included. It may be interesting to many to learn that our experience has led to a modification of the medical student certificate, which was adopted by the Regents of the University, April 26. We now propose to issue a medical student certificate to one who will *pass our examinations* in three years of English, in two years of mathematics (including algebra and geometry), in two years of Latin, one year of physics, one year of chemistry and one year of American history. We believe that this is a better preparatory course than the one that has been heretofore offered. While this course, as you will observe, covers an average of only two and one-half subjects pursued through four years, we believe that its training value is worth much more than that of a course made up of twenty-eight or thirty subjects pursued for from ten to twenty weeks each. In quantity it appears to be less; in quality it is certainly much more than we have formerly required.

It should be noted also that the student who does the work specified above will regularly do considerable other work, thus making out a full high school course in quantity as well as quality.

We all recognize the fact that the best high school course leaves much to be desired as a preparation for the study of medicine. A full college course is the ideal and it is no more than sufficient for this purpose. But we are here confronted with economic conditions that make this impossible of realization in all cases. The great majority of all who select medicine as a vocation must make it a means of gaining a liv-

ing. The business aspects of the case can not be neglected. A large proportion of the graduates of our medical colleges must go out into the smaller towns and villages to practice medicine. The work is hard and the remuneration is not large. It is an economic impossibility to require of all an expenditure in preparation that is clearly beyond the hope of return in the future. For the present and for the immediate future the doctor degrees must be granted to many who can not spend four years in high school, four years in college and four years in a professional school. We are glad that there are some schools that are able to make this requirement, and that there are some students who are able to give the time and the money necessary to complete such a course. We need and shall always need the trained specialist and the trained investigator; but at the same time we need and must have the country doctor. In a large majority of cases, then, it seems to me, that we must organize our medical curriculum on the basis of a high school course as preliminary education.

I have said above that the four-year college course is the ideal preparation for the medical student, but that economic conditions make it impossible of realization in all cases at present and, so far as we can see, in the near future. Is it possible to so combine the work of the arts course with the medical course that we may avoid, to some extent and in a large number of cases, the economic difficulty? This seems to be the burning question in medical education today.

The rapid development of medical science within the last few years has so extended the field that must be covered that four years is none too long a time for it. Even though the students come to the medical school with the training that is assumed to go with the A.B. degree, he can not well cover the subject matter that is essential in less than four years. This seems to be almost universally admitted. The A.B. degree can not then be accepted *per se* for any part of the time of a medical course. In those universities where arts courses and medical courses are both maintained it is easy—if the authorities so desire—to accept the first year of medicine for the last year of arts, and so give the students both degrees within seven years. What could be done in case the student is in a literary college, where no medical department is maintained, or in case a student wishes to pursue his medical course in some institution other than that from which he obtains his bachelor's degree?

I can perhaps best answer this question by stating what is being done along this line in New York State. At the Regents' Convocation in Albany, in June, 1904, this general question was discussed in a most able paper by Dr. Albert Vander Veer, of Albany. Subsequently, a committee consisting of leading representatives of medical colleges and of literary colleges was

appointed to give the matter further study. At a conference of colleges, held some months ago, Dr. Egbert LeFevre, of New York University and Bellevue Medical College (the chairman of this committee), gave a preliminary report, which I introduce here as the latest expression in our State on this subject and one made after most careful consideration by many able men:

SUMMARY OF HOURS.

	Instruction.	Laboratory.
Anatomy	150	50
Biology		
Histology	75	40
Botany and zoology		
Bacteriology	75	40
Chemistry	150	50
Physics	100	40
Physiology	100	40
	650	260

"Anatomy—The anatomy taught in the undergraduate college should include a thorough course in comparative anatomy. If this training is thorough it would seem possible not to introduce human anatomy beyond that which concerns the bones of the skeleton, joints, ligaments and the muscles as taught comparatively.

"Histologic Technic and Microscopy—The work in the colleges in this subject is really beyond that given in the medical schools. The textbooks on embryology are satisfactory, and most of the courses in the colleges are beyond those given in the medical schools.

"Botany and Zoology should also be included in the course in biology. Materia medica found in the curriculum of most medical schools can not be taught satisfactorily in college, but the student well grounded in botany can readily take up materia medica in the second year.

"Bacteriology—In the college course, this should be taught more definitely than at present. In the medical schools disease-producing micro-organisms are studied, but it is not necessary that these should be used in college, as the principles involved in making culture media and growing micro-organisms in the laboratory, and the life history, can be demonstrated as well on the simple forms as on those producing disease, especially as this work is reviewed later in the curriculums of the medical schools. The end to be secured in the teaching of bacteriology in the college should be a thorough training in the technic and principles involved, which should include:

"1. Instructions in the methods of making staining solutions and the preparation of the solutions in most common use in laboratory work.

"2. The technic of making cover slips of the basic form of bacteria and the study of their morphological characteristics.

"3. The methods of cleaning and sterilizing glassware and nutrient media. The study of the effect of different temperatures on the growth of different bacteria, the method of making plate cultures, the counting, fishing and systematic study of colonies.

"4. Systematic study of at least six organisms, including their cultural and staining characteristics, the chemical products formed, and their resistance to heat and chemicals. Also the bacteriological examinations of milk, air and water.

"Chemistry—This subject should include general chemistry (organic and inorganic), analytic (qualitative and quantitative), and medical toxicology and urinalysis. From the medical point of view toxicology and urinalysis demand greater knowledge of physiology than the college student possesses, but the student thoroughly drilled in general and analytic chemistry will have no difficulty in taking up these subjects in the second medical year.

"Physics—This subject should be taught very thor-

oughly in the college or high school course, as medical students need to be particularly conversant with light, heat, electricity and kindred branches.

"Physiology—The physiology that should be taught in the college course will consist of elementary physiology, but it should be taught very definitely. Courses outlined in *Moore's Elementary Physiology* or *Huxley's Principles of Physiology* will be adequate.

"The so-called circular course of many medical schools, in which half the subject is treated the first year and the remainder the following year, renders it impossible for a student to enter the second year well prepared in physiology. If the course of such medical schools can be reconstructed so that the first year in general physiology shall be an elementary course, leaving for the second year the consideration of human physiology in detail, the elementary course can readily be given in college."

Of course the work outlined in this report must be done if it is to be accepted. A mere perfunctory covering of the subjects will not suffice and will not be accepted. The colleges in which the work is done must be equipped with satisfactory laboratory facilities and with sufficient teaching force to make the work effective. None of the work should be accepted till positive evidence is submitted that the conditions have been met.

When this can be done it seems to me perfectly clear that it will be a positive advance in medical education to grant the M.D. degree on those who have completed a four-year college course that includes the work specified and who have subsequently spent three years in a medical school. Seven years' training must result in better equipment than four years' training can give. Moreover, if the subjects mentioned in the report are well taught there will be no weakening of the arts course. In fact, if the work be well distributed through the four years of the arts course, that course may be strengthened instead of weakened.

I have no right to speak with authority concerning what will be done in our State, but it seems very probable that the Regents will, in the near future, adopt substantially the plan recommended by the committee in the report quoted above.

If such action shall result in influencing more students to take a college course in preparation for the study of medicine, we shall be brought by that much nearer to the ideal.

It would seem out of place, I am sure, for me, a layman, to attempt any elaborate discussion of the details of the topics that should constitute a medical course. I ask your forbearance while I make a few general observations regarding it.

To me it seems unwise to even attempt to formulate for general adoption a rigid curriculum prescribing definite subjects, definite quantities, definite sequence or methods of instruction. So long as individuals think independently there will be differences of opinion upon all of these points. It should be possible to fix a minimum requirement in hours for a few subjects.

The methods of presenting subjects and the sequence of the subjects in the course will of

necessity vary according to the varying views of those who are giving the instruction and the varying conditions under which the instruction is given. As I have said previously, power is of more importance than mere information. Every course of study should be shaped with reference to giving the student the ability to apply, so far as possible, his knowledge of medical science. The development of clinical instruction to the greatest possible extent, the increase in laboratory facilities, and the consequent better development of the basic principles of medicine are subjects that should receive careful consideration. It should not be forgotten that the highest test of the efficiency of medical science is found in the ability to prevent disease rather than the ability to cure. Courses in hygiene and sanitation should be made a prominent feature in the curriculum.

In conclusion, let me say that it is highly gratifying to observe the increased interest on the part of the public in scientific medicine as is manifested in the popular approval of legislation tending to raise the standards for admission to practice, and to guard the public against medical charlatans. I hope the time is not far distant when every State will license but one kind of physician—the man who is fit—and will then permit him to practice in accordance with whatever school or method his good judgment may dictate. I hope too that the time is not far distant when the standards of all the States will be such that a physician moving from one State into another may find no obstruction in the way of earning a livelihood by the practice of his profession.

THE TREATMENT OF RHEUMATOID ARTHRITIS AND ALLIED CONDITIONS OF THE JOINTS.*

By WILLIAM BENHAM SNOW, M.D.,

NEW YORK.

IN the treatment of rheumatoid arthritis there are always four things to consider: (1) the cause; (2) the central condition; (3) the general constitutional condition, and (4) the local affections.

In my experience with more than sixty cases of this disease, I have found invariably that some exhausting condition or circumstance has been present prior to or associated with the onset of the affection. Chronic nephritis marasmus, grippe, affections of the alimentary canal, pelvic derangements, over-work, anæmia from various causes, auto-intoxication from constipation, each may play an important part. These seem to bring about nutritional changes in the trophic centers of the cord, for the conditions present are characteristic of those associated with involvement of the cord. While the affection may appear,

*Read by invitation before the Section on Orthopedic Surgery, New York, Academy of Medicine, April 20, 1906.

first in one joint, usually in one thumb, in a very short period of time it is present on both sides and as it proceeds appears bilaterally. Atrophy becomes marked in all cases upon both sides as the disease progresses—atrophy invariably out of proportion to disuse. This atrophy appears early and is associated in advanced cases with pigmentation, as described by Garrod. The slowly progressing destruction of the joint structures characterized by degeneration, not so marked in other inflammatory joint conditions, is also indicative of trophic changes.

As a causative factor the toxæmia, which seems to affect the trophic centers of the cord, may arise from auto-intoxication and not be due to a specific germ acting upon it or the affected joints; but in some way interfering with the nutrition of the trophic centers and thereby impair the nutrition of the corresponding region, and may be general from the outset.

The weakened resistance of the members involved are marked by venous circulation visible over the small joints, cold extremities and absence of local firmness and tone in the muscles.

The local inflammatory process, subacute in character, is exceedingly painful at times and remarkably susceptible to atmospheric conditions. The fusiform enlargement of the joints, the so-called nodes of Herberden, characteristic of this affection, are composed of the results of the inflammatory process—local stasis—and the accumulated products present with an impaired metabolism, and go on to degeneration of the joint structures.

In simple synovitis, hypertrophy and thickening of the tissue elements at first supervene, while in rheumatoid arthritis a less active process of lowered resistance is characteristic. Never in these cases, we believe, are there present the generally supposed chalky deposits. X-ray examinations of all of my cases have failed to disclose concretions in a single case. That condition belongs to another type of arthritis, a very rare affection.

The destructive process characterized by disintegration of the interarticular cartilages and other ligamentous structures mentioned by Garrod and others, do not take place, as a rule, until about two years after the onset of the disease, and then follows the destruction of the articular surface.

The painful muscular contractions—constant in all inflammatory conditions, but most marked in rheumatoid arthritis, are both a source of great discomfort to the sufferer and to a positive degree increase the process of destruction in the articular surface on account of the pressure exerted.

The *prognosis* in this affection, which has been generally considered uniformly bad, is now, in the light of therapeutic progress, very encouraging.

All except cases in the last stage can be brought to a *status quo*, and kept from progressing by energetic treatment. Within the first two years—the *first stage*—there are very few cases that can-

not be entirely abated and conditions rendered approximately normal; for in few if any cases to this time will any destructive process have taken place, as is demonstrated by frequent X-ray examination. Desultory or irregular attention to treatment will suspend activity and defer degeneration, but not effect a cure.

In the *second stage* which should be designated as the stage of degeneration or destruction, the degree of improvement will depend upon the extent of the structural changes and the method and regularity of treatments. In this stage the whole process can, in most cases, be abated and pain and suffering gradually relieved if the patient is kept under strict attendance and régime, until the latent process ceases.

An active intestinal catarrh with fermentation unrelieved, for the time, prevents the progress to recovery, and so also when a primary exhausting disease is unrelieved. These cases are fortunately rare. To overcome contractures and increase the range of joint movement requires months of patient work and skill, but is possible in most cases in which ankylosis has not taken place, or in children who have grown while the limbs were in a condition of fixed contraction.

The *treatment* of rheumatoid arthritis demands more time, patience and attention to technique than other joint conditions. The indications for treatment are directed to the restoration of general health, removal of the exciting cause, and the relief of the local conditions.

The discovery of the cause will often tax the skill of the most resourceful. Examination of the urine and feces excluding the involvement of the alimentary and urinary tracts; pelvic conditions of the female will often be found to be the occasion of lowered resistance.

Whatever the cause of the impaired functions, strict attention to diet and building up of the economy is a matter of first importance. The diet should be in the main generous, made up of the most nutritious and digestible foods.

The conditions of poor metabolism characteristic of the disease are remarkably benefitted by the employment of the physical agents, static electricity, light and mechanical vibration.

The energizing effect of the static wave-current in atonic conditions must be understood to be appreciated. Surging as the high potential current of small amperage goes back and forth between the metal electrode placed over the spine, abdomen, or an affected joint to every part of the surface of the patient, it sets up mechanically, activities of the cells everywhere. Its influence upon general metabolism has been demonstrated in hundreds of cases and there are very many observers to-day in a position to attest its merits, in this and other particulars.

It is the rule in these cases to employ the current at least once daily over the spine or abdominal viscera. When the nutritive processes

are in good condition, however, its administration over a large joint will be all that is required.

In addition the administration of concentrated light from a high power incandescent lamp or a marine searchlight, or an incandescent light bath, serves a valuable purpose in inducing a restoration of active function in the skin and otherwise stimulating an active general metabolism.

Mechanical vibration from both the viewpoint of spinal stimulation and vibra-massage is a valuable adjunct to static treatment, both general and local. This, the most recent of physical agents, is destined to play an important part in the therapeutics of this and other joint affections. It serves to stimulate active, general and local nutrition applied over the spine or inhibits when applied according to the indications, and locally as a method of vibra-massage it is far more effective and less laborious than manual massage. Locally it is invaluable in relieving the tension and muscular contraction.

The combined judicious employment of these measures contributes all that seems to be required to restore to normal the nutritive and metabolic functions as they do in all cases in which organic lesions do not preclude the possibility of recovery.

The method of treatment of the local conditions of this affection is that applicable to the treatment of all non-infective joint inflammations or of simple inflammation in general.

Conditions of stasis, stagnation or functional inactivity presuppose an indication for the induction or restoration of activity—the removal of stasis. Rest in inflammatory conditions favors stasis and is certain if prolonged in joint inflammations to be followed by ankylosis. For relieving these processes mechanical measures are invaluable.

There are very few conditions, and they either fractures or cases of infectious origin, in which an inflammatory process is present, that one or another of the mechanical or physical measures is not of greater value than other methods of treatment.

When my paper on the "Treatment of Rheumatoid Arthritis"* was read before the American Electro-Therapeutic Association, at Washington, in 1899, the actions of high potential currents had not been generally appreciated even after the successful clinical results reported at that meeting.

Up to this time it had not been generally recognized by the profession that electricity of high or low potential had properly a place in treatment for the relief of acute or even sub-acute inflammatory conditions.

The followers of Erb, the error of whose theories one by one have been established, still adhere to some extent to the error that electricity should only be employed after subsidence

of the acute condition; but those who have intelligently investigated the action of high potential currents have found in them the most valuable means of combating acute non-infective inflammatory processes and the earliest stage of superficial pus processes as well.

In a paper on the "Use of High Potential Currents in the Treatment of Hyperæmia and Pain,"* read before the American Electro-Therapeutic Association at Buffalo in September, 1901, I first took the stand that the high potential currents, particularly the static modalities, were indicated in the treatment generally of non-infective inflammatory conditions, acute or chronic, and that the earlier in acute conditions the measure was employed the more prompt and certain would be the restoration to normal.

Just prior to the preparation of that paper it had been demonstrated to me from clinical observation that the effects of these currents were due essentially to their *mechanical properties—to their energetic action in removing local stasis—the bete noir* of the physician in the treatment of inflammation.

Stasis removed, the simple non-infected inflammatory condition in the early stage of the process promptly recovers, wherever located.

Stasis removed in early suppurative conditions, an active phagocytosis will destroy the germs, after which recovery is prompt.

Stasis removed and local activity repeatedly induced, where chronic non-infective inflammation is present, there is offered the possibility for ultimate or partial recovery relative to the chronicity, local degenerative or traumatic conditions.

As has been demonstrated and will in time be generally recognized, the same thing is true of every viscus or soft structure of the body; and in other structures except those of the closed-in brain and bony framework—the structures composed of muscle, nerve and elastic tissue. Before the stage of degeneration, mechanical measures will energetically remove stasis, restore circulation, promote elimination and recover tone to the tissues. Activity is the *sine qua non* of recovery. In no class of conditions is this truth more pregnant than in the treatment of non-infective joint affections.

The mechanical measures which play an important part in the treatment of these joint conditions are high potential electricity, particularly the static, mechanical vibration, exercise, massage, radiant light and heat, moist and dry heat and cold.

It may seem, without reflection, that radiant energy in the forms of light and heat is rather chemical than mechanical; they do all however, when administered with proper degrees of intensity or duration, induce tissue contraction. The puckered washwoman's fingers, the congestion relieved by the douche, as demonstrated by Emmet, or by the hot poultice, the

*Transactions of the American Electro-Therapeutic Association for 1899 and 1900. F. A. Davis & Co., Philadelphia, Pa.

*Journal of Advanced Therapeutics for March, 1902.

constricting effect of heat and cold are all induced tissue contractions.

Of all agents that affect inflammatory stasis and inactive metabolism, that which induces local activity—intrinsic activity—in the tissues involved is the most energetic in relieving the local condition. This is effected by the various static modes of application to a degree not possible by other electrical currents or other methods of mechanical administration.

From the mild brush-discharge which promptly relieves and cures the recent sprain of the small joints of the hand, or removes the induration early in the development of a felon, to the long static spark which stirs to contraction the deepest structures of the back or thigh, or the static wave-current derived from a powerful Holtz machine which will transmit its penetrating influence to the deepest recesses of the human frame, there is no region except the brain, closed in its bony capsule, that cannot be induced to some degree of diffuse intrinsic contraction and general cellular activity by the static modalities locally applied.

Furthermore, it is clinically demonstrated that these modalities remove induration, reducing swelling, and thereby relieve pain and restore circulation and repair, with a disposition to the maintenance of tissue tone, the first step towards the repair of a simple inflammatory process.

In infective processes it will be readily appreciated that an agency which will destroy the located coccus or bacillus is the first indication after which the active influences of static currents are again indicated.

These methods and their actions are no longer a fiction, but well authenticated by hundreds of medical observers in this country and abroad.

It is the principle of action involved in these premises which renders these measures effective in restoring general and local metabolism, thereby inciting the various indications for the treatment of rheumatoid arthritis. Measures which have been instrumental in healing trophic ulcers, as well as restoring fingernails that have disappeared with the trophic process of tabes, are beyond question, as has been demonstrated, capable of restoring nutrition and normal conditions in rheumatoid arthritis.

In childhood the local application of the wave-current for twenty minutes daily, is capable of relieving all pains caused by manipulation after a few days' treatment, and in bringing about a discontinuance of the active process if continued for a long enough time. One case which has suffered for more than one year, after six weeks' treatment in this manner, has had no recurrence.

Another unfortunate and crippled sufferer, who was also a victim of nephritis, from which he died, was rendered free from pain within ten days, and during more than one year that he was under observation the painful condition

did not return. This patient's condition (See Fig. 5) demonstrated the futility of all efforts to overcome contractures developed during childhood. The static treatments and efforts of Dr. A. M. Phelps and his assistants at the Post-Graduate Hospital, where he was cared for, having proved futile. Careful urinary analysis during treatment showed constantly the presence of albumen, granular and hyaline casts, and, remarkable to observe, at the same time a large excess of urates were constantly eliminated. The child died from nephritis about one year after removal from the hospital without a recurrence of the painful condition present when he came under observation.

The results obtained in these two cases in childhood is an assurance that much can be promised from its employment in youthful sufferers from the use of the static wave-current alone.

The earlier cases, within the first year of the affection, who pay strict attention to treatment, are promptly cured, as is attested from successful results in ten cases treated and cured by the writer. The only cases which seem to resist treatment, and in my experience I have seen but two, were those in which an active intestinal or other infection was unabated. One of these discontinued treatment; the other, a physician's widow, after three months of discouragement, yielded to treatment with iron and arsenous acid given for an unquestionable chronic malarial poisoning, having for years resided in the lowlands of the Mississippi Valley. In this case the static treatment was persisted in until recovery was complete.

To administer the wave-current alone in adult cases is impracticable because it requires too many administrations daily to get the necessary effect. In children several joints, four or six may be connected to the machine at one time. The long or short static sparks according to locality are the means, *par excellence*, in the treatment of adult cases.

The relief afforded by the painful spark when applied to the conditions of local congestion of pain, sense of heaviness, painful stiffness, and muscular contraction, calls forth universally expressions of gratitude and willingness to endure the painful ordeal, from the sufferers. The results obtained are not temporary, but when progressively employed result in the elimination of the products of poor metabolism, removal of pain and swelling, followed by the restoration of tissue firmness and normal resistance. With the removal of the inflammatory process contractions cease and with the recovery of general health the restoration is complete.

Ten cases have been relieved of all symptoms of the disease and with but one exception are in a normal condition having remained so from two to six years. These were in the first stage.

All cases but one treated have improved under treatment and in all cases the condition has been

improved and kept from progressing when under treatment. Most cases have been among the poor, and for one or another reason such as removal or poverty, have discontinued treatment. A good number of cases are under treatment, some of whom are in faithful attendance, and improving, others improve temporarily, and rest treatment until they relapse and then return, otherwise the percentage of recoveries would be still larger.

One case only has entirely resisted treatment for two months without improving and then discontinued. In this patient a condition of fermentation of the stomach and alimentary canal was unrelieved, which was undoubtedly the cause of the condition.

These results have encouraged me to urge upon those who have had less favorable experience to thoroughly investigate the method.

The same methods are eminently successful in the treatment of most other non-infective joint affections as has been demonstrated by uniform success in a large number of cases.

STILL'S DISEASE.*

By C. P. BULL, Jr., M.D.,
NEW YORK.

STILL'S Disease is a type of infectious arthritis occurring in young children and described by Still in 1896. It is characterized pathologically by changes in many, or most, of the largest joints, the lymphatic glands, spleen, blood and muscles.

Age is the only known predisposing cause, the disease nearly always first appearing between the ages of one and five years. Germs are probably the exciting cause, and probably several kinds of bacteria are capable of causing the manifestations. Edsall, of Philadelphia, calls attention to the similarity of the symptoms of chronic lymphatic tuberculosis, as described by Sternberg, and suggests that tubercle bacilli of a very low degree of virulence may be an exciting cause.

The pathology comprises changes in the joints, lymphatic glands and spleen, the blood and muscles. Many, or most, of the largest joints present effusion, marked thickening of the synovial membrane, the capsule and the connective tissue outside it. The thickened synovial membrane is relaxed, forming folds and fringes. After a time these may undergo fatty degeneration. There is no tendency toward destructive change or ankylosis. The bones and cartilage, as shown by the X-ray, present no change. The joint changes are slowly progressive for many months and then the process seems to become stationary. The lymphatic glands all over the body become enlarged, but chiefly those in relation with the affected joints, varying in size with

the acuteness of the process in the joints. The glands are hard, remain separate and show no tendency to break down. The spleen is enlarged, the degree of enlargement depending upon the acuteness of the disease. On section, the glands sometimes show ecchynoses, but are often of normal appearance. The spleen is firm and of normal appearance. Microscopical examination shows hyperplasia of lymphatic tissue and of the Malpighian corpuscles of the spleen. Examination of the blood shows a moderate increase in the number of leucocytes, a moderate decrease of red corpuscles, and a decrease in hemoglobin, which is often disproportionate. The muscles which move the affected joints early show marked atrophy.

The onset very rarely is acute, but in the great majority of cases it is insidious. The first thing noticed is stiffness, soon followed by fusiform, elastic swelling of one or more joints. The joints usually involved, taken in the order of frequency, are the wrists, hands, cervical spine, ankle, elbow and fingers. The development is symmetrical. There is no pain, except with motion, which is always limited. There is no tendency toward suppuration or ankylosis. Early in the disease enlargement of the lymphatic glands all over the body occurs. They are separate, hard and never break down. The spleen enlarges; this is probably due to the greater reaction to toxæmia in children, because in adults with infectious arthritis splenic enlargement is unusual. The muscles moving the affected joints soon show marked atrophy which causes the joints to appear larger than they otherwise would. Anemia, usually of moderate degree, is present, and the color index is usually low. Moderate leucocytosis evidences a mild toxæmia. The urine is negative. Slight exophthalmos has rarely been observed. The heart is usually negative. Adherent pericardium has been found in several autopsies. Complications rarely occur, endocarditis is the most frequent. There are two types of temperature. Usually the patient has a temperature of 102° or 103° for several days and then the temperature subsides only to recur at intervals of days or weeks. In the second and rarer type the temperature is slightly above normal nearly all the time, exhibiting fluctuations of one or two degrees. The course of the disease is slowly progressive, until after a time the disease seems to become permanently stationary.

The prognosis is better than in infectious arthritis in adults because of the greater recuperative power of children. The joints can not return entirely to the normal after the exacerbations of temperature and other active manifestations of the disease have disappeared, because of the thickened capsule and synovial membrane. The latter is relaxed, thrown into folds and presents enlarged villi or fringes, which may be drawn between the articular

*Read before the Section on Orthopedic Surgery, New York Academy of Medicine, April 20, 1906.

surfaces during motion. Their presence is a source of irritation causing effusion to persist. However, the recovery of a fair amount of joint function is to be expected. It seems reasonable to suppose that a complete subsidence of glandular swelling is not always to be expected with the decline of the disease, for in a process which extends over so long a period the elements which give rise to the swelling of the glands have become organized into fibrous tissue.

The treatment of this variety of infectious arthritis does not differ from that of the type occurring in adults. Infectious arthritis is always attended with more or less toxæmia, therefore, the eliminative functions should receive attention. The patient should have plenty of drinking water, to which alkalies may be added. Salicylates have not produced any good results. Every measure that will better the patient's general condition, thereby increasing his power to combat toxæmia, is indicated. While the disease is progressing the affected joints should have complete rest; this is best secured by immobilization. When the disease appears to have come to a standstill, passive and active motion of the joints should be employed. Counterirritation, by means of baking accessible joints and hot water bathing, may be tried, also passive congestion of the joints, continued for many weeks or months, as described by Bier and commonly known as "Bier's Treatment"; however, none of these measures can be depended upon to produce results. Massage is indicated to improve the condition of atrophied muscles.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By JAMES J. WALSH, M.D., Ph.D.,
NEW YORK.

(Continued.)

PART II.

CHAPTER III.

The next year a circular communication of the same kind was sent to the county medical societies, treating of many practical points. The suggestions of the committee of the State Society are nearly all directed to distinct betterments in the status of the profession. Especially attention is called to the necessity for careful medical education not only of students, but also of physicians; and for this purpose it is suggested that lecturers on medicine be chosen by the County Medical Societies to keep the members in touch with medical progress. The question of securing for physicians exemption from the law requiring citizens to serve in the militia is discussed, and it was not long before the universal interest aroused by this communication led to the enactment of the proper legislation to

secure such exemption. There is a tone of moderation all through the circular, which shows how careful were the officers of the State Society not to hurt the susceptibilities of practitioners living in the more backward districts, nor the feelings of those in attendance at schools where medical opportunities were bound under the circumstances to be imperfect.

CIRCULAR COMMUNICATION FROM THE MEDICAL SOCIETY
OF THE STATE, TO THE COUNTY MEDICAL SOCIETIES.
FOR THE YEAR 1810.

Medical Society of the State of New York,
ALBANY, February 10, 1810.

The various relations which the Medical Society of the State has with the County Medical Societies and the public, have been attended to during the present Session, with all the zeal which might be expected from the members of an Institution, to whom were confided by law the important interests of the Medical Profession.

The information which the Society has received, of the attention paid to medical education in some of the Seminaries of this State, has afforded the highest satisfaction, and confident expectations are cherished, that the County Medical Societies will yield their collateral aid to the constituted authorities of the State, to favor their laudable exertions to promote the diffusion of knowledge.

In the former communications of this Society, the Medical Societies of the Counties were invited to encourage such observations as might advance the improvement of the healing art, and it is confidently expected that the Medical Society of the State will be informed of the result of the exertions of the County Medical Societies in the fields of Science.

The Medical Society of the State deem it their duty again to invite the Medical Societies of the Counties to grant every encouragement to promote the diffusion of Medical knowledge.

Pursuant to a resolution of the Society, it is also recommended that each County Medical Society do appoint two or more Lecturers, whose duty it shall be to afford such instruction in any of the branches of the Healing Art as may meet the approbation of the Society by which such appointments may be made.

The representations which have been received respecting the operation of the present Militia Law on the members of the Medical Profession have been duly attended to, and the Society has adopted such measures as they deemed most expedient to obtain a revision of said Law. The Society consider it their duty to support the ancient privileges of the members of the Medical Profession, which in this State were not invaded during the sanguinary struggles of the country for national independence; nor can it be supposed that the Physicians and Surgeons of this State will, when necessary, be wanting in patriotic exertions, if it be recollected that Warren, Mercer and many others, first in council and not second in the field, were of their Profession.

The communications which have been laid before the Society, soliciting an application to the Legislature for an Act to prevent Inoculation for Small Pox, have been attentively considered. As this is a subject of importance to the public, and highly interesting to the feelings of many respectable citizens, the Society deem it proper for the respective County Medical Societies to have such communications from the Members of the Legislature, in their vicinity, as may enable them to judge of the expediency of a law for the aforesaid purpose.

It is expedient to observe, that the expenses attending the Medical Society of the State, merit the consideration of the County Medical Societies. It will always evince a proper sense of dignity in the Medical Profession to support their own Institutions without applying for such purposes to the Legislature for pecuniary aid.

The Society view with much satisfaction the various Medical Institutions of the State, which they trust will be cherished with care and attention for the benefit of the community. Though all institutions are marked with imperfections, yet when their administration is in conformity with a spirit of moderation and justice, these are corrected; and it must be recollected that a restless disposition for innovation and change is not always connected with human improvement.

By order of the Medical Society of the State of New York.

JOHN STEARNS, M.D., *Sec'y.*

CHAPTER IV.

NEW YORK MEDICAL SOCIETIES AS CORPORATIONS.

So much difficulty was encountered in securing the legal regulation of medical practice under the too general provisions of previous laws, that, in 1813, a determined effort was made to secure further legislation that would obviate the difficulties that had been encountered in the application of the preceding enactment. As soon as the County Medical Societies attempted to prosecute unlicensed practitioners the difficulty arose that there was doubt as to their legal status, that is, whether they had such corporate existence as to sue and be sued. This was true to some extent, also, with regard even to the State Medical Society. Accordingly it is evident that prominent legal talent was secured and a very formal bill, bristling with technical legal phraseology and having the many repetitions deemed necessary for binding legislation, was drawn up in order to determine definitely the legal status of both State and County Medical Societies. This became the basic law for the regulation of medicine in New York State, and it is the one to which all laws go back for more than half a century.

There was another and very practical object for the securing of the enactment. The original law creating State and County Medical Societies had given them legal status only on condition that the first meeting be held during the year subsequent to the passage of the law. A certain number of counties had not organized medical societies during that year, and now were not in a position to come into existence with assured legal status. Besides, New York State was growing rapidly, more rapidly than any other State in the Union, and the larger counties of the early years of the century were gradually being divided with the consequent creation of new counties. Many of these desired to have the right to organize county medical societies and this was secured by the Law of 1813. An added feature of this law was that if there were not enough members in any county to justify the organization of a county medical society then medical practitioners in that county had a right to join the County Medical Society in an adjoining county.

Another special feature of this act, and one which was to have a far-reaching effect upon

the organization of the State Medical Society in subsequent years, was one of its last provisions. It provided for the election of not more than two permanent members at each annual meeting, these permanent members to be "eminent and respectable physicians and surgeons residing in any part of the State." Because of the fact that this act was for so long the basic legal faculty of the State and County Medical Societies for the regulation of the practice of medicine and, indeed, the most important legal enactment of the first half century of the Society's existence, it has seemed advisable to give it in its entirety especially as all subsequent legislation down almost to our own time was enacted with a definite view of the effect that it would have in broadening or narrowing the provisions of this carefully drawn Enactment of 1813.

AN ACT TO INCORPORATE MEDICAL SOCIETIES, FOR THE PURPOSE OF REGULATING THE PRACTICE OF PHYSIC AND SURGERY IN THIS STATE. PASSED APRIL 10, 1813.*

WHEREAS, well regulated medical societies have been formed to contribute to the diffusion of true science, and particularly the knowledge of the healing art; Therefore,

1. Be it enacted by the people of the State of New-York, represented in Senate and Assembly, That it shall and may be lawful for the physicians and surgeons in the several counties of this state now authorized by law to practice in their several professions, except in those counties wherein medical societies have already been incorporated, to meet together on the first Tuesday of July next, at the place where the last term of the court of common pleas next previous to such meeting was held in their respective counties; and the several physicians and surgeons so convened as aforesaid, or any part of them, not less than five in number, shall proceed to the choice of a president, vice-president, secretary and treasurer, who shall hold their offices for one year, and until others shall be chosen in their places; and whenever the said societies shall be so organized as aforesaid, they are hereby declared to be bodies corporate and politic, in fact and in name, by the names of the medical society of the county where such societies shall respectively be formed, and by that name shall be in law capable of suing and being sued, pleading and being impleaded, answering and being answered unto, defending and being defended in all courts and places, and in all matters and causes whatsoever; and shall and may have a common seal and may alter and renew the same at their pleasure; Provided always, That if the said physicians and surgeons shall not meet and organize themselves at such time and place as aforesaid, it shall be lawful for them to meet at such other time as a majority of them shall think proper; and their proceedings shall be as valid as if such meeting had been at the time before specified.

5 W., 211; 3 W., 426; 24 B, 570.

2. And be it further enacted, That the medical societies of the counties already incorporate, shall continue to be bodies corporate and politic, in fact and in name, by the names of the medical society of the county where such societies have respectively been formed, and by that name shall be in law capable of suing and being sued, pleading and being impleaded, answering and being answered unto, defending and being defended in all courts and places and in all matters and causes whatsoever, and shall and may have a common seal, and may alter and renew the same at their pleasure, and that the president, vice-president, secretary and treasurer, of such incorporated societies, shall

*New York Statutes at Large. Albany, N. Y., 1869. Chap 94.

hold their offices for one year, and until others shall be chosen in their places.

3. And be it further enacted, That the medical society already incorporated, by the style and name of the Medical Society of the state of New York, shall continue to be a body politic and corporate, in fact and in name, and by that name shall be in law capable of suing and being sued, pleading and being impleaded, answering and being answered unto, defending and being defended, in all courts and places, and in all matters and causes whatsoever, and shall and may have and use a common seal, and may change and alter the same at their pleasure; and that the said society shall be composed of one member from each of the county societies in the state, elected by ballot at their annual meeting, who shall meet together at the time and place appointed by the said society for that purpose, and being met, not less than fifteen in number, may annually elect by ballot, a president, vice-president, secretary and treasurer, who shall hold their offices for one year, and until others shall be chosen in their places.*

4. And be it further enacted, That the Medical Society of the State of New York, and also the medical societies of the respective counties, shall and may agree upon and determine the times and places of meeting; and the time so agreed upon shall forever thereafter be the anniversary day of holding their respective meetings; and it is hereby made the duty of the secretary of each of the county medical societies to lodge in the office of the clerk of the respective counties, if not already done, a copy of all the proceedings had at their first meeting; and it shall also be the duty of the secretary of the medical society of the State of New York, in like manner, to lodge in the office of the secretary of this state, a copy of their proceedings had at their first general meeting; and the said clerks and secretary are hereby required to file the same in their respective offices, for which they shall each receive the sum of twelve and a half cents.

5. And be it further enacted that the members now composing the medical society of the State of New York from each of the four great districts, shall remain divided into four classes from each of said districts shall go out of office annually.

6. And be it further enacted, That it shall be the duty of the secretary of the medical society of the State of New York, whenever the seats of any of the members shall become vacant, to give information of the same to the respective county societies, to the end that such county societies may supply such vacancy at their next meeting.

7. And be it further enacted, That in case there shall be an addition to the number of persons composing the medical society of the state, that in that case it shall be in the power of the said society at any of their annual meetings, and as often as they shall judge necessary, to alter and vary the classes in such manner as that one-fourth of the members from each of the four great districts as near as may be, shall annually go out of office.

8. And be it further enacted, That if the seat of any member of the medical society of the State of New York shall be vacated, either by death, resignation or removal from the county, it shall be the duty of the medical society of such county to fill such vacancy, at their next meeting after such vacancy shall happen.

9. And be it further enacted, That the medical societies established as aforesaid, are hereby respectively empowered to examine all students who shall and may present themselves for that purpose, and to give diplomas under the hand of the president and seal of such society before whom such student shall be examined, which diploma shall be sufficient to enable the person so obtaining the same to practice physic or surgery, or both, as shall be set forth in the said diploma, in any part of this state.

10. And be it further enacted, That if any student who shall have presented himself for examination be-

fore any of the medical societies of the several counties of this state shall think himself aggrieved by the decision of such society, it shall be lawful for such student to present himself for examination to the medical society of the State of New York; and if in the opinion of such society the student so applying is qualified for the practice of physic or surgery, or both, as the case may be, the president of such society shall, under his hand and seal of such society, give to the said applicant a diploma, agreeable to such decision.

11. And be it further enacted, That it shall and may be lawful for the several medical societies so established as aforesaid, at their annual meetings, to appoint not less than three nor more than five censors, to continue in office one year and until others are chosen, whose duty it shall be carefully and impartially to examine all students who shall present themselves for that purpose, and report their opinion in writing to the president of the said society.

(Section 12 repealed by Laws of 1828, Chapter 21.)

13. And be it further enacted, That it shall and may be lawful for the medical societies of the respective counties of this State, and also the medical society of the State of New York, to purchase and hold any estate, real and personal, for the use of said respective societies: Provided, Such estate, as respectively authorized to hold, shall not exceed the sum of one thousand dollars; and that the estate, as well real as personal, which the medical society of the State of New York is hereby authorized to hold, shall not exceed five thousand dollars.

14. And be it further enacted, That it shall be lawful for the respective societies to make such by-laws and regulations relative to the affairs, concerns and property of said societies, relative to the admission and expulsion of members, relative to such donations and contributions as they or a majority of the members at their annual meeting shall think fit and proper: Provided, that such by-laws, rules and regulations, made by the society of the State of New York, be not contrary to nor inconsistent with the constitution and laws of this State, or of the United States; and that the by-laws, rules and regulations of the respective county societies shall not be repugnant to the by-laws, rules and regulations of the medical society of the State of New York, nor contrary to, nor inconsistent with, the constitution and laws of this State or of the United States.

15. And be it further enacted, That the treasurer of each society established as aforesaid shall receive and be accountable for all monies that shall come into his hands by virtue of any of the by-laws of such societies, and also for all monies that shall come into the hands of the president thereof, for the admission of members, or licensing students; which monies the said president is hereby required to pay over to the said treasurer, who shall account therefor to the society at their annual meetings, and no monies shall be drawn from the treasurer unless such sums and for such purposes as shall be agreed upon by a majority of the society at their annual meeting, and by a warrant for that purpose, signed by the president.

16. And be it further enacted, That it shall be the duty of the secretary of each of the said medical societies, to provide a book, in which he shall make an entry of all the resolutions and proceedings which may be had from time to time, and also the name of each and every member of said society, and the time of his admission, and also the annual reports relative to the state of the treasury, and all such other things as a majority of the society shall think proper; to which book any member of the society may at any time have recourse; and the same, together with all books, papers and records, which may be in the hands of the secretary of the society, shall be delivered to his successor in office.

17. And be it further enacted, That it shall be lawful for each of the said medical societies to cause to be raised and collected from each of the members of such society, a sum not exceeding three dollars in any one year, for the purpose of procuring a medical library and apparatus, and for the encouragement of useful discov-

*Note.—See Laws of 1853, ch. 317. Post, p. 717.

eries in chemistry, botany and such other improvements as the majority of the society shall think proper.

18. And be it further enacted, That any student who may receive a diploma from the medical society of this state, shall pay to the president thereof on receiving the same, ten dollars; and for each diploma that a student may receive from the medical society of any county, he shall pay to the president thereof on receiving the same, five dollars; Provided, that the students who have been examined previous to the twenty-sixth day of May, one thousand eight hundred and twelve, and were entitled to receive diplomas, but who have not received the same, shall not pay therefor more than two dollars.

19. And be it further enacted, That the medical society of this State may elect by ballot at their annual meeting, eminent and respectable physicians and surgeons, residing in any part of the state, which persons so elected shall be permanent members of the society, and entitled to all the privileges of the same; Provided, that not more than two such members shall be elected in any one year and that they shall receive no compensation for their attendance from the funds of the society. (Sections 20, 21, 22, repealed by Laws of 1823, Ch. 21.)

23. And be it further enacted, That it shall be in the power of the Legislature to alter, modify or repeal this act whenever they shall deem it necessary or expedient.

24. And be it further enacted, That if there shall not be a sufficient number of physicians and surgeons in any of the counties of this state to form themselves into a medical society agreeably to this act, it shall be lawful for such physicians and surgeons to associate with the physicians and surgeons of an adjoining county for the purposes hereby contemplated.

25. And be it further enacted, That this act shall be and hereby is declared to be a public act.

CHAPTER V.

EARLY PROCEEDINGS OF THE SOCIETY.

The proceedings of the early meetings of the Society as published were very meagre. Such as they are, however, they are of surpassing interest, because they serve to make clear just what were considered to be the powers and obligations of the Society. They exhibit in a very striking way the effort of the Society to uplift the profession by means of union, and the encouragement of local organizations, as well as by the offering of prizes, the invitation for the presentation of essays on climatic influences, and other local features, supposed at that time to be connected with the causation of local diseases. Only a few copies of the early transactions were printed and most of them have disappeared. Reprints were made, however, first in 1831, and subsequently on two other occasions, and are to be found in the transactions of later years.

In spite of this, however, it has been deemed advisable in this centenary volume to give the original proceedings of the first five meetings of the Society, in order to show the general character of the business transacted and the methods of the Society. After this time a modification of the original law that formed the foundation of the Society was secured from the Legislature, conferring some new powers and also making some new limitations with regard to the practice of medicine.

These proceedings of the early meetings are printed just as they are found in the original transactions, in Dr. Samuel Purple's set at the

New York Academy of Medicine, with the exception of certain lists of names that it seemed unnecessary to repeat since those who are specially interested in them can find them without difficulty in any of the many reprints of the proceedings.

The Transactions of the Society at its first meeting in Albany, 3rd February, 1807.

"The statute enacted on the 4th of April, 1806, by the honorable the legislature of this state, to incorporate medical societies, for the purpose of regulating the practice of physic and surgery may be considered as among the first efforts made in this country to give the medical profession an honorable station in the community.

"By investing the privileges of medical men, in corporate communities formed of the members of that profession, the public may be freed from many impositions, and the usefulness and importance of the healing art will be extended. The history of all the learned professions imperiously proves this fact, that no one of those professions has ever become respectable or extensively useful to mankind, that was not under the restraint of the great body of its own members. Mankind have in all ages and in all communities been too often deceived by men who pretended to professional merit and who by mean practices on the ignorances, follies and caprices of individuals, have gained an artificial importance in society.

"This is more especially the case in the medical profession. Hence the importance of the law, placing the regulation thereof under incorporated medical societies. The advantages to the community in placing the regulation of the medical profession under the direction of its own members, is already sufficiently manifested, by the promotion of medical education and encouragements given to physical enquiries and observation, and the diminished influence of pretenders to the healing art, throughout the State."

The Medical Society of the state was duly organized on the first Tuesday in February, 1807, when the following members were chosen officers.

William McClelland, President; Alexander Sheldon, Vice-President; Moses Willard, Treasurer; John Stearns, Secretary. John M. Mann, Columbia; William Wheeler, Dutchess; Lyman Cook, Westchester; Moses Willard, Rensselaer; Caleb Samson, Oneida; Censors. David R. Arnell, Orange; John Ely, Greene; Westell Willoughby, Jun., Herkimer; Alexander Sheldon, Montgomery; John M. Mann, Columbia; Committee of Correspondence.

The Society enacted certain bye-laws, and agreed to apply to the Legislature to divide the members of the society into classes and to make some provision for the support of the society. They examined and licensed some candidates for the practice of physic and surgery.

At this early period of the establishing of the society, it was considered proper to extend its usefulness in promoting medical inquiries in the different counties in the state. Accordingly each member of the society was directed to present a geological and topographical description of the county in which he might practice and also a history of such diseases as might prevail in his particular place of residence; and that each member should give an account of any remarkable case that might occur in his practice, together with its treatment, at the anniversary meetings of the society.

The society then adjourned to meet on the first Tuesday in February, 1808.

SECOND MEETING, ALBANY, ON THE FIRST TUESDAY OF FEBRUARY, 1808.

1. Officers and members present.—Drs. Wm. McClelland, from the County of Albany, President. Alexander Sheldon, of Montgomery, Vice-President. John Stearns, Saratoga, Secretary. Lyman Cook, Westchester; Jesse Shephard, Schoharie; David R. Arnell, Orange; James

G. Graham, Ulster; John Ely, Greene; Westell Willoughby, Jun., Herkimer; Reuben Hart, Ontario; John H. Frisbee, Onondaga; Nicholas Romaine, New York; Andrew Proudfit, Rensselaer; Horatio Powell, Clinton; Tracy Robinson, Chenango; Jonathan Bush, Lewis; Alexander Morse, Essex.

The society then proceeded to arrange its members into four classes, according to the four great senatorial districts of the state, pursuant to law, whereupon it appeared that in the Southern district, the county of New York was drawn into the third class, Nicholas Romaine, member; Westchester, 2d class, Lyman Cook, member.

Middle District, Greene, 4th, John Ely, member. Columbia, 2d, John M. Mann, member. Dutchess, 4th, William Wheeler. Ulster, 2d, James G. Graham. Delaware, 3d, Thomas B. Whitmarsh. Orange, 3d, David R. Arnell.

Western District. Oneida, 1st, Caleb Samson. Madison, 2d, James Morse. Herkimer, 2d, Westell Willoughby. Orange, 3d, John H. Frisbee. Cayuga, 1st, Barnabas Smith. Jefferson, 4th, Hugh Henderson. Chenango, 2d, Tracy Robinson. Ontario, 4th, Reuben Hart. Lewis, 4th, Jonathan Bush. Otsego, 1st, Gurdon Huntington.

Eastern District. Essex, 4th, Alexander Morse. Schoharie, 4th, Jesse Shepherd. Saratoga, 1st, John Stearns. Clinton, 2d, Horation Powell. Albany, 1st, William McClelland. Montgomery, 3d, Alexander Sheldon. Washington, 2d—Rensselaer, 3d, Andrew Proudfit.

2. Election of Officers for 1809. The Society proceeded to the anniversary election agreeable to law, when it appeared that, Dr. Nicholas Romaine was elected President. Dr. Alexander Sheldon, Vice-President. Dr. John Stearns, Secretary. Dr. James G. Graham, Treasurer. Dr. Lyman Cook, Dr. John M. Mann, Dr. William Wheeler, Dr. David R. Arnell, Dr. Westell Willoughby, Censors. Dr. John Ely, Dr. Alexander Sheldon, Dr. Jesse Shepherd, Dr. Reuben Hart, Dr. Barnabas Smith, Committee of Correspondence.

3. Prize Questions.—The society taking into consideration the importance of promoting philosophical and medical enquiries, which might be interesting to the public, deemed it expedient for that purpose to adopt prize questions, when the following were agreed to, and directed to be published.

1st. A medal, value fifty dollars, for the best dissertation on the topography, geology and mineralogy of any county in the state, together with an account of the prevalent diseases in such country.

2nd. A medal, value twenty-five dollars, for the second best dissertation on the same subject.

3d. A medal, value, twenty-five dollars, for the best dissertation on the causes and best method of preventing or curing the typhus mitior, or low nervous fever, which prevails in the different counties of this state.

Drs. Sheldon, Graham and Wheeler, who were appointed a committee to determine the most eligible mode of adjudging the preceding prize questions, reported—That it be the duty of the President, Vice-President, Secretary, Treasurer and Censors, to select from the communications, six of the best dissertations on each question, which shall be presented to the society for final adjudication.

Thereupon the said report was approved.

4th. Geological Descriptions, &c.—The following members in pursuance of the by-laws, reported a topographical and geological description of their respective counties, together with the diseases prevalent in the same. viz. Dr. Alexander Sheldon, Montgomery; Dr. David R. Arnell, Orange; Dr. Willard Wheeler, Dutchess; Dr. John Stearns, Saratoga; Dr. Hugh Henderson, Jefferson; Dr. Horatio Powell, Clinton; and Dr. Lyman Cook of Westchester. Dr. Westell Willoughby communicated a case of hydrophobia, and Dr. Moses Willard a case of ascites successfully treated.

5th. Amendment to Bye-Laws.—The following ordinance was reported to the society by Dr. Arnell, Dr. Willoughby and Dr. Hart, in an amendment to the existing bye-laws:

Be it ordained by the Medical Society of the State of New York, that seven members of the society be competent to form a quorum, and to transact the business of the society until the first Tuesday in February next.

Whereupon the said ordinance was adopted.

6th. College of Physicians, New York.—The society having considered that the population of the county of New York was more than the average population of two other counties in the state; and that it might be interesting to the furthering the views of his society in promoting medical education, that the College of Physicians and Surgeons in the City of New York should be represented in this society, and have the privileges of a county medical society. Whereupon it was ordained, that the society consent to receive a representative from the College of Physicians and Surgeons in the City of New York. And that the said College should have all the other rights and privileges of a county medical society, if the honorable the Legislature deem the same expedient.

7th. Honorary Members and Presidents of County Societies.—The following gentlemen were elected honorary members of the society. Benjamin Rush, M.D., Philadelphia. Nathan Smith, M.D., Dartmouth College, New Hampshire. Dr. John Pomeroy, Burlington, Vermont. Dr. John Miller, Onondaga, New York. Dr. Moses Willard, Albany, New York.

And it was further ordained that all members of the first class who may not be re-elected by their respective county societies, shall be honorary members of this society.

And it was further ordained that all the Presidents of the different county societies, and also those members of the Legislature who were members of any county society in the state, shall be *ex-officio* honorary members.

THIRD MEETING, ALBANY, FEBRUARY, 1809.

1. Officers and Members present.—Drs. Nicholas Romaine, New York, President; Alexander Sheldon, Montgomery, Vice-President; John Stearns, Saratoga, Secretary; William Wheeler, Dutchess; Lyman Cook, Westchester; John M. Mann, Columbia; David R. Arnell, Orange; John Ely, Greene; Andrew Proudfit, Rensselaer; Westell Willoughby, Herkimer; Jesse Shepherd, Jefferson, vice Hugh Henderson, deceased; Walter Colter, Onondaga, vice John H. Frisbee, resigned; Abraham Allen, Washington, vice Philip Smith, deceased; Amos G. Hull, Oneida, vice Caleb Samson, whose term had expired; Alexander Morse, Essex.

2. Two prizes, Application to the Legislature, and Smallpox. Two prize dissertations on the typhus mitior, and one on the topography, geology, mineralogy and natural history of New York, were presented to the society and committed to Drs. Wheeler, Proudfit and Stearns.

Drs. Sheldon, Arnell, Mann and Shepherd were appointed a committee to consider and prepare an application to the Legislature for aid to promote the science and practice of medicine in this state.

Drs. Romaine, Mann and Colter, were appointed a committee to petition the Legislature for a law to prohibit the inoculation of small-pox in this state.

3. Death of Dr. Henderson.—The society being informed of the death of Dr. Hugh Henderson, of Jefferson County,

Resolved, to wear the customary mourning for a month as testimony of respect to his memory.

Pursuant to the bye-laws, and by permission obtained of the Legislature, the president delivered his Anniversary Address in the Assembly Chamber.

4. Election of Officers for 1810.—The society proceeded to elect their officers for the year ensuing, when Nicholas Romaine, M.D., was chosen President; Alexander Sheldon, Vice-President; Andrew Proudfit, Treasurer; John Stearns, Secretary; Lyman Cook, John M. Mann, Wm. Wheeler, David R. Arnell, Westell Willoughby, Censors; Nicholas Romaine, John Ely, Amos G. Hull, Jesse Shepherd, Abraham Allen, Reuben Hart, Henry H. Sherwood, Committee of Correspondence.

Drs. Shepherd, Proudfit and Arnell were appointed a

committee to present the thanks of the society to the President for his Anniversary Address, and to request a copy for publication.

5. Honorary Members.—Dr. Abraham Allen nominated the Rev. Alexander Proudfit, A.M., of Salem, in the county of Washington; and the President nominated John Warren, M.D., Professor of Anatomy and Surgery in the University of Cambridge, to become honorary members of the society.

6. Dr. Morse.—Dr. Morse read a dissertation on the topography, mineralogy and diseases of the County of Essex.

7. Anniversary address by the President, Dr. Romayne.—It being the first we find published, and so well adapted to the occasion, that we shall insert it entire.

It will be found among notable addresses.

FOURTH MEETING, ALBANY, FEBRUARY, 1810.

1. Officers and Members present.—Dr. Nicholas Romayne, President, New York; Dr. Alexander Sheldon, Vice-President, Montgomery; Dr. Andrew Proudfit, Treasurer, Rensselaer; Dr. John Stearns, Secretary, Saratoga; Dr. Westell Willoughby, Censor, Herkimer; Dr. Alexander Morse, Essex; Dr. John Ely, Greene.

The following members presented their credentials which were approved, and they accordingly took their seats.

Dr. William Wilson, Columbia; Dr. Henry White, Westchester; Dr. Leer Ward, Genesee; Dr. Asa B. Sizer, Madison; Dr. Benjamin Bevier, Ulster; Dr. Henry I. Hoorbeck, Orange; Dr. Oliver C. Comstock, Seneca; Dr. John Sofford, Lewis; Dr. Oliver Davidson, Clinton; Dr. William McClelland, Albany; Dr. Abraham Allen, Washington.

2. Dr. Hosack's Botanical Garden and Report thereon.—A memorial from the Medical Society of the County of New York, to the Legislature, recommended by the corporation of the City of New York, and the Governors of the New York Hospital, for the purchase of Dr. Hosack's Botanic Garden, was presented to the Society and referred to Drs. Sheldon, Ely and Ward.

Dr. Sheldon from the committee to whom was referred the memorials for the purchase of Dr. Hosack's Botanic Garden, reported the following resolution:—That the Medical Society of the State of New York do unite with the Medical Society of the county of New York, the corporation of the City of New York, and the Governors of the New York Hospital, in soliciting the honorable the Legislature to purchase the botanic establishment of Dr. Hosack, if consistent with the funds of the state, or otherwise, to grant a lottery for that purpose. And that the establishment, if purchased, be so managed under the direction of the Legislature, as may be most convenient to the diffusion of medical science.

Whereupon it was resolved, that the said resolution be engrossed on the aforesaid memorial, and signed by the President and Secretary.*

3. Honorary Members.—John Warren, Professor of Anatomy and Surgery in the University of Cambridge, Massachusetts; and the Rev. Alexander Proudfit, A.M., of Salem, Washington County, having been duly proposed, were unanimously elected honorary members of this society.

4. Election of Officers for 1811.—The Society proceeded to the annual election of officers, when Dr. Nicholas Romayne was chosen President; Dr. Alexander Sheldon, Vice-President; Dr. Andrew Proudfit, Treasurer; Dr. John Stearns, Secretary; Drs. Westell Willoughby, jun., William McClelland, William Wilson, Abraham

*In the reprint of the proceedings in the *United States Medical and Surgical Journal* there occurs the following note:

In pursuance of preceding recommendations, Dr. Hosack's Botanic Garden was purchased by the Legislature at seventy three thousand dollars—that being the amount of which it was estimated by three respectable commissioners of the city of New York. It was subsequently ceded to Columbia College on condition that a college edifice should be erected on the ground within ten years. This condition was afterwards revoked.

The property at this time is said to be worth more than one hundred thousand dollars, and we understand that it is the intention of the Trustees of Columbia College to erect on the spot a splendid Building.

Sheldon, Andrew Proudfit, John Stearns, Henry H. Sherwood, Oliver C. Comstock, John Sofford, and Henry White, Committee of Correspondence.

5. Militia Law.—Dr. Sheldon, from the committee to whom were referred the communications from the county medical societies of New York, Saratoga, and Montgomery, reported the following resolution; That the section of Militia Law which compels physicians and surgeons to do military duty, is contrary to their ancient rights and privileges, and that a committee be appointed to wait upon Dr. Mitchell, and other members of the Legislature, to represent the same and to request their friendly aid to effect the repeal of the said section. Whereupon Drs. Stearns, Comstock and Romayne were appointed a committee for that purpose.

6. Communications read.—Dr. Stearns read a communication on a case of catalepsy, successfully treated.

Dr. Hoorbeck read a communication on the topography, and medical history of the county of Orange.

The Secretary read a communication on the like subjects, respecting the county of Ontario, from Dr. Hart.

7. County Medical Schools.—The Committee to whom was referred the subject of the County Medical Schools reported that, whereas, the Medical Society of the State feel solicitous to promote the respect, ability and usefulness of the several county medical societies, by inviting them to promote general diffusion of medical knowledge, therefore, it was

Resolved, That each County Medical Society do appoint two or more discreet lecturers, whose duty it shall be to give such instruction to medical students as the encouragement they may receive will justify, and that they be requested to communicate to the Committee of Correspondence of this Society, special accounts of their success, for the information of this and the county societies.

8. Honorary Members.—Dr. Samuel Mitchill, Professor of Natural History and Botany, in the University of this State; and Dr. Hosack, Professor of Materia Medica and Botany, in Columbia College, were nominated honorary members of this Society.

9. Admitted to practice.—Drs. Quackenbos and Burrill, of the County of New York, and Dr. Manney of the county of Dutchess, having produced satisfactory testimony of their medical studies, and proficiency in medical knowledge, were admitted to the privileges of physicians and surgeons in this state.

FIFTH MEETING, ALBANY, FEBRUARY, 1811.

1. Officers and Members present: Dr. John Stearns, Secretary; Drs. William Wilson, William McClelland, Abraham Allen, and Westell Willoughby, Censors; Dr. Benjamin R. Bevier, Ulster; Dr. Henry H. Sherwood, Jefferson; Dr. Asa B. Sizer, Madison; Dr. Moses Willard, Honorary Member.

The following new members presented their credentials, which were approved and they accordingly took their seats:

Dr. John R. B. Rodgers, New York; Dr. Eli Burritt, Rensselaer; Dr. Anthony Davis, Orange; Dr. Adabel E. Paine, Delaware; Dr. William Patrick, Jun., Saratoga; Dr. James L. VanKleeck, Dutchess; Dr. Jeremiah D. Fowler, Westchester.

The President of the society being absent, Dr. William McClelland was called to the Chair.

2. Honorary Members.—Drs. Samuel L. Mitchill and David Hosack, having been duly proposed, were elected honorary members of the society.

3. Prize Medal.—The prize medal for "the best dissertation on the topography, geology, mineralogy and medical history of any county in the State of New York," was adjudged to Dr. Stearns of Saratoga.

4. Respect to the memory of Dr. Wheeler.—On motion it was Resolved, that the members of this society wear crepe around the left arm for thirty days, as a testimony of respect for their deceased brother, Dr. William Wheeler of Dutchess.

5. Election of Officers for 1812.—The Society proceeded to the annual election of officers, when the following gentlemen were chosen: Dr. William Wilson,

President; Dr. Westell Willoughby, Vice-President; Dr. Asa B. Sizer, Treasurer; Dr. Benjamin R. Bevier, Secretary; Drs. John R. B. Rodgers, New York; William M'Clelland, Albany; William Patrick, jun., Saratoga; Eli Burritt, Rensselaer; and Jesse Shepherd, Schoharie, Censors.

Drs. William Wilson, Columbia; Asa B. Sizer, Madison; John R. B. Rodgers, New York; Eli Burritt, Rensselaer; John Ely, Greene; Henry H. Sherwood, Jefferson; and Jesse Shepherd, Schoharie, Committee of Correspondence.

6. Petition to the Legislature.—Dr. Rodgers from the Committee appointed to inquire into the expediency of petitioning the Legislature for a fund and for other purposes, reported a draft of a memorial praying for aid and sundry amendments to the law, which was approved of and ordered to be left to the care of Dr. John Stearns; and his exertions and influence requested in and with the Legislature, for the passage of a law conforming thereto.

7. Honorary Members, and thanks to Dr. Stearns. Drs. Nicholas Romaine and John Stearns were proposed honorary members of the society.

On motion, it was Resolved, That the thanks of the society be presented to Dr. John Stearns for his faithful services as Secretary.

8. Dr. Willard Dissertation.—Dr. Moses Willard read and presented to the society a dissertation on typhus mitior.

On motion it was resolved, That the thanks of the society be presented to Dr. Willard for his dissertation.

(To be continued)

A grave danger to adults and children, mainly the latter, are our bed-rooms. Indeed, my friend Biermer, late professor in Zurich and Breslau, called tuberculosis a bed-room disease. With what right? A baby is at least sixteen hours a day in that narrow, confined, airless, windowless bed-room; a child at least ten or fourteen hours, the greater part of its young life. The air is the reverse of what it should be to protect blood formation, circulation and digestion. What can be done to improve it to a certain extent? Some window should be open all night and day. If there be none in the bed-room there is one in the adjoining front room or the kitchen at the rear. Unfortunately, not always, for we are still in an era of selfish refusal on the part of man to be held responsible for the evils and ills of his neighbors. We are hardly entitled to call ourselves a civilized community when fifty thousand families at least, with three to six children each, live each in one light room and one or two small dark holes. In these holes they breed tuberculosis. But it is no consolation to you that they die of it. Before they die they infect their neighbors; and their neighbors, and their neighbors, in the capacity of seamstresses, servant girls, laundresses, cooks and teachers, infect you and your children and your friends' children.—*Jacobi*.

God lent his creatures light and air,
And waters open to the skies;
Man locks him in a stifling lair,
And wonders why his brother dies.

—*Holmes*.

METHYLENE BLUE IN THE TREATMENT OF INOPERABLE CANCER.

DR. A. JACOBI, of New York, in a discussion before the Medical Society of the State of New York, Jan. 30, 1906, said that all physicians, no doubt, were called upon sometimes to treat inoperable cancer. His experience ran back fourteen or fifteen years and involved a large number of cases which the surgeon would not touch. These patients, he said, could be made comfortable, and some might be restored, at least temporarily, to a certain amount of health and efficiency by internal treatment. Fourteen or fifteen years ago Moorhof-Mosetig in Vienna recommended the use of aniline dye, methylene blue, in inoperable cancers. At that time it was used subcutaneously. In America, Dr. Willy Meyer was, Dr. Jacobi believed, the first to write on that subject. Dr. Jacobi said this method of using it was very painful, and, therefore, but little success attended its use. Later he had used methylene blue internally. When he had to treat an inoperable cancer, particularly of abdominal organs, or in cases where operation had been refused, he gave methylene blue in pill form, a half grain four times daily in the beginning, and increasing up to four, five and six grains a day. From the very beginning in order to counteract the disagreeable dysuria, he gave extract of belladonna, three-fourths of a grain a day, divided into three or four doses. It acts very much better than nutmeg which has been recommended for that purpose. Under such treatment the cases have done well, particularly the intraabdominal cancers. In cases of cancer of the liver, after using this treatment for some time, he has seen autopsies performed, and the tumor found to have been much reduced, the patients having lived for a good many years in tolerable comfort. He had had one case under observation eight years; this patient now has been attending to his business all the time. He would recommend this treatment, too, in cases that have been operated upon, as a routine measure. This plan of treatment he brought before the Society because there are so many of these cases. Frequently he has combined the methylene blue with arsenious acid, a preparation which he considered better than Fowler's solution. It could also be given with strychnine or anything one pleased. It is important that the pills should be made up by a good apothecary. The dosage of the methylene blue should be gradually increased from two up to six grains daily, and even more, divided in four doses.

There is every reason to believe that, though tubercle bacilli may live for certain lengths of time outside of the animal body and may be cultivated on specially prepared media, they flourish only in the living body, and that if dissemination of the bacilli from diseased animals and human beings could be prevented the malady could be arrested.—*Maryland Tuberculosis Commission*.

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Editorials.

UNHYGIENIC IMMUNITY.

IMMUNITY against almost any condition which threatens health may be acquired.

There are certain fundamental things which general scientific opinion is agreed upon. It is agreed that pure water and pure air are better for the health than impure water and impure air; and the advance of civilization has resulted in the general acceptance of these beliefs. However, an immunity against many of the impurities existing in air and water may be acquired. It is well known that races which live in conditions which to us would be squalor, drinking and eating dirty foods, enjoy an immunity from the dangers of filth, and thrive under conditions which would be fatal to the more cleanly races. Intestinal infections which give the natives of India little trouble are fatal to the English soldiers. The people of some of the southern countries of Europe eat meat in a state of decay that would prostrate the north European. One can cultivate an immunity from ptomaines as well as alcohol and tobacco.

What is true of insults to the gastro-intestinal tract is also true of the respiratory tract. The Esquimaux in the winter shut themselves in and breathe over and over again the vitiated air from their own lungs, living practically in a state of hibernation; yet this practice has existed so long that when brought into civilization and surrounded by conditions which to us are hygienic,

they are most prone to contract consumption and die. It is reported from Panama that the negroes of the West Indies are suffering a high degree of mortality, although they are compelled to live under the most sanitary conditions. These negroes in their native state live in filth and bad air, yet they perish under the conditions which, theoretically, should be favorable. Just what other conditions may enter into this case we do not know, but these are the reported facts.

On the other side we have a still different picture. It is true that the strongest and most healthy persons often are made ill by violations of hygiene which the less robust endure without complaint. We know of persons who live according to the most advanced knowledge of hygiene, sleeping in the open air, and living out of doors practically day and night, who suffer from oppression of breathing, headache and even nausea, in the vitiated air of a theater or church, while the weakly shopkeeper or clerk, who spends most of his time in an atmosphere of about the same quality, is comfortable and blithe.

Thus, there are penalties for the healthy as well as for the sickly. These observations point to two things: The human organism suffers temporarily from any sudden change into new conditions from old conditions under which it has thrived, whether it be for better or for worse; and it is capable of developing an immunity to poisons materials, either inhaled or ingested, provided that the immunizing process is approached gradually. This power to become immune to the constant assaults of poisons is a part of the great organic law which has enabled animal life to endure, and which has contributed to the differentiation of species.

ELECTRICAL RESISTANCE OF THE BLOOD AND URINE AS A TEST OF THE FUNCTIONAL EFFICIENCY OF THE KIDNEY.

EVERY aid that can contribute something to help in the determination of the functional efficiency of the kidney is to be sought. The simple examinations of the urine, with tests for specific gravity, have served, and still continue to serve, a most useful purpose. The application of cryoscopy, or the determination of the freezing point, to blood and urine, has helped to throw light on this complex question. Cryoscopy gives an index of the molecular concentration of the fluid to

which it is applied. It operates independently of the kind of molecules, provided they are not disassociated, acids and bases and their combinations being exceptions.

Dawson F. D. Turner, in a communication to the *Lancet*, July 28, 1906, reports his experiments with electricity in determining the resistance of the urine and blood as a test of the efficiency of the kidneys. He has already made a report to the Royal Society of Edinburgh upon his experiments with urine. The fluid to be tested is held in a U-shaped electrolysis tube, containing two disc-shaped platinum electrodes, arranged so as to rest just upon the surfaces of the fluid. The electric tests were made always with the same amount of fluid and always under the same conditions. Turner found that the specific resistance of normal urine amounts to about 45 ohms. This resistance is a measure of the amount of salts in the fluid—the greater the concentration the less the resistance. In certain diseases he found that the electric resistance was increased. In acute pneumonia, on account of the diminution of the chlorides, this was the case; also in diabetes mellitus, acute and chronic nephritis, and in pernicious anemia. The glomeruli being responsible for the salts in the urine, a high electric resistance points to disturbance of their function.

Similar experiments were made with the blood. The best results were obtained by placing 5 cubic millimetres of freshly-drawn blood between two cup-shaped electrodes 3 mm. in diameter, coated with spongy platinum and fixed at 0.75 mm. apart. Careful tests with normal blood, made in this manner, showed an average resistance of 93.5 ohms. This resistance depends upon the salt concentration in the blood. A striking change was observed in pernicious anemia, the resistance being only about 50 ohms. The deduction is that the blood in this disease contains an abnormal amount of salts, due either to destructive metabolism or to renal inefficiency. Light is thus thrown upon this disease, for the electric resistance of the urine is much higher than normal, showing that products are retained in the blood which should pass into the urine, but which do not. An inefficiency of the kidney is thus indicated, and a revision of the therapeutics of the disease called for.

Turner has compared his electric findings with those of cryoscopy and been led to formulate a "hemo-renal salt index," by dividing the electric resistance of the blood by that of the urine. In

health the product of this equation equals two or three whole numbers (93.5 divided by 45=2.08). If this number increases, it means that the blood contains fewer salts and the urine more; if the hemo-renal index diminishes it means that the functional activity of the kidney is diminishing. Tests of cases have demonstrated the correctness of these observations. The examination is simple with the proper apparatus, and is destined to be a help in diagnosis and prognosis.

SODIUM CHLORIDE AND DROPSY.

TO the French we are indebted for the clinical demonstrations of the relation of sodium chloride to dropsy, and for the practical application of "dechlorination" in treatment. It was long ago pointed out by Widal that in renal disease the retention of sodium chloride by its failure of excretion is followed by œdema, and that this œdema diminishes if the excretion of sodium chloride is increased or if sodium chloride is withheld from the diet. An excess of this salt in the blood seems also to be associated with the occurrence of albuminuria or with the increase in the amount of albumin in the urine.

Striking cases of leakage of serum from the blood vessels into the connective tissue, as accompaniments of renal disease, have been remedied by the French clinicians by diminishing the amount of salt ingested. Cases with œdema of the legs, ascites, and chronic œdema of the lungs, have been restored to a state of comfort and apparent health by increasing the amount of water ingested and by a diet of bread made without salt, meat and fowl cooked without salt, unsalted butter and other foods containing a minimum of sodium chloride. It is shown that when a condition exists which hinders the excretion of salt it appears in excess in the blood and then enters the tissues and extra vascular spaces along with the serum of the blood. When this condition is present the balance of the proportion of salt on the two sides of the glomerular cells is not maintained. If, now, salt is withheld from the food, the salt necessary for the blood economy comes out of the œdematous tissues, and with it the serum in which it is held.

The old-fashioned doctor who withheld water in these cases and gave sodium chloride because it is set down in the books as one of the best diuretics did not get good results because he was doing

what was diametrically opposite to the treatment which clinical experience is showing helps and cures these cases. Both of these lines of treatment are based upon theory; but newer knowledge has added the salutary pinch of attic salt which experience has proven necessary for the elimination of sodium chloride.

THE IRREGULAR PULSE.

GASKELL, in Schafer's Text Book of Physiology, has shown that the heart possesses five properties: excitability (the power to respond to stimuli), conductivity (the power to conduct stimuli from one point to another), tonicity, contractility, and rhythmicity (the power to produce rhythmically its own stimulus). The last of these functions has been the least understood, and its disturbances have entered but little into correct prognostic considerations. It does not suffice to say that an irregular heart is a bad prognostic sign, when we know it exists in persons who live long and without other cardiac disturbance.

In an admirable study of this condition John Hay, of Liverpool,* shows that no real distinction can be made between the intermittent and the irregular pulse. They are essentially the same, and usually are caused by an extra-systole, and not by an omitted systole as might be supposed. Sometimes this phenomenon is due to a contraction of the ventricles independent of the auricles, that is, before the auricles have properly emptied themselves. Sometimes it is due to a ventricular contraction synchronous with an auricular contraction. In either event the amount of blood sent into the aorta is not sufficient to give a pulse. Hay finds that this condition occurs in four classes of persons: those with an unusual high degree of excitability of the heart muscle, those whose blood contains toxins, patients with arteriosclerosis, and those with organic disease of the heart. It is not difficult to understand that organic disease of the heart might cause this stimulus to give an extra-systole, but still we can not forget how many cases of serious heart disease go on to death with an ever-regular pulse.

In considering the prognosis of this condition Hay believes that too serious a view is taken of it. The presence of arrhythmia under certain circumstances may be of help in diagnosis or prognosis, but when it is the only abnormal symptom

present it cannot be viewed with alarm. In a patient with high temperature, extra-systoles indicate a severe toxemia. Occurring during convalescence extra-systoles simply signify a weak heart. In the acute stage of pneumonia or rheumatic fever arrhythmia bodes ill. The studies of Hay conclude that a pneumonia patient, whose pulse intermits during the first five days, rarely recovers, but irregularities at the crisis or during convalescence matter little.

There is another group of cases with heart irregularity not due to extra-systole, but to interference with conductivity in the nerves connecting the auricles with the ventricles—the bundle of His. In these cases the stimulus which should pass down to the ventricle, following contraction of the auricle, fails, and there is an omission of ventricular contraction.

Still another case of irregular heart action is found in certain cases in which the auricle does not receive its primary stimulus through the normal path, but gets it from below or from the auriculo-ventricular bundle. In this case contraction of the auricles and ventricles takes place at the same time. Hay also points out that arrhythmia may be due to a dropped beat due to impairment of contractility. All of these conditions can best be determined by comparing synchronous arterial and venous tracings. He shows that the old classifications are without meaning. The so-called intermittent, the bigeminal, the trigeminal, and irregular pulses are all due usually to the same variation from the normal method of systole—namely, the extra-systole. This extra-systole is the response of the ventricle to a stimulus arising in itself and antecedent to the arrival of the normal stimulus from the auricle. The extra-systole usually disappears with an increase of the heart-beat frequency.

THE PURE FOOD BILL.

THE passage of the Pure Food Bill is one of the hopeful signs that Congress will help the people. Against the powerful opposition of the manufacturers of questionable foods and dangerous medicines, the newspapers which they control, the wealthy Proprietary Association and United States Senator Hemenway, the bill passed the House by a vote of 242 to 17, and the Senate by 64 to 4. This result is really a victory for the press, both lay and medical, which for the past two years has been agitating

Liverpool Medico-Chirurgical Journal, July, 1906.

this subject. Much credit is due to the periodicals which have been engaged in the exposure of the nostrums and patent medicine frauds. The bill prohibits the interstate shipment of adulterated or misbranded articles, and provides for the examination of samples of foods and drugs by the Bureau of Chemistry in the Department of Agriculture. The standards for drugs are those recognized in the United States Pharmacopœia and the National Formulary. The bill becomes operative January 1, 1907, but unfortunately has no appropriation for carrying it into effect. It requires that medicines containing narcotics and poisonous drugs shall be labelled with the name and amount of such substances.

This bill, if provided with means for its enforcement, will be of much service to the public. It will also result in the destruction of many of the so-called household remedies which would not be used were their contents known.

An interesting feature is that the Department of Agriculture is called upon to pass judgment upon drugs and medicines intended only for human use. While that department is the best that Washington has for this work, and as it already has so many distinctly medical functions to perform, it might occur to some that we have here another argument for a federal Department of Sanitation or a National Board of Health.

Observations.

The newspapers and the medical press are prone to call attention to the "accidents of summer," and it is not to be gainsaid that an appalling number of misfortunes and fatalities mark the summer holidays. In the cities, each Sunday or holiday has its calamities, and the country and seashore every day report disasters which have overtaken the seekers after summer rest and recreation. These accidents and deaths are particularly pitiful, and even dramatic, because they occur in the midst of merrymaking and happiness, and not in the presence of grim and dangerous occupations. Many reasons have been assigned in a general way for these misfortunes, but they all have been subsidiary. I have never seen the real reason assigned. Possibly, because it is so simple, it has been overlooked. Briefly, the explanation is to be found in the tendency on the part of persons engaged in strenuous business life, when the opportunity for a short vacation presents itself, naturally to seek some diversion which is totally different from their daily occupation, and to apply the same strenuous efforts to "having a good time" as they apply to

their every-day vocation. This can never be done with safety.

A mill hand works for fifty weeks with his dangerous machinery and is not hurt, because he is familiar with it; but when he steps in a cat-boat and gets mixed up with the tides and weather, trying to have enough fun in two weeks to last him the rest of the year, Mr. David Jones, Esq., is bearing down on his lee bow every minute. And, on the other hand, the fellow who sails a boat all the year had better keep his fingers out of the wheels of the mill.

For eleven months the pale-faced bank clerk has grown soft and flabby with his eye glued to his ledger page. He has had his cocktail before dinner, and at night over his pipe has sat about the grill-room camp-fire and dilated upon the merits of smokeless powder, while the hands of the tall clock in the corner have become scarcely visible through the thickening smoke. His oculist adds a diopter or two to his glasses; and in the late fall he packs his paraphernalia and plunges into the woods. He tries to make himself look like a half-breed, and thinks that he does, but his guide smiles a deep smile that shows not on his placid face. Now, if you look any more like a deer than a well-curb does, my advice to you is to keep out of the banker's range, or there may be another of these "accidents of the summer." And the native woodsman would make just as bad a mess at figuring discounts.

The prince of the ball-room and the afternoon tea never really has an opportunity to display his manliness until he gets into his bathing suit. The undertow and a breaker or two start in to eat him up, and they get away with him so far that Sylvester's method, for three steady hours, leaves him cold and limp. And the tough old life guard would cut a sorry figure in the cotillion.

The mistake made by our summer vacationist is to plunge into vacation with the confidence of vocation; and in these strenuous days there is too wide a distance for safety between the two.

The cheap seaside resorts vie with one another to furnish their patrons with new sensations, and the frequenters of these places get so much for a small outlay of money that they find the attractions irresistible. All sorts of death-inviting devices shoot people like catapults down grades, up grades and through the air. The ingenuity that has been expended in contriving machines to give people, in the bloom of health, an opportunity of coming up to the death line, almost to the crossing place, feeling the cool breath of eternity, and then receding in the exhilaration of safety, would, if so applied, solve many a human problem. Unfortunately the insanity of amusements of our seaside resorts does not give recreation. Most of the patrons of Coney Island find themselves worse off for it on Monday morning. It involves more nervous strain and excitement than exists in their every-day work, and many more dangers, as experience has shown.

Thousands of employes work hard all the year,

and have a vacation of two weeks in July or August. This vacation is an event, and well it should be, for their labors have earned them two weeks many times over. It is prepared for and thought about, and a good time must be had at any cost. The "good time" too often consists in endeavoring to crowd into that short space a succession of events which should have been distributed more equably through the year. The vacationist works more strenuously at having a good time than he does at earning his livelihood.

All of these conditions cause an approach to the danger line in vacation time; and behind it all lies the strenuous life. While the habits of the people and our social and economic conditions are slow to change, it is always to be hoped that our society may yet organize itself so that its affairs may move along more smoothly. The labors of the men and women who toil should so be regulated that recreation is intermingled with work in wholesome proportions. No country or people in the world are so deficient in the practice of sensibly interspersing labor with play as the Americans. The average American, who is fighting his way to business success, does not know how to play or to take recreation.

There is little that the law can do. It is not a matter of throwing more safeguards about the people, as is suggested. The defect is manifestly a fundamental one, and lies in our socio-economic conditions.

Items.

TYPHUS FEVER IN PHILADELPHIA.—The first case of typhus fever which has occurred in Philadelphia since 1888 was discovered there in a young man who had recently arrived from Denmark. The case terminated fatally at the Municipal Hospital. No other cases have as yet been reported.

THE INTERSTATE COMMERCE COMMISSION, in an Accident Bulletin, issued on July 23d, covering the months of January, February and March of this year, reports the total number of casualties to passengers and employees during this period to be 1,126 killed and 17,170 injured. This is an increase of 17 killed and 52 injured over those reported in the three months preceding. The Commission repeats its former opinion that the block system of signals is the best means of preventing railroad accidents.

DISEASE IN BEDDING.—An investigation has recently been made of the modes of manufacture of cheap bedding which is sold in the poorer quarters of London. It is said that mattresses are made from dirty rags collected from dust heaps and that these are not subjected to a preliminary cleansing. One gram of this material developed 7,590,000 colonies of bacteria, while only 6,400,000 were obtained from the same amount of sewage.

THE CHOLERA SITUATION IN THE PHILIPPINES is reported to be steadily improving. The number of new cases and of deaths are diminishing daily. The vaccine prepared by the Government laboratory was used for the purpose of immunizing a number of the natives in infected districts. It is stated with much satisfaction that none of the immunized contracted the disease.

THE FLOATING HOSPITAL OF ST. JOHN'S GUILD has been carrying over one thousand mothers and children daily, the number of sick babies being much larger than usual. Funds are urgently needed in order to continue the work for the remainder of the year.

ENLARGEMENT OF ROOSEVELT HOSPITAL.—The sum of \$12,000 will be expended in altering the two-story amphitheatre of Roosevelt Hospital. This will be made into a four-story building with a large lecture room and dormitories for employees. A new amphitheatre is now in course of erection on another part of the grounds.

INFANT MORTALITY from intestinal diseases in the City of New York shows a marked decrease as compared with last year. Between May 28 and July 22, 1905, there were 2,070 deaths from gastro-intestinal diseases in children under five years of age. This year during the same period of time there were only 1,475 deaths.

PROF. V. EISELSBERG OPERATED ON.—It is reported that on July 27th Prof. V. Eiselsberg, of the University of Vienna, underwent an operation for appendicitis. He has been an enthusiastic supporter of the early operation in all cases of appendicitis, and on the day of the operation he performed two appendicetomies himself before announcing to his assistants that he wished the operating room prepared for the removal of his own appendix. The diagnosis was confirmed and the appendix was promptly removed by one of his assistants.

SMALLPOX.—Three cases of smallpox have been announced by the Board of Health in the town of Bath, New York. It is said that many have been exposed to the contagion.

NOSTRUM VENDORS BARRED IN GENEVA.—The Mayor of Geneva, N. Y., has issued an order to the effect that in the future no licenses are to be granted to vendors of patent medicines and other nostrums. The Mayor stated that the loss in revenue to the city would be overbalanced by the amount saved by the people.

THE STATE BOARD OF MEDICAL EXAMINERS OF NORTH CAROLINA, at a recent meeting, expressed its willingness to co-operate with the State and county societies in delicensing any physician of the State whose alcohol or drug addiction had gone to such an extent as to unfit him for the practice of his profession.

NATIONAL PUBLIC HEALTH SOCIETY PROPOSED.—It is announced that a meeting will be held in the Hudson Theatre, of New York City, on November 15 for the purpose of organizing a National Society for the preservation of public health. The movement has the endorsement of many scientific societies and individuals of prominence. The function of the proposed society is to obtain and circulate accurate knowledge concerning everything that is a menace to public health and morals, to prevent quackery, criminal practice, morals, to prevent quackery, criminal practice, drug adulteration and the sale of alcohol and narcotic drugs in the guise of proprietary and patent remedies. Such a society should receive whatever support it may require for its organization. The amount of good it might accomplish for the public welfare is inestimable.

BEER DRINKING IN THIS COUNTRY is evidently on the increase. According to figures published by the Internal Revenue Bureau for the fiscal year, which closed June 30, 1906, there were consumed 160,000,000 gallons of beer more than were consumed during the previous year. The total consumption of beer in this country during this year amounted to 54,651,636 barrels or 31½ gallons for each inhabitant. In the fiscal year 1905 49,459,539 barrels were consumed.

THE AMERICAN ASSOCIATION OF OBSTETRICIANS AND GYNECOLOGISTS will hold its nineteenth annual session in Cincinnati on September 20, 21, and 22, 1906.

DR. FREDERICK F. HOYER, of Tonawanda, N. Y., has recently completed his sixty-seventh year of medical practice in that place. Long life and happiness, and still more years to this venerable man!

LABORATORY OF THE VANDERBILT CLINIC.—Plans have been filed for the enlargement and improvement of the laboratory of the Vanderbilt Clinic of the College of Physicians and Surgeons in New York City. The size of the laboratory will be doubled.

TRACHOMA EPIDEMIC.—It is reported that despite the efforts of the Health Department to prevent the spread of this disease, at least one-third of the school children in the thickly populated districts of Manhattan and twenty-five per cent. of those in Kings County are affected with trachoma.

AN INTERNATIONAL CONGRESS OF LIFE INSURANCE EXAMINERS is to be held in Berlin, September 11 to 15. The special topics for discussion will be pulmonary tuberculosis, obesity and syphilis.

MOSQUITO EXTERMINATION.—Under the direction of Dr. Doty, who secured an appropriation of \$17,000 from the city, Staten Island has been practically rid of mosquitos. Most of the results were obtained by transforming marshes into solid

ground and digging ditches for drainage. It is estimated that 230 miles of ditches, ten inches wide and two feet deep, have been dug this summer.

THE AMERICAN LARYNGOLOGICAL, RHINOLOGICAL AND OTOLOGICAL SOCIETY.—At the annual meeting of this society, held in Kansas City, Mo., Dr. Wendell C. Phillips, of New York, was elected to the Presidency for 1906 and 1907.

Medical Society of the State of New York.

The attention of members is called to the following resolution, passed by the House of Delegates on May 19, 1906:

On and after October 1, 1906, no member of the Medical Society of the State of New York shall receive the *Directory*, the *NEW YORK STATE JOURNAL OF MEDICINE*, nor be entitled to malpractice defense until his County dues and State assessment have been paid.

Special Correspondence.

THE SEVENTY-FOURTH ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.
TORONTO, August 25, 1906.

There is no doubt that Toronto extended a warm welcome to those who were present at the 74th annual meeting of the British Medical Association. Englishmen who had imagined Canada a land of perpetual snow did not seem inclined to don the fur overcoats they had brought with them. Outside the exhibition hall, where under the shade of the trees the thermometer registered 90 degrees, a packing case marked "keep well protected from frost" served as the butt of many jokes. A perspiring visitor from the old country was heard to remark to his Canadian confrere, "I suppose, doctor, you get a great many interesting cases of yellow fever, enteric and similar tropical diseases in your practice here?" and the gentleman from Texas stated that he was leaving at the end of the first day to go back home where it was cool. In spite of the heat, however, Toronto may be credited with one of the most successful meetings of the British Medical Association that has been held in recent years. There was an unusually large attendance, nearly two thousand registering, and practitioners from the "States" were very much in evidence. From the Empire State alone there were nearly two hundred representatives. In fact, so large was the delegation from the United States and so prominent was the part they played in the scientific programs, coupled with the fact that Toronto is essentially an American city, that one might almost believe that he was attending a session of the American Medical Association rather than that of the British Medical Association. We are forced to admit, however, that on the whole our British cousins manage their meetings rather better than we do ours.

The grounds and buildings of the University of Toronto furnished an ideal meeting place. The main building, erected 1856-1858, and a beautiful specimen of Norman-Gothic architecture, was given up to the information and registration bureau, post-office, committee rooms, exhibition hall, a few of the section meeting rooms, etc.; the other section meetings were held in the neighboring halls and laboratories scattered around the University campus. All the section meetings were held in the mornings, from 9.30 to 12.30 o'clock, leaving the afternoons and evenings free for the general meetings and various entertainments, etc. As a rule, the rooms where the section meetings were held, though

hot and uncomfortable, were crowded to the doors. The discussions, in some cases, were more acrid and tinged more with personalities than we are accustomed to at our own meetings. They were none the less interesting, and unquestionably the honors rested with the American profession. Striking was the homage paid on every possible occasion to Dr. Wm. J. Mayo, the president of the American Medical Association. The programs of the various sections were very uneven and some showed lamentable weakness. The general opinion of those who attended both meetings was that the program of the last session of the American Medical Association presented far more material that was of real scientific value. It was somewhat a surprise to hear a few points exploited as "new," which had been thoroughly threshed out in American literature several years ago. The space at our disposal forbids our giving even a brief résumé of all the important scientific papers presented. These will be accessible as published *in toto* and hence we will confine ourselves to a general description of the session as a whole.

Tuesday, August 21.—Though the different sections started their work at 9.30 A. M., the official opening of the convocation did not take place until 2 o'clock in the afternoon. The opening ceremonies were held in the new Convocation Hall, where a felt floor covering and many flags and draperies concealed some of the imperfections of the unfinished building. Seats had been hastily put in shape, and there was a large crowd representing the general public as well as the medical profession. From the main building the procession of notables marched in academic costume to the scene of the meeting. The long line of streaming gowns and robes in many colors was a picturesque sight as it marched across the green lawn. The scarlet and ermine, the crimson and gold of British and Canadian universities mingled with dashing military uniforms and with the cool linen and turbans from far India. Some of the more notable members and visitors were escorted to the platform and marched to their seats through a brilliantly hued aisle formed by two lines of local doctors, university professors and others.

The proceedings were opened by an invocation for Divine guidance and help, after which the retiring president, Dr. G. C. Franklin, delivered his valedictory, and his successor, Dr. R. A. Reeve, of Toronto, was installed.

At this juncture the delegates from various colleges and kindred associations were introduced to the president-elect. As each was called upon, he proceeded to the front of the hall, shook Dr. Reeve's hand, and took a seat on the platform.

Addresses of welcome were made by Mayor Coatsworth on behalf of the city; by Dr. I. H. Cameron, on behalf of the local Reception Committee; by Dr. Alexander McPhedran, on behalf of the Canadian Medical Association, and by Dr. G. A. Bingham, on behalf of the Ontario Medical Association. The retiring president and Sir Victor Horsley were made vice-presidents for life.

Dr. Reeve then delivered his very able inaugural address, at the close of which various votes of thanks were tendered, and the meeting adjourned.

A large majority of the delegates went directly to the garden party at the residence of Lieutenant-Governor and Mrs. Clark. Refreshments were served in a large tent and music was furnished by the famous Kilties' Band. The beautiful lawns and grounds of the Government House, together with the striking costumes of the guests, furnished a sight long to be remembered.

In the evening Dr. W. S. A. Griffith delivered the Address in Obstetrics, on the teaching of Obstetrics, and later President and Mrs. Reeve gave a reception in the University quadrangle, which, with the addition of lantern lights and brilliant evening costumes, was but a repetition of the garden party of the afternoon.

Wednesday, August 22.—Following the section meetings in the morning, at 2.30 P. M. Sir James Barr delivered the Address in Medicine, on the Circulation,

viewed from the Peripheral Standpoint, and at 8.30 P. M. Sir Victor Horsley the Address in Surgery, on the Technique of Operations on the Central Nervous System. This latter was followed at 9.30 P. M. by a reception by His Worship the Mayor and the City Council at the City Hall. Mayor and Mrs. Coatsworth ascended the dais in the Council Chamber promptly at 9 o'clock, and for two hours a constant stream of guests passed through the room and received a cordial greeting. Long tables were laden with refreshments and there was an abundant demand for cooling liquids.

Thursday, August 23.—The morning was devoted to section meetings and the afternoon to numerous entertainments, luncheons, etc. A brilliant spectacle of the afternoon was a special convocation of the Senate of the University of Toronto and the ceremonious conferring of the degree of LL.D. on the following: Prof. T. C. Allbut, Dr. A. H. F. Barbour, Sir Thomas Barlow, Sir James Barr, Sir Wm. H. Broadbent, Dr. H. W. Langley Browne, Dr. George C. Franklin, Prof. W. D. Halliburton, Sir Victor Horsley, Dr. Donald McAlister, Dr. W. J. Mickle, M. le Dr. Louis Lapique, Prof. L. Aschoff, and Dr. Wm. J. Mayo, President of the American Medical Association.

A thunder shower at noon gave welcome relief from the terrific heat that hitherto had prevailed. The annual banquet was held in the evening. Victoria Rink, where the dinner was served, was attractively decorated, and in spite of the many hundred who sat at the tables we have never attended a banquet, given in connection with a medical convention, where the arrangements were so nearly perfect. The post-prandial speeches gave evidence, if the visitor had not become aware of it earlier, that Canada unmistakably is fully aware of its past achievements and confident of a great future. As one present tersely remarked, "the Canadians are beginning to feel their oats." Mayo's brief and diplomatic speech was cheered to the echo.

Friday, August 24.—At the close of the section meetings shortly after noon, the general exodus began and there was a noticeable thinning out of the medical visitors in the hotels which hitherto had been overcrowded and taxed beyond their capacity. Numerous entertainments, etc., were on the program, as indeed had been the case during every previous day of the session. This day practically closed the convention and the following Saturday was given over to excursions and side trips.

A notable feature throughout the session was the Exhibition Hall where a large number of manufacturers of drugs, foods, medical and surgical instruments, books, periodicals, etc., made attractive displays. American exhibitors were greatly in preponderance and the booth of the NEW YORK STATE JOURNAL OF MEDICINE in conjunction with the *Medical Library and Historical Journal*, during the entire session was crowded with visitors. The latter journal's large collection of portraits and illustrations of a medico-historical nature, and the golden cover of the JOURNAL in contrast with the dark blue trimmings of the booth made this one of the most attractive of all the exhibits.

The entire medical profession of Canada, and particularly that portion residing in Toronto, is to be congratulated on their success in making the 74th annual meeting a memorable one in the history of the British Medical Association.

A. T. H.

I have hope and wish that the nobler sort of physicians will advance their thoughts, and not employ their time wholly in the sordidness of cures; neither be honored for necessity only; but that they will become coadjutors and instruments of the divine omnipotence and clemency in prolonging and renewing the life of man.—*Bacon.*

Progress of Medicine.

PRACTICE OF MEDICINE.

EDITED BY

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THE OPSONIC PROPERTY OF THE BLOOD.

The medical journals of Great Britain in their recent numbers have presented to their readers several important and interesting articles concerning the "opsonic" theory, upon the principles of which seems to rest the whole subject of therapeutic inoculation with bacterial vaccines. This theory bids fair to place in the hands of medical science one of its most formidable weapons for use in the warfare against bacterial disease. Ronald E. French, in the *Practitioner* for July, explains the theory and its application in perhaps the most comprehensive manner, and from him we quote.

Dr. A. E. Wright, of St. Mary's Hospital, London, has evolved a working hypothesis which assumes the presence in the serum of man and animals of a substance, called by him an "opsonin," which has the power of acting on the invading bacteria in such a way as to render them an easy prey to the phagocytes. He assumes, moreover, the existence of a separate and distinct opsonin for almost every one of the many pathogenic species of bacteria, and consequently also assumes that the degree of resistance of an organism to invading bacteria depends largely on the quantity of opsonins present in the blood. The importance of being able to readily estimate the various opsonins quantitatively and with a certain amount of accuracy becomes at once obvious.

The method for the quantitative determination of the opsonins which has finally come to be used is one originally introduced by Leishman, and modified by Wright. The author explains minutely the process, which we mention in brief. Three preliminary operations are necessary: the collection of a small quantity of blood serum from the patient, and of a similar amount from a normal person, and the preparation of a sufficient volume of human "washed" blood corpuscles. Also the preparation is required of a suitable emulsion of the bacteria against which the sera are to be tested. A mixture is then made in one tube of normal serum, washed corpuscles, and bacteria emulsion; and in the second tube, of equal quantities of the patient's serum, washed corpuscles and bacteria emulsion. After incubating for fifteen minutes, smears of the liquid are made, stained and examined microscopically. The number of bacteria within the first fifty poly-

morphonuclear white blood cells is noted carefully. The normal serum is taken as having an opsonic index of unity, so that the number found in fifty cells in the patient's slide, divided by the number in the fifty cells on the normal slide, gives the opsonic index of the patient.

Among the points established concerning the nature of the opsonins, the following may be mentioned:

1. The variable factor is present in the serum and, so far as concerns its quantitative estimation, is independent of the leucocytes.

2. Opsonins are distinct from those substances which bring about bactericidal and bacteriolytic reactions.

3. The opsonin passes from the serum to the bacteria, and acts upon them in such a way as to prepare them for ingestion by the phagocytes.

4. Variations in the number of leucocytes in the blood do not correspond with similar variations in the opsonic index.

5. In a large number of infections, *specific* opsonins can be detected in the serum.

The opsonic index remains practically constant from day to day in the same healthy individual. In tuberculous disease it may vary from 0.2 to 2.6. In some cases the index undergoes great variation, indicating auto-intoxication and occurring either when the patient is getting better or going down hill—usually the latter.

When a dose of tuberculin or other bacterial vaccine is injected the index at first falls, then it rises to a point above its original level; again it falls, but only slightly, and is then maintained for a variable period at this higher level. The first fall is called the "negative phase," and the subsequent rise the "positive phase." If an inoculation is given during a negative phase, there will be a further fall, and the succeeding positive phase will be long delayed or absent; an inoculation just after or during the positive phase gives rise to a small negative phase superimposed on the first one.

Therapeutically the ideal aim is to obtain a cumulation of positive phases, and to avoid ever giving an injection during the negative phase. To do this it is necessary to take the opsonic index at regular intervals. By this treatment a certain class of tuberculous patients are found to be benefited by a properly interspaced series of tuberculin injections. Not every case is suitable for these injections: for example, a patient already septicæmic or in whom the immunizing defense is breaking down, as indicated by very marked variations in the opsonic index. The most suitable cases are those whose index is low, and whose focus of infection is strictly localized.

The results at Guy's Hospital have so far been encouraging in spite of the fact that many of the cases treated were regarded as hopeless from a surgical point of view. Of five cases of genito-urinary tuberculosis, three have done very well, and can be considered as completely cured; one died and one was little influenced. Several

cases of acne have been cured. Of two cases of gonorrhoeal urethritis, one improved rapidly, and one remained *in statu quo*. French concludes that in acute infective processes nothing can be gained by inoculations, but in chronic localized infections it is almost always possible to increase the natural resistance of the patient, and so to help nature bring about her own cure.

George W. Ross, pathologist to the City of London Hospital for Diseases of the Chest, has been using opsonic methods in the diagnosis of tuberculosis in everyday hospital work during the past nine months. By this means he has been able to differentiate between acute tuberculosis and ulcerative endocarditis or enteric fever, when in no other way could a sure diagnosis be made. In the diagnosis of the more chronic forms of pulmonary tuberculosis from similar but non-tuberculous diseases, he has used with success the opsonic reaction in malignant disease of the lung, chronic bronchitis and emphysema, bronchiectasis, and general debility. Ross agrees with Wright that, "we have, in the power of raising the antibacterial power of the blood with respect to any invading microbe, out of all comparison the most valuable asset in medicine.—*British Medical Journal*, July 7, 1906.

George A. Crace-Calvert, writing concerning the opsonic index in the sanatorium treatment of tuberculosis, says: "The greatest benefit from inoculation is to be obtained in those chronic cases of phthisis which, with a fair amount of disease and a fair amount of cirrhosis and healing, are nevertheless practically stationary, whether they have tried climatic or sanatorium treatment. With the inoculations physical signs disappear in a way that I never remember to have seen them with sanatorium treatment only. Those patients with tuberculous glands recover in a surprising fashion, the glands rapidly quieting down and disappearing. Though I do not think by any means we have a panacea for all tuberculous diseases, I am convinced that sanatorium treatment, alone or combined with inoculations of tuberculin, does at present give the best chance to a sufferer from tuberculosis."—*British Medical Journal*, July 7, 1906.

THE ETIOLOGICAL RELATIONSHIP OF SYPHILIS TO TABES AND GENERAL PARALYSIS OF THE INSANE.

Byron Bramwell in his Clinical Studies considers this subject fully. He discusses the chief facts and arguments which were advanced in favor of the view, which he had held for many years, that syphilis is the chief factor in the production of tabes and general paralysis of the insane, and also refers to the facts and arguments which have been brought against this important view.

He quotes statistics to prove that a very large proportion of patients suffering from tabes or general paralysis of the insane have had syphilis (between 80 per cent. and 94 per cent.). Bram-

well says that the more carefully he inquires the greater the percentage he gets. He says this seems to be the experience of all or almost all observers. As you all know, many patients, whose mental powers and memories are quite normal, have a delicacy in disclosing a history of syphilis; both in private and hospital practice, many patients who have had syphilis deliberately and emphatically deny that they have had the disease. So frequently is this the case that when a patient comes before him with tabes or general paralysis of the insane, he does not ask him *if* he has had syphilis, but *when* he had syphilis. In many cases of general paralysis of the insane the memory and mental power are markedly impaired, and the statements of the patients are unreliable.

He says that it is most important to remember that both tabes and general paralysis of the insane develop after syphilis which, *in its early stages*, was mild rather than severe. This fact has been noted by many observers, and is particularly insisted upon by Professor Fournier. He carefully followed 83 cases of syphilis from the initial chancre up to their final termination in general paralysis of the insane, and he found that in no less than 80 of the 83 cases the syphilis in its early stages was slight. Whereas of 243 cases in which the syphilis in its early stages was severe *not a single case* terminated in general paralysis of the insane. These are remarkable figures.

Again, amongst persons living in districts where syphilis is rare or unknown, and amongst certain classes of the population (such as ecclesiastics, monks, etc.) in which syphilis is very rare or unknown, tabes and general paralysis of the insane are very rare or unknown; but amongst these persons and classes mental diseases and nervous diseases, which are not the result of syphilis, occur as frequently, or almost, as amongst the general mass of the community.

Further, the most careful inquiry fails to show any other factor which is so constant and so important in the production of these diseases. Hereditary and family influence, alcoholic excess, traumatism, stress and strain of various kinds, lead poisoning and other forms of intoxication have been blamed and are, in his opinion, without doubt etiological factors of importance in addition to syphilis, *i. e.*, when added to syphilis; but they are not like syphilis constant (or almost constant) factors; many of the highest authorities deny that there is sufficient evidence to show that *per se* (*i. e.*, in the absence of syphilis) they ever produce typical tabes or typical general paralysis of the insane. Professor Brissaud, for example, the President of the Neurological Society, of Paris, says that he has never seen an undoubted case of general paralysis of the insane which was not syphilitic.

For many years Bramwell has held the opinion, and over and over again stated it in his writings, that syphilis is *the most important factor* in the production of tabes and general

paralysis of the insane. He now thinks it highly probable, though this is difficult to prove with certainty, that is—as David Drummond was one of the first, if not the first, to advocate—an essential factor for the production of these diseases. This opinion (that syphilis is the most important factor in the production of tabes and general paralysis of the insane is corroborated by a great number of facts some of which are the following:

Rarity of tabes and general paralysis in women; females affected with tabes and general paralysis of the insane have had syphilis or have been exposed to syphilis; juvenile tabes and juvenile general paralysis of the insane always syphilitic; the children and wives of patients affected with tabes and general paralysis of the insane often present symptoms or signs of syphilis; conjugal tabes and conjugal general paralysis of the insane are always syphilitic.

Some very remarkable cases have been met with which seem to show that syphilis contracted from the same source is specially apt to produce tabes and general paralysis of the insane; in other words, special varieties, so to speak, of the syphilitic poison seem to predispose to the production of tabes and general paralysis of the insane; or, as Professor Erb puts it, certain forms of syphilis are especially toxic for the nervous system.

The author also states that another fact which is highly suggestive of the syphilitic origin of tabes and general paralysis is that the Argyll-Robertson condition of the pupil (which in the absence of local changes in the eyeball or in the optic nerve to account for its presence is, practically speaking, pathognomonic of previous syphilis) is of such frequent occurrence in these two diseases.

The conclusion that tabes and general paralysis of the insane are more likely to occur when the mercurial treatment was imperfectly carried out and of short duration than in cases in which it was very thorough and prolonged is probably, he thinks, correct.

These facts, in his opinion, show that syphilis is a factor of the very highest etiological importance in tabes and general paralysis of the insane. It is, in fact, the most important factor in the etiology of these diseases. He is rapidly coming to the conclusion that syphilis is probably an essential factor in the production of these diseases; in other words, that without previous syphilis we probably never have true tabes and true general paralysis of the insane.

Further, the facts that have been advanced by Professor Fournier seem to show general paralysis (and presumably tabes) usually follows syphilis, which in its early stages is mild rather than severe; and since syphilis, which in its early stages is mild is not usually subjected to such a prolonged and thorough mercurial treatment as syphilis which in its early stages is severe, the further conclusion seems indicated that prolonged

and thorough mercurial treatment in the early stages of syphilis (though it does not invariably) does very often prevent the subsequent development of general paralysis (and presumably tabes.) *Quarterly Journal of Clinical Medicine*, Vol. IV. Part II, January 1, 1906.

PULMONARY TUBERCULOSIS INCOMPATIBLE WITH MITRAL STENOSIS.

Rokitansky called attention some time ago to the fact that patients with mitral stenosis seldom, if ever, develop pulmonary tuberculosis, owing to the passive congestion present in the lungs. At a recent meeting of the Verein für Innere Medizin in Berlin, Prof. Ernst von Leyden demonstrated the heart and lungs of a patient who had died from heart weakness as the result of mitral stenosis. In the lungs were found old tubercular lesions, however, without signs of recent advancement. The speaker was of the opinion that the tuberculosis might have preceded the heart lesion, and that upon the appearance of the heart lesion it became stationary. Prof. Kraus and Prof. Westenhoffer in the discussion emphasized the importance of this teaching of Rokitansky and said that they had found it almost without exception to be true.—*Berliner Klinische Wochenschrift*, July 9, 1906.

RENAL HEMORRHAGE FOLLOWING COOLING OF THE BODY.

Cases of renal hemorrhage following cooling the body in even such a manner as by submerging the hands in cold water have occasionally been reported. K. Zikmund, in a Russian journal, reports another such a case in which for months renal hemorrhage took place after any moderate chilling of the body surface. In the urine were found hyaline casts as well as as blood. A blood examination gave negative results. After excluding all other considerations the author diagnosed scorbutus, complicated with chronic parenchymatous nephritis. All therapeutic measures proposed by the physician were without avail, especially as the patient paid no heed to directions concerning diet and conduct. Upon the advice of a layman, however, the patient took great quantities of lemon juice, six lemons daily, and without other means recovery soon followed.—From review in the *Zentralblatt für innere Medizin*, July 7, 1906.

THE CHROMOSACCHAROMETER.

A new instrument for the quantitative determination of sugar in the urine by means of a comparison of colors is the chromosaccharometer, described by Ernst Bendix and Alfred Schittenhelm. In pattern it resembles the hemometer, or hemoglobinometer of Sahli. There is a standard tube containing a brown liquid, the color of which corresponds to a one per cent. sugar-urine boiled with an equal part of a 10-15 per cent. solution of sodium hydroxide. Of the urine

to be tested, 5 ccm. are boiled with an equal quantity of sodium hydroxide solution and placed in a second tube, which is graduated. If of a darker shade it is diluted with water until of the same shade as the standard solution. The percentage of sugar is then read at the level to which the diluted fluid reaches. This instrument will not indicate less than one per cent. of sugar, but in quantities greater than this, it is found to give almost accurate results, independent of the presence or absence of albumen, or the color of the urine. The advantage claimed for this instrument is the small amount of time required for the test.—*Muenchener Medizinische Wochenschrift*, July 3, 1906.

A MORE LIBERAL DIET IN TYPHOID FEVER.

A comparative study of diet in typhoid fever is made by Francis P. Kinnicutt who has collected statistics of over 5,000 cases in which various diets have been given. From the statistics he concludes that hemorrhage and perforation are rather less frequent under a mixed, soft and solid diet than under the restricted fluid diet consisting mainly of milk. Diet probably has little to do in the causation of relapses. The influence of diet in causing simple recrudescences of fever he believes a real one, but due rather to abrupt changes in diet than to its quantity. The author says further: "As the result of the study which has been described, a plea for a different dietetic management of typhoid fever than that which almost universally prevails seems justified. But by a different management is by no means meant indiscriminate feeding. It is, rather, a management adapted to the individual case and based upon the recognition, (1) that while the digestive function in many cases of the disease is unquestionably seriously impaired, frequently the impairment is not a material one; (2) that a clean tongue, a true appetite, hunger, should be accepted as guides for the cautious employment of a more generous diet; (3) that the individual, rather than the disease, is to be considered and treated.

"By such a management I am convinced that much suffering may be avoided, prolonged disability materially modified, the danger of secondary infections more efficiently met, and a more rapid convalescence effected."—*Boston Medical and Surgical Journal*, July 5, 1906.

CYANOSIS WITH POLYCYTHÆMIA.

A rare case of cyanosis with polycythæmia is reported by James W. Russell. The patient, a domestic, aged 21 years, complained of shortness of breath and swelling of the legs. She had not menstruated for eighteen months. The face and lips were cyanosed. The heart was somewhat enlarged, and there was slight albuminuria. During a period extending over three months the

red corpuscles numbered between 6,297,000 and 8,650,000. The white corpuscles averaged about 7,000. The hemoglobin was more than 120 per cent. No abnormality in the size or shape of the red corpuscles was observed. With rest in bed the cardiac symptoms improved, the cardiac enlargement slowly diminished, and the œdema disappeared. The polycythæmia diminished with the improvement in the condition of the heart, but it did not disappear. The author believes that besides cases of sphenomelagic polycythæmia there may be cases such as this seems to have been, in which the polycythæmia is merely an accompaniment of the cyanosis due to the weakness of the cardiac muscle.—*Lancet*, July 7, 1906.

GENIUS IN MEDICINE.

Sir Frederick Treves is quoted as saying in a recent popular English magazine to those young men thinking of entering the medical profession that he considers genius as some sort of a neurosis. The few men of genius he has met were exceedingly impossible, and altogether out of place in the medical profession, where even cleverness is not to be encouraged. The things that make for progress in medicine, he says, are difficult to define. Hard work comes first; then there must be close observation; of course, too, a man must know his profession; again, a man must be kind; the last quality to a successful medical man is honesty, and it cannot too emphatically be laid stress upon.—*The Practitioner*, April, 1906.

THE TREATMENT OF PULMONARY TUBERCULOSIS BY PASSIVE HYPERÆMIA.

Bier's method of treating tuberculous joints by producing passive congestion of the parts is recently being applied to many other conditions with success. The visitor to the wards of the German hospitals is astonished at the large number of cases he sees who are being treated by this method. One of the latest contributions to the subject is concerning the treatment of pulmonary tuberculosis by means of hyperæmia, by H. Leo. The author produces a passive hyperæmia of the lungs, not with any sucking apparatus as heretofore proposed, but by placing the patient on a horizontal bed with head and legs raised, and with chest occupying the lowest position. This treatment, he says, should never be used when there is tendency to hemorrhage, and on account of increasing the liability to hemorrhage should be commenced carefully. At first the patient lies only one hour daily in this position, with legs but little elevated. Gradually the time is increased, and the legs are raised higher. Though the author has treated but thirty cases by this method he believes that favorable results may often be obtained, though not in every case.—*Berliner Klinische Wochenschrift*, July 2, 1906.

SURGERY.

EDITED BY

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AND

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TUBERCULOSIS OF THE MAMMARY GLAND AND ITS OPERATIVE TREATMENT.

At various times since 1885 the surgical clinic of Tübingen has published its cases of tubercular disease of the breast, and has commented upon the manifestations which have characterized this affliction and the results attending its surgical treatment. In the present communication Braendle gives the history of eighteen cases. Each of them was carefully followed after operation and the final result noted. In no case did the disease appear before puberty. The most frequent period of life at which it occurred was from the thirtieth to the fiftieth year, although in two cases the disease appeared later than fifty. Nearly all of the patients had borne children, and in most instances had nursed them. In one-half of the earlier cases other coincident tubercular affections were present. In the last eleven there was no pulmonary implication and in only two were the lymph glands generally affected.

The axillary glands were involved in 85 per cent. of the cases. There is a difference of opinion as to whether this affection of the axillary lymphatic glands is to be regarded as the primary or a secondary infection. Koenig favors the latter theory.

Two forms of mammary tuberculosis are described. The first is a rare variety in which there are circumscribed intramammary cold abscesses. In the second and more constant form the diseased areas become confluent. Other authors describe a third group in which solitary nodules occur. This probably is an earlier stage of the disease rather than a specific type. In all of the cases the tubercular character of the disease was confirmed by histologic examination.

The course of the disease was always gradual. As a rule the patient had noticed the presence of firm masses in the breast for months or years. Gradually these would enlarge, soften and sooner or later break down.

On physical examination the breast was found to be of either normal or increased size. In almost 30 per cent. of the cases the nipple was retracted. In advanced cases fistulæ were present. On palpation there would be found a tumor of variable size, irregular in outline, in the main of firm consistence, yet perhaps softened at points, ordinarily movable, but sometimes fixed to the pectoralis major. In 70 per cent. of the cases it was adherent to the skin.

While the histologic diagnosis can be made early, it is exceedingly difficult to determine clinically

at a corresponding period the nature of the growth. A differential diagnosis from carcinoma can definitely be made only with the microscope. Advanced age does not exclude tuberculosis. Even where there is a firm tumor with central softening one cannot be certain as to the diagnosis since this condition has been known to occur in cancer.

When, however, fistulæ have become established, granted that the history of the case warrants it, the diagnosis of tuberculosis can be made.

As to the treatment nothing short of complete amputation of the breast and thorough cleaning out of the axilla will suffice.

This was done in all but one case. Here drainage was undertaken with good result. One patient had post-operative pneumonia. All others were well in from eight to fourteen days.

In all but two cases the subsequent course is given. Of these one was operated upon too recently and the other was lost track of. Of the remaining sixteen, thirteen are living and continue to be perfectly well. Three died several years after operation, but all succumbed to phthisis. In four of the patients but a year to a year and a half had elapsed since operation. The other cases had been operated from four to nineteen years ago and remain free from disease.

As to the prognosis, the result of operation warrants its being pronounced favorable; although as tubercular disease is frequently present at the same time in other organs this should be given with reserve. However, it can be asserted that these cases justify the conclusion that tuberculosis of the mamma is less serious than are other forms of surgical tuberculosis.—*Beitrag zur Klinischen Chirurgie*, Band L. Heft I, June, 1906.

THE DIAGNOSIS AND TREATMENT OF LACERATIONS OF THE LIVER.

Dr. G. Dencks gives the details of seven cases which were brought to the hospital at Friedrichshain, three of which recovered. In these three cases one resulted from a gunshot wound, one from a kick by a horse, while the third patient was run over. Of the four fatal cases, in two there were other severe accompanying lacerations. In the four fatal cases, the ruptures were subcutaneous, two having resulted from falls, and two having been crushed under wheels.

The conclusions reached from the observation of these cases do not very materially differ from those to be drawn from the study of a larger group of similar injuries. Thus it was observed that the right lobe is the part of the liver most often injured in subcutaneous ruptures, and that the tears are usually on the convex surface. Excluding the case of gunshot wound the left lobe was injured but once. In no case were isolated tears found on the concave surface.

As to the signs, tension of the abdomen and abdominal tendencies were constant manifestations.

Neither was absent in a single case. The tension and rigidity were always general and never limited to one side. Tenderness, though likewise general, was found to be more marked over the right hypochondrium or epigastrium. In three cases there was neither hiccough eructation of gas nor vomiting.

These cases were all extremely severe, and in each large quantities of blood were found in the abdominal cavity. Dullness over the dependent parts of the abdomen was observed four times, and twice there was pain radiating towards the right shoulder blade.

The pulse could not be depended upon to indicate the degree of internal hemorrhage. Occasionally, in the most rapidly fatal cases, it was found to be of relatively good character.

The only therapeutic measure to be considered is laparotomy. In two cases the lacerations were sutured with catgut carried deeply into the liver substance. In the other cases, and this group includes the three which recovered, the bleeding was controlled by tampon. No ill effect ever attended this method of treatment. In one case the gauze strips were serviceable in draining an abscess which had formed between liver and diaphragm. The gauze tampon is to be regarded as the best means of controlling liver hemorrhage. It is the most reliable and at the same time the quickest of application. Suture is to be reserved for such wounds as have smooth, clean cut edges, easy of apposition.

Of greatest importance in cases of laceration of the liver is prompt diagnosis followed by immediate laparotomy. Even when the diagnosis cannot be absolutely made, if there is good ground to fear that this injury has occurred, exploratory laparotomy is indicated.—*Deutsche Zeitschrift f. Chirurgie*, 82 Band 4-6 Heft Mai, 1906.

GENERAL PATHOLOGY.

EDITED BY

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THE IODINE REACTION IN LEUCOCYTES.

J. Barnicot has carried out experiments testing the reaction of leucocytes to iodine. In this investigation he used Ehrlich's method of staining, which consists in mounting and simultaneously staining the air-dried film of blood in a mixture of iodine, 1; potassium iodine, 3; distilled water, 100; with enough gum acacia to convert the fluid to the consistency of a thin syrup.

Two kinds of reaction are seen, an extra-cellular and an intra-cellular. The extra-cellular reaction is present in normal and pathological blood: in the latter it may be increased. It may appear in the form of small, amorphous, purple-

brown fragments which are either free in the blood plasma or enclosed within cells which appear to correspond to the blood-platelets. Similar fragments are sometimes seen lying in a mass of granular protoplasmic debris.

This extra-cellular reaction is so inconstant in occurrence and amount as to have no bearing on a consideration of the true iodine reaction.

The intra-cellular reaction is determined by the staining properties of the polymorphonuclear leucocytes. Cells staining a faint lemon-yellow or yellowish-brown tinge are classed as "negative."

Those staining a diffuse brown or containing purple-brown granules in their periphery are classed as "positive."

Opinions differ as to the chemical nature of the iodophile substance, but the weight of evidence seems to point to its being glycogen, probably in combination with albumen.

In regard to the significance of the iodine reaction, the writer believes it to be an expression of a degenerative process within the cell and not an evidence of increased activity for purposes of defense. The reaction bears no relation to leucocytosis, when both are present in the same blood, other than that of a common cause; the reaction may be absent in leucocytosis, present with a normal leucocyte count, or even with leucopenia.

A "positive" reaction is evidence of a toxæmia, bacterial or non-bacterial in origin, and to some extent the intensity of the reaction is parallel with the intensity of the toxæmia.

The continued presence of an iodine reaction in pneumonia after crisis is a further aid to other clinical signs which lead one to suspect delayed resolution or some complication.

When an accumulation of pus is thought to exist, the absence of a reaction is of very great negative value.

The writer concludes that the reaction is—apart from the two conditions above mentioned—so inconstant in manifestation or so variable in degree, that it cannot with justice be granted a serious place among the means at our disposal for the diagnosis or prognosis of disease.—*Journal of Pathology and Bacteriology*, June, 1906.

A consumptive himself is almost harmless, and only becomes harmful through bad habits.—*Cornet*.

LOCAL ANESTHESIA IN OTOTOLOGY. JULIUS HECHINGER, of Freiburg, recommends the following local anesthetic in ear practice:

Acid, carbolic, liquefact.....	0.5
Cocain. mur.	2.0
Menthol	2.0
Spirit. vini	10.0

This is particularly recommended in paracentesis of the ear drum.—*Deutsche Med. Wochenschrift*, Nu. 13, 1906.

Transactions of Societies.

NEW YORK ACADEMY OF MEDICINE.

Section on Orthopedic Surgery.

STATED MEETING, April 20, 1906.

Dr. Reginald H. Sayre, Chairman.

CHRONIC ATROPHIC PARALYSIS.

DR. W. W. LESEM presented three cases of chronic atrophic paralysis, and gave a history of a fourth case. In all of them, the condition had primarily manifested itself by a gradual, progressive weakness of the thenar and hypothenar muscles of the hand, accompanied by marked atrophy of those muscles. Each of them had as its pathological basis an entirely distinct anatomical lesion. Two of them were until recently regarded as types of a single disease, but lately Oppenheim and other neurologists have differentiated them from one another. Chronic atrophic paralysis primarily manifesting itself in the thenar and hypothenar muscles, occurs (1) in neuritis of the ulnar nerve; (2) in chronic anterior poliomyelitis; (3) in progressive muscular atrophy; (4) in amyotrophic lateral sclerosis; (5) in syringomyelia.

Dr. Lesem said that the four cases were so similar in their origin that only by the closest scrutiny and the lapse of time could they be differentiated from one another. Case I, an instance of progressive muscular atrophy, differed from Case III, an example of chronic anterior poliomyelitis, only in the presence of fibrillary contractions of the muscles. That phenomenon is also frequently present in chronic anterior poliomyelitis, and the differential diagnosis between the two affections in this instance was entirely dependent upon the time of life when the diseases first manifested themselves. Case I was a man, 55 years old, while Case III was a girl of 20. Chronic anterior poliomyelitis is a disease of youth and early adult life, whereas progressive muscular atrophy never occurs before the age of 35. The differential diagnosis was all the more difficult in the two cases under discussion, because Case III was a rather abnormal type of chronic anterior poliomyelitis. That disease usually manifests itself first in the peronei of one leg, and some months later appears in the muscles of the other leg. The anterior tibial group is next involved, and subsequently the gluteal and the adductor groups. Finally, the disease extends to the muscles of the calves, and to the vastus externus, the vastus internus, and the quadriceps extensor. This type of the disease, save for an occasional involvement of the psoas and iliacus, and the muscles of the back, does not progress further. In Duchenne's type, the affection extends to the muscles of the back, and finally involves the shoulders, the arms, the forearms and hands.

Case I and Case II, the latter a rare type of syringomyelia in a boy of seventeen years, differed from one another in the far more rapid course of the latter, in the presence of slight rigidity of the upper arm, and in the trophic disturbances of the skin and nails. Syringomyelia is a disease of youth and early adult life. In Case II, after several months had elapsed, dissociated sensory disturbances typical of gliosis spinalis appeared, thus rendering the diagnosis evident.

Case I and Case IV, the latter an instance of amyotrophic lateral sclerosis in a carpenter, 39 years old, resembled one another so closely in all their symptomatology that only the extremely rapid course of the lesion rendered the diagnosis of progressive muscular atrophy in the latter case doubtful. It was not until eleven months after the disease had gained any palpable headway that the symptoms of lateral sclerosis in the legs, upon which the diagnosis was based, became apparent.

Cases II and III, which were, respectively, examples

of syringomyelia and chronic anterior poliomyelitis, differed in their early development only in the far more rapid course of the former. Subsequently, slight rigidity of the upper arm, lively patellar reflexes, the presence of disassociated areas of loss of pain sense, and trophic disturbances of the skin in Case II served to differentiate them.

Cases II and IV both began as cases of progressive muscular atrophy. Both of them rapidly developed slight rigidity and exaggerated patellar reflexes. Finally, the presence of trophic skin disturbances and disassociated areas of loss of sensation in Case II, and the symptoms of lateral sclerosis in Case IV led to a definite diagnosis.

Case III was peculiar in that six years prior to the onset, the patient had an attack of anterior poliomyelitis involving only the left leg and the thigh. The right lower extremity was at no time affected. Six years afterwards the patient developed a chronic anterior poliomyelitis in both upper extremities. This case and Case IV, the latter one of amyotrophic lateral sclerosis, in their early stages differed only in the far more rapid progress of the latter. Both began in identically the same way, but in Case IV within a year the disease had invaded the muscles of the upper arm and the neck, finally giving rise, in the eleventh month, to spastic symptoms in the legs. Case III, on the other hand, after four years' duration, had extended only to the left upper arm and shoulder, while the right upper arm was but slightly involved.

From the analysis of these cases, Dr. Lesem said, it would be seen that occasionally syringomyelia, chronic anterior poliomyelitis, progressive muscular atrophy and amyotrophic lateral sclerosis so closely resembled one another in all their symptomatology that for months we may be utterly unable to differentiate them. Syringomyelia and amyotrophic lateral sclerosis are far more rapid in their course than chronic anterior poliomyelitis and progressive muscular atrophy; at the outset this is the only factor that might throw any light upon the differential diagnosis. When spastic symptoms of the legs do not develop early, as in Case IV, or when, as in Case II, disassociated sensory disturbances are absent, we are utterly at a loss to determine whether our patient is suffering from syringomyelia or amyotrophic lateral sclerosis. Time alone can aid us in arriving at a definite conclusion as to the diagnosis in these obscure cases of chronic atrophic paralysis.

STILL'S DISEASE.

DR. VIRGIL P. GIBNEY presented a boy, six years old, who was admitted to the Hospital for the Ruptured and Crippled in June, 1905. He was somewhat emaciated and under-sized, and pale and anemic in appearance, with evidences of former rickets. There was no dyspnoea nor cyanosis. There was marked prominence of the parietal bones, pigeon breast and the rachitic rosary. The head was held rigidly upright, and slightly inclined to the left. Movement of the head was limited and painful. The gait was uncertain, the body being held rigidly erect. The post-cervical glands were markedly enlarged. The submaxillary and a few of the anterior cervical were enlarged. The axillary glands were also markedly enlarged, and the inguinal and femoral could be felt. The glands were hard, but not tender; the enlargement was symmetrical. All the thoracic and abdominal organs were apparently normal.

There was marked atrophy of the muscles of the arms and forearms on both sides, with an elastic, fusiform swelling on the posterior surface of both wrists, more marked on the left side. Fluctuation was present. The active movements of the upper extremities were slow and deliberate. The range of passive motion in the wrists was much restricted, and painful when carried past the limit. The range in the shoulders was apparently normal, but painful when carried to the normal limits. The elbows were apparently normal.

In the lower extremities there was some atrophy of the thighs and calves, but less marked than in the arms.

There was a small, elastic flattened swelling over the anterior surface of both ankle joints, presenting fluctuation. Active movements of the parts were slow and guarded, and the range was much restricted. Passive motion of the hip and knee joints showed that the range of motion was nearly normal, but painful when near the normal limits. Motion of the ankles was also much restricted.

Fluoroscopic pictures of this case, which were exhibited by Dr. Gibney, showed nothing abnormal in the cervical spine, shoulders, hips or knees. In the wrists, the ends of the radius and ulna, and also those of the metacarpal bones, were distinct. The carpal bones could not be made out, appearing like a large blur. In the lower extremities, the ankle joints and the astragalus and os calcis showed a slight blur.

In this case, Dr. Gibney said, there was no history of specific disease. The first symptoms of his present trouble had appeared when he was about three and a half years old. A blood count, made on January 15, 1906, gave the following results: Red cells, 4,800,000; white cells, 15,000; hæmaglobin, 85 per cent.; polynuclears, 61.4 per cent.; lymphocytes, 35 per cent.; eosinophiles, 0.6 per cent.; transitionals, 3 per cent.; nucleated reds, none. Moderate secondary anemia.

In connection with this case, Dr. C. P. Bull, Jr., gave a brief history of Still's disease, which he said is a type of infectious arthritis occurring in young children, and described by Still in 1896. It was characterized, pathologically, by changes in many or most of the larger joints, the lymphatic glands, the spleen, blood and muscles.

Discussion.

THE CHAIRMAN, DR. SAYRE, who saw Dr. Gibney's case for a few moments last January, thought there was a decided improvement in his appearance.

DR. GIBNEY replied that the improvement had apparently occurred since the boy left the hospital, and had returned to his home on the lower East Side.

DR. T. HALSTED MYERS said he did not think the treatment of these cases was well understood. In a case that came under his observation in St. Luke's Hospital, about two years ago, he tried immobilization and local applications for three months, and then, as no improvement occurred, excepting relief of pain, the child was sent home, and the only treatment resorted to was simple hypernutrition. Perfect recovery took place. In that case, both ankles and knees, fingers, wrists and elbows were involved.

A NEW HIP SPLINT.

DR. W. E. GALLIE, of Toronto, Canada, who devised the splint, demonstrated it to the Section. It was intended for cases of acute, suppurating hip-joint disease. By means of it, perfect fixation was secured, the patients could be easily moved about, and it was applicable to either limb. The principal point about the brace is that by a device at the lower end, the traction, which, as the patient lies in bed, is obtained by weight and pulley, can be retained as the patient is moved about.

Discussion.

DR. SAYRE thought the apparatus shown by Dr. Gallie was a very useful one, and in addition to the purpose for which it was devised, it would also serve to protect patients after operations on the hip. The fact that it could be transferred from one leg to the other was an additional advantage. It would serve as a protective cuirass after operation, and answered the same purpose as Phelps' hip splint.

DR. HOMER GIBNEY, after congratulating Dr. Gallie upon the very efficient apparatus he had shown, said he thought it was far better than the wire cuirass, or the hip splint of Phelps, referred to by Dr. Sayre.

SCOLIOSIS WITH TORTICOLLIS.

DR. DEXTER D. ASHLEY presented a boy fifteen years old, who complained of pain and stiffness of the neck, which compelled him to hold his head on one side. He

had been under observation something over a year. When first seen the neck was quite stiff and painful, and upon examination a distinct grating was produced, as of denuded cartilage. The patient then, as now, had the appearance of being well nourished and muscular. He had a distinct heart murmur, and gave a history of an attack of rheumatism three years ago involving all the joints of the extremities, with pain and tumefaction, suggesting Still's disease. Motion is now much freer than even six months ago, and the shortening of the sterno-mastoid muscle more apparent, simulating torticollis.

Several X-rays showed nothing abnormal unless, it may be, a broadening and flattening of the bodies of the fifth, sixth and seventh cervical vertebrae.

Patient had been given constitutional treatment and electricity. The speaker referred him to the hospital for the correction of the deformity, but doubting the efficiency of the operation, he asked for suggestions.

Discussion.

DR. HOMER GIBNEY said the case was apparently one of scoliosis and torticollis. The boy complained of very slight pain on turning the head. The upper cervical and first dorsal vertebrae were slightly deviated to the left. There was no enlargement of any of the joints.

THE DIFFERENTIAL DIAGNOSIS OF VARIOUS JOINT DISEASES, GENERALLY CLASSED AS RHEUMATOID ARTHRITIS.

DR. P. WILLIAM NATHAN read a paper with the above title.

THE TREATMENT OF RHEUMATOID ARTHRITIS.

DR. WILLIAM BENHAM SNOW read a paper with the above title, for which see page 356.

In connection with his paper, Dr. Snow showed a case of chronic synovitis of the knee joints, and a number of cases of rheumatoid arthritis, which he had successfully treated by the method described in his paper. He also exhibited numerous skiagraphs which showed the condition of the joints in this form of arthritis.

Discussion.

DR. CHARLES L. DANA said that, while the subject under discussion was not a neurological one, still he had to deal with many of these types of disorder in hospital and private practice, and had had considerable experience in certain lines of what had been known as rheumatoid arthritis. He considered Dr. Nathan's classification of these disorders as a very good one, and in accord with the pathology of the condition, as it was understood at the present time. Some of Dr. Nathan's terms, he believed, had already been adopted.

Dr. Dana said he did not know anything about the infectious osteo-arthritis troubles of infancy. The only cases he saw were those that were generally classed under the head of the metabolic type of rheumatoid arthritis, and the senile and trophic forms. The term metabolic osteo-arthritis certainly applies very well to the form described by Marie, and known as spondylosis rhizomelia. This disease was first described as a special one of its kind, but it has been later classed with the forms of rheumatoid arthritis. Post-mortem investigations have shown that it is a proliferative ostitis, and that its terminal results are a rigid, ossified spine. This distinguished it from the gonorrhoeal form of spondylitis, which sometimes gets well. In metabolic spondylosis rhizomelia Dr. Dana said he had seen scarcely any improvement, no matter what treatment had been employed. By means of tonic treatment, baths, etc., the affection is at times arrested, but electricity and antirheumatic remedies have no modifying effect on its course.

Another form of disorder which he saw occasionally is the ordinary type of senile rheumatoid arthritis, with deformity and atrophy of the joints. This is the form that is commonly associated with Heberden's nodes. These are frequently observed in hospital practice, and

the most favorable treatment that he knew of was rest, with cod liver oil and large doses of strychnia, associated with simple tonic baths and daily massage. He had never seen any good effect from electricity in this disease—at least, none that he was sure of. It was still unproven that the static current had any effect on metabolism. That theory was formerly taught, but Dr. Dana said he knew of no careful physiological chemists who have been able to demonstrate it. Personally, he did not believe that electricity in any form especially promoted metabolism, nor had it been proven that static electricity penetrates the tissues very much; such was not the tendency of the current.

Dr. Dana said that while he had always been receptive to electro-therapeutics, he thought certain men claimed too much for that method, and that their claims were too often based on generalities and vague statistics instead of upon specific cases.

Dr. Dana said that in discussing the pathology of rheumatoid arthritis, Dr. Nathan had omitted to speak of arterial sclerosis. In the metabolic and some of the trophic types, arterio-sclerosis, while perhaps not the primary feature, is a very important one.

DR. VIRGIL P. GIBNEY said that many years ago the late Dr. Knight was very enthusiastic in regard to the value of electricity in the treatment of certain joint diseases, and on one occasion he read a paper before the New York Academy of Medicine upon the subject of static electricity. He had never been able to convince Dr. Knight that the cases so treated were not cured, and Dr. Knight had never been able to convince him that the treatment was of much value. Since that time, Dr. Gibney said, he had passed through several similar waves of enthusiasm in regard to the curative power of static electricity in certain joint conditions, and he was still skeptical in regard to its value.

DR. HERMAN C. FRAUENTHAL said that while he did not look upon electricity as a cure-all, he thought it possessed some therapeutic virtue. The Paquelin cautery and the static spark were similar in some respects. The latter at times gives rise to pretty severe contractions. Contractions without pain can also be produced by having the spark elsewhere than on the patient, and very often in cases where a nerve has been severed by traumatism or otherwise, decided contractions can be produced in the involved muscles a long time after they are supposed to be inactive to other forms of electricity.

DR. EDWARD C. TITUS said it was a matter of surprise to him that so many members of the medical profession were loath to accept improved principles in therapeutics in conditions that were resistant to the older and well-established plans of treatment. Personally, he was convinced that the method of treatment described by Dr. Snow was the most satisfactory in dealing with cases of so-called rheumatoid arthritis. There was no question, he thought, about the nutritional changes that had taken place in the joints in those cases, nor of the effect of the treatment, as described by Dr. Snow, upon such joints. The results shown by Dr. Snow were evidence of the value of this advanced method of therapeutics. To merely refer to the treatment as electrical was very vague, and to include the static modalities under the general term of electricity was an indefinite expression. Personally, Dr. Titus said, he had owned a static machine for twenty years, but it was only within a few years that he had learned to appreciate the value of some of the static modalities. Although they were termed electrical, there seemed to be nothing electrical about them. That they exerted a therapeutic action on the tissues was absolutely established, and that they furnished a valuable addition to the armamentarium of the physician was beyond question.

Dr. Titus said that Dr. Dana had spoken of the benefit he had observed in some cases of senile rheumatoid arthritis following the administration of cod liver oil, large doses of strychnia, together with tonic baths and frequent massage. All those remedies and thera-

peutic measures tended to improve the general metabolism, and to that extent improved the patient's nutrition and the local condition in the joints. The same results could be obtained, the speaker said, without the use of drugs and the guess-work their administration entailed, by the proper application of a selected static modality. The effect of this method of treatment on hyperæmic or acute inflammatory conditions is evidenced by the marked contraction it produces in the tissues, which re-establish the normal circulation, and restore a normal metabolism. The treatment is also of the greatest service in cases of acute neuritis, sciatica, etc., and those who are not familiar with its therapeutic possibilities would do well to investigate it, and by so doing they would add a very valuable method of treatment to those already in their possession.

DR. SIDNEY A. TWINCH said that when he first saw the case of chronic synovitis of the knee joints, which Dr. Snow had presented, he was inclined to regard it as one of rheumatoid arthritis. In that instance, the static treatment described by Dr. Snow had certainly proved beneficial, and personally, the speaker said, he did not see how the orthopedist could get along without the continuous electrical current. During the past winter, Dr. Frauenthal had presented a paper upon gonorrhœal joint affections, in which he had emphasized the value of the continuous current in the treatment of that form of inflammation. Dr. Twinch said he had found the continuous current very useful in neuritis and other affections.

DR. NATHAN, in closing, said that Goldthwaite, of Boston, divided rheumatoid arthritis into the infective, hypertrophic and atrophic types. He failed, however, to recognize the essential difference between the two types of disease, and for that reason his classification is objectionable. His atrophic form is the same as Dr. Nathan's metabolic, but the fact should be borne in mind that all these bone lesions which result in joint disease are attended by a certain amount of atrophy. The hypertrophy is simply a compensatory affair. Within the bone, the process of rarefaction goes on, whereas outside the periosteum proliferates, forming osteophytic spurs.

In regard to the treatment described by Dr. Snow, Dr. Nathan said that personally he had never resorted to electricity in the treatment of rheumatoid arthritis, although he was constantly seeing cases in which that method of treatment had been unsuccessfully tried.

DR. SNOW, in closing, said he was convinced that those present who had expressed skepticism in regard to the value of the treatment he had described in his paper, had done so only because they were entirely unfamiliar with its method of application. That the static current did not penetrate the tissues, as stated by Dr. Dana, was entirely foreign to our knowledge of the law of physics governing this subject. One of the well recognized laws of electricity is that the current takes the shortest route by the best conductor between two points. It must be borne in mind that the high resistance of the skin—about 100 times greater than the other tissues—prevents the static charge from passing over the skin to surround the body, but in straight lines in every direction through the tissues. It could not be otherwise and fulfil the natural law. The body charged and insulated, the static sparks when discharged escape from every part of the surface through the body to the point of escape. Sparks of proper intensity will cause contractions of large and deep seated muscles anywhere in the human frame. The action of the spark is mechanical, not electrolytic, inducing activity in and of the parts to which it is applied. They thus effect tissue drainage by expression, coincidentally removing induration and restoring circulation, thereby eliminating sluggish processes and restoring metabolism. Under this treatment, the non-infectious cases, such as rheumatoid arthritis, would invariably get well, providing the lymphatics and the structure of the joints has not become absolutely impaired through the chronicity of the process.

County Societies.

BROOME COUNTY MEDICAL SOCIETY.

The quarterly meeting of this Society was held at Binghamton, N. Y., July 3, 1906.

The following officers were elected: President, F. M. Miller, Binghamton; Vice-President, E. H. Wells, Binghamton; Secretary, Jack Killen, Binghamton; Treasurer, Ray Beardsley, Binghamton.

Censors: J. G. Orton, Binghamton; J. H. Chittenden, Binghamton; J. M. Farrington, Binghamton; Charles Butler, Harpursville; F. W. Sears, Binghamton.

Scientific Program.

Dr. L. D. Fosbury, Endicott, N. Y. Subject: "A Case of Syphilitic Marasmus."

Dr. Geo. O. Williams, Greene, N. Y. Subject: "A Speculation."

Dr. J. J. Kane, Binghamton, N. Y. Subject: "The Newer Anesthetics."

"Miscellaneous reports of cases."

MEDICAL SOCIETY OF THE COUNTY OF ROCKLAND.

REGULAR QUARTERLY MEETING, AT PIEDMONT, ON
Wednesday, July 11, 1906.

The following members were elected: Dr. J. William Giles, Nyack; Dr. Matthew J. Sullivan, Haverstraw.

At this meeting the Society agreed as a body to refuse to make examinations for the old line insurance companies for any fee under five dollars.

New Books.

NEUROTIC DISORDERS OF CHILDHOOD. Including a study of auto and intestinal intoxications, chronic anemia, fever, eclampsia, epilepsy, migraine, cholera, hysteria, asthma, etc. By B. K. RACHFORD, M.D., Ohio. New York, E. B. Treat and Company, 1905.

In Part I the author has revised the series of papers published on some physiological factors of the neurosis of childhood. He has studied the physiological peculiarities of the immature nervous system of infants and children, and the important bearing which these peculiarities have in the individuality of the neuroses of childhood. The study of a work of this character is important, as this class of diseases has been little understood by the general practitioner, yet it is a well known fact that infants and children are especially predisposed to nervous disorders.

Part II deals with the individual neuroses and the lines of treatment.

PHYSIOLOGY OF THE NERVOUS SYSTEM. By J. P. MORAT, of the University of Lyons. English edition translated and Edited by H. W. SYERS, M.A., M.D. (Cantab.). Chicago, W. T. Keener & Co., 1906.

This is a most attractive volume. The physiology of the nervous system is given a meaning, and made to stand out as something peculiar and without analogue in the organic world. The nervous system, the author says, does not provide force, it utilizes it, and this duty devolves upon it by reason of the perfection of its own organization. It is the nervous system which decides at what moment the energy accumulated by the living being shall be liberated, in other words, shall allow matter to exert its motor functions. In the nervous system all movement induces sensation, and all sensation induces movement of some kind. This system, moreover, among its most extraordinary attributes, possesses a power of adjournment concerning the events depending on it. Professor Morat's work elucidates, as no other book upon the subject, the peculiar influences of the nervous system over the rest of the animal organism.

This subject is a most complicated one but the author has systematized it and made it plain. This volume embodies the latest advances in the knowledge of the nervous system.

MATERIA MEDICA AND THERAPEUTICS. By J. MITCHELL BRUCE, M.A., LL.D., M.D. *First American Edition.* Chicago, W. T. Keener & Company, 1906.

The first edition of this book appeared twenty-two years ago, since which time it has undergone many revisions. This last edition has been adapted to the new United States Pharmacopœia, and brought up to date in every sense. There has also been added a new part on the materia medica of India and the British colonies. In the description of special therapeutics there is a systematic tracing of the physiological actions and uses of the different drugs in their passage through the body, from their first contact with it locally until they are eliminated in the secretions.

This little volume is of special use to the student.

THE COMPLETE POCKET-FORMULARY AND PHYSICIANS' VADE-MECUM. By J. C. WILSON, A.M., M.D. *Third Edition.* Philadelphia, J. B. Lippincott Company.

This little book, arranged to fit the inside coat-pocket, is a veritable library of therapeutics and materia medica. It contains over 2,500 prescriptions, arranged for ready reference under an alphabetical list of diseases. It contains a special list of new drugs, with their dosage, solubilities, and therapeutic applications, together with about all the other practical therapeutics for ready reference that the practitioner could require in his day's work. It is a wonderfully handy little volume.

Deaths.

HENRY A. ATWATER, M.D., of Brooklyn, N. Y., died July 31, 1906; aged 28 years.

HENRY BAETING, M.D., of Buffalo, N. Y., died July 14, 1906; aged 55 years.

WILLIAM P. BRANDEGEE, M.D., of New York City, died July 30, 1906, of apoplexy, at the age of 42 years.

He was a native of Brooklyn, a graduate of Yale, and the College of Physicians and Surgeons, and visiting surgeon to the New York Eye and Ear Infirmary.

SERENO BURNELL, M.D., died in Holbrook, Long Island, August 3, 1906; aged 87 years.

CHARLES M. BUGGE, M.D., died in Brooklyn, July 17, 1906; aged 65 years.

WALLACE C. CLARK, M.D., died in New York City, May 19, 1906.

WILLIAM DE LE MONTAYNE, M.D., of Kingston, N. Y., died of nephritis, at his summer home in Hurley, August 11, 1906; aged 69 years.

CHARLES F. HERMAN, M.D., died in Waterbury, Conn., August 2, 1906, after a brief illness; aged 36 years.

He was physician to the Brooklyn Dispensary and Polhemus Clinic.

ALEXANDER HUTCHINS, M.D., of Brooklyn, died on July 30, 1906, in his seventy-first year. He attended the Harvard Medical and New York Medical Colleges; served as assistant surgeon in the Navy during the Civil War; was thrice president of the Medical Society of Kings County, and also president of the Medical Society of the State of New York; and for twenty-five years visiting physician at the Brooklyn Hospital.

GODFREY R. MARTIN, M.D., died at Glens Falls on Wednesday, August 8, 1906.

CHARLES McDONALD, M.D., died at his home in New York City, February 22, 1906; aged 81 years. He was a Confederate veteran.

CHARLES A. TINKER, M.D., died at Westhampton, Long Island, on July 18, 1906.

AMELIE D. F. VON DER LUHE, M.D., died July 21, 1906, in Greenport, L. I.; aged 46 years.

HARRIET A. WOODWARD, M.D., died at Round Lake, N. Y., on July 25, 1906.

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Original Articles.

METHODS OF RESEARCH INTO THE CAUSES OF EPILEPSY:

Its Curability: and its Point of Greatest Prognostic Value.*

By WILLIAM P. SPRATLING, M.D.

SONYEA, N. Y.

Medical Superintendent, The Craig Colony for Epileptics; Ex-President, The National Association for the Study of Epilepsy.

DESCRIPTIONS of epilepsy, its forms and subdivisions, its nature and variability, its causes, results and forms of treatment, its power as a disease dangerous to life, and, more important than all the rest, its curability in many cases when it is taken in time and rightly treated for two or three years, do not by any means conform to the standard descriptions to be found in the vast majority of text-books that deal with this disease, which descriptions are necessarily the ones that dwell in the minds of most physicians.

If I depart to-day from the well-worn text-book paths in what I have to say, lay it to the fact that I have not found the material for a paper of this sort during the past fifteen years so much in the literature or in the library as I have in the living, and also to a very considerable extent, in the dead bodies of some 3,000 cases of epilepsy of all ages, and due to all recognized causes, that have come under my observation within that time.

Unmistakable evidence in abundance points to a more satisfactory and successful treatment of epilepsy in the future than has been such treatment in the past. To understand why this is so we must understand the causes that have led so often to failure to cure epilepsy in the past. We must also understand the principles upon which the more enlightened treatment of the future is to be based, and which in a few places in this country and abroad—especially in England and in Germany—are finding successful application at this time.

The treatment of any disease must to a certain extent remain unsatisfactory until its pathology is established. One reason, I venture to say, why we have failed to establish a definite path-

ology in epilepsy has been because certain of its most conspicuous, its most persistent and most destructive types possess no definite pathology that is discoverable, or that ever will be discoverable, by any of our *present* methods of investigation in the laboratory, on the autopsy table, at the bedside, or elsewhere.

In my judgment we need to establish an entirely new line of research in looking for the basic causes of epilepsy in the great majority of cases; and maybe, to some extent in all cases. I speak of the causes of epilepsy as I would of its types, for the latter are numerous. To say that a person has epilepsy, and make no further specification, conveys only the vaguest meaning nowadays to the mind of the well-trained epileptologist. An individual may have one of several perfectly distinct forms of the disease or a combination of them all or in part; or again he may have one of half a dozen imperfect forms of it. So with the causes, and what is more important, and should be constantly borne in mind, is these causes are evasive, indefinite, shifting and unstable in their action; full of power and capable of producing the most pronounced epileptic seizures to-day, and completely harmless to-morrow—so harmless, indeed, that as individual factors they have absolutely no existence whatever. Such causes must be regarded as bio-chemical in nature. They are perhaps never just the same in intensity. But the main point to remember is, that they act when present on brain tissue already prepared in some mysterious way for their action.

Personally I do not believe we will ever find the fundamental lesion in epilepsy so long as our research studies are confined exclusively to the autopsy table; that is, not the entire lesion, nor yet the most important part of it, for in my judgment, in most cases the lesion must be composite in character.

We have found organic brain conditions after death in many epileptics that undoubtedly contributed to the production of epileptic convulsions, but the real convulsive factor, the evasive agent, the specific toxine, if I may so distinguish it, that comes and goes, that is present to-day and not to-morrow, that produces a series of attacks to-day, a single attack to-morrow or next week, and status epilepticus next month or a year hence, is yet to be discovered.

I do not belong the school of neurologists who believe, and who even go so far as to dogmati-

*Read by invitation before the Joint Medical Societies of the Counties of Allegany and Cattaraugus of New York and McKean of Pennsylvania, at Rock City, N. Y., July 17, 1906.

cally assert, as some do, that epilepsy is always dependent upon an organic cause in the brain. Nor do I belong to the school of those who believe that epilepsy is always due to some embryonal condition, to "a potentiality" which leads to instability and early death of certain portions of the brain cortex. My own opinion at this time includes the beliefs of these two schools; but at the same time, it goes much further, is more complex, and I may express it as follows:

First—Epilepsy of a certain type is due in certain cases to an organic cause, such as a cerebral hemorrhage, gross or minute; trauma, or a tumor. Such causes most frequently produce those forms of the disease in which the mental life of the patient is preserved for years after the onset of the disease, and maybe there is no impairment during the entire life of the individual. This is really not essential epilepsy.

Second—Epilepsy, mostly of an essential nature, is sometimes due to "a potentiality" that exists in the brain at the moment of birth, and that under proper stimulation or irritation may induce convulsions at the very moment of birth, immediately after birth, a few days, weeks or months after birth, or that may have no effect or influence in that direction whatever until the proper stimulation is applied in adult life. The epilepsy due to a combination of such causes is more nearly essential or idiopathic than the type of epilepsy described above.

Third—Epilepsy is more often due to a condition of specific systemic poisoning—a condition in which deep-seated errors exist in the fundamental principles of nutrition, in metabolism, in the ultimate cell life, in the last phase of nutrition, and which errors are so serious from time to time and at irregular intervals that a *positive universal toxic condition* is the result, and which toxic condition varies in intensity in the same individual at different times as it must to produce attacks of epilepsy so unlike.

To make the matter as plain as possible, and detach from it much technicality, I may say that an epileptic convulsion is a reaction on the part of a living body, inherently weak at some point, to a poison; but instead of the reaction manifesting itself as an elevation of temperature, as delirium, or in some other way common to reactions, it comes as a sudden disintegration of nervous tissue in the brain, the nature and result of which vary according to the area involved in the so-called "nervous discharge."

It is my belief that thousands of persons escape fixed insanity by reason of their epilepsy. The seizure modifies or destroys the poison that may and probably would have produced lasting insanity.

One person has a seizure, well defined in form, barely loses consciousness, is disturbed by no muscular commotion whatever, not even so much as the necessary blinking of an eye, and in less than fifteen seconds he is in his normal state again. Another person has a Grand Mal attack,

most frightful and terrorizing to witness, that completely destroys all motion and consciousness for hours, and that leaves him dazed, confused, weak, sore all over, and inert for twenty-four to forty-eight hours afterwards.

Such variable results show that different brain areas are involved during the fit, and in variable degrees.

It is my conviction that thousands of individuals are born into the world with a *positive convulsive tendency*, an act physicians too generally fail to recognize. "Worm fits," "teething fits," "stomach fits," and other popular convulsive phenomena of infant life attest this fact. Many such persons, after reaching years of discretion, do not respect this tendency, and the result is that sooner or later they become confirmed epileptics. Others do respect it, and while they are never strong in a neurologic sense, they escape epilepsy *wholly by right living*.

To sum the whole matter up, I may say that a *weak brain, a toxine, an injury*, are the three great primal factors in the etiology of all the epilepsies. The first two in combination are probably responsible for 95 per cent. of all cases of this disease. To amplify them would fill a good sized book.

PATHOLOGY.

I am fairly familiar with the work that has been done in this direction during the past twelve to fifteen years in this country and in Europe. Several investigators have been more or less active in it. Some of them have asserted a definite pathology in epilepsy. Prout and Clark, in my own book (*Epilepsy and its Treatment*, 1904), say: "The most striking changes presented by the cortex of the epileptic are found in the cells of the second cortical layer, cells distinctly sensory in type. In patients dying during a period of status epilepticus these changes are most decided. The cells are swollen in many instances to twice their normal size, the nucleus being especially large and granular, with indistinct outline. The limitations of the nucleus are often difficult to determine. The chromatic substance has almost disappeared from the body of the cell, and this portion of the cell appears ragged and poorly outlined. The most striking changes are found in the nucleus. In addition to being granular, swollen and poorly outlined, the nucleolus is often absent, having been abstracted from the nucleus in process of section making. This occurs in status cases two or three hundred times more frequently than in sections of normal brain." Much more is said, but the gist of the pathology of epilepsy, as Prout and Clark appear to desire to state it, lies in the part quoted.

In the light of my own experience, and taking all things into consideration, I am led to doubt that this view of the pathology of epilepsy covers the problem in a satisfactory way. I am more willing to believe that the changes described by pathologists as having been found in the brains

of epileptics to this time did not primarily exist as a cause of epileptic seizures, but appeared later as a result of such seizures. I fear pathologists have mistaken results for causes. The conditions they have found have never within my knowledge been found at the beginning of cases of epilepsy, a fact that should be worth something in an argument of this kind.

TREATMENT.

As a foreword to what I desire to say about treatment, I want to speak of *indefinite history taking and history keeping* in cases of epilepsy. Nine-tenths of the epileptic patients that I see, and who have been ill for years, have kept no records of their attacks, and in none of them are the records clear and systematic in a way to make periodic comparisons easy. I think it a handicap to successful treatment to have no good record of the attacks. I have devised a "record card of epileptic seizures." Spaces are provided for noting the attacks as often as need be, and the card is ample for use for a year. It can be carried in the pocket. Summaries and comparisons can be made monthly, quarterly and yearly. The character of the attacks are easily designed by appropriate signs as "Grand Mal," "Petit Mal," "Jacksonian," or "Psychic."

It is almost as important that the physician should know when a change occurs in the type of his patient's seizures as it is for him to know of the presence of the seizures in any form. If I had a patient who had frequent attacks of Psychic epilepsy, and if the type should change into Grand Mal, I would be much gratified, and congratulate the patient accordingly.

The record card of seizures also contains a dietary. Let me dismiss the dietetic part of the subject by saying that the physician who fails to prescribe in writing for his epileptic patient a rigid and appropriate diet has failed in one of the most important parts of the treatment.

This is one way in which the treatment of epilepsy in the future will be vastly better than it has been in the past. Like other diseases that require special dietetics, we cannot prescribe an absolute regimen for all cases. Individual idiosyncrasies must be respected. But the essential dietetic principle is substantially the same. The best nourished epileptic—other things being equal—is the epileptic whose diet best meets his personal requirements.

THE BROMIDS.

The one factor that has done more to retard the successful treatment of epilepsy since Laycock first used them for this purpose in 1847 than anything else, has, in my judgment, been the universal and irrational use of the bromids. It is a significant fact that in the pre-bromid days the percentage of cures in epilepsy, according to excellent authorities, was greater than it is now. I believe the bromids have a limited sphere of usefulness in epilepsy in that they lessen cortical irritation and *hold attacks in*

check while other forms of treatment are being applied and are having an opportunity for action. In themselves alone, I am confident, they are powerless to cure epilepsy. Why give a drug that is mildly destructive in action in the long run—and the bromids must be given for years—to reconstruct a congenitally weak brain, or to help eliminate a systemic poison?

HOW TO GIVE THE BROMIDS.

If you give the bromids begin with six or eight grains three times a day an hour after meals in a full glass of water—the more water the better. In a month increase the dose to ten grains three times a day, but do not go beyond fifteen grains, unless for a limited time to check serial attacks or status epilepticus. Keep the bowels freely open; the skin highly active by baths and massage, and the danger of biomic acne and general bromism will be lessened.

Nowadays you can adopt Toulous's method of salt starvation, and get better results from fifteen grains of bromid a day with no sodium chloride in the food, than you can with thirty grains and the usual amount of salt in the food.

Toulouse's plan is a good one, but requires special food preparation, and in many instances this is not easy.

A still better plan is to use the pure bromine in the form of bromipin, giving it as an emulsion. It does not produce acne, is not apt to disturb the alimentary canal, and most patients gain in weight under it.

The opium-bromid treatment of Fleischig so popular some years ago has been discarded.

Borax in fifteen to twenty grain doses is often effective when the bromids fail to suppress the attacks.

Chloretone was found useful by Weeks in three to five grain doses, while I have used brometone in five grain doses, morning and noon, and ten at night, with excellent results in several cases during the past two years.

A boy of eighteen came to me with his face a mass of foul sores from one hundred and twenty grains of bromid he had been taking daily for ten years. His epilepsy was mostly of a motor type. I stopped the bromids as quickly as possible, put him on brometone, and the effect was almost miraculous. In nine weeks his skin cleared up almost like a baby's; his eyes brightened; his appetite increased, and his attacks dropped from five to seven in a month to one in three months. He is still improving, and I look for a cure in two or three years more. He is also taking iron and strychnia, cascara sagrada, and is held to a most absolute diet, under a strict form of living, being under the supervision of a competent person constantly.

Zinc; urethane; simulo; solanum carolinense, which is an excellent preparation in many selected cases; trional, and the coal-tar derivatives, are all more or less useful, though their value is not apt to be lasting.

As to surgery, I can only say in so short a

paper that it has a field of usefulness in epilepsy we are learning to appreciate more fully as we operate with more care, and in cases selected with greater caution. Outside of operations on the brain—which of course is the great field for surgery in epilepsy—many cures have been effected at Sonyea through abdominal and other operations—the abdominal work being wholly among the women. Cases for laparotomy should be studied for months previously and especially observed at the time of the menstrual epoch.

Roswell Park resected the cervical sympathetic nerves and ganglions on both sides of the neck in three cases nearly three years ago at the Colony, the result being that two of them have had no attacks since. All presented a definite aura of violent flushing of the face just before the fit.

Errors of refraction should be corrected. Foreign growths in the nose, adherent foreskins, old scars that are tender, and other focal conditions that may incite convulsions should be dispensed with.

Do not look for brilliant results from surgical intervention in epilepsy immediately after the operation. Rather regard the operation as the beginning of a new course of treatment, and keep up the use of other remedies with greater persistence than ever. In fifteen years I have learned that a surgical operation performed this year may set in progress a cure that will not be complete for several years, though the operation originally began the cure.

THE POINT OF PROGNOSTIC VALUE.

At Sonyea, where we have nearly 1,100 epileptics of all grades, we classify them mentally for practical purposes, under six heads, "good," "fair," "feeble-minded," "imbecile," "idiotic," and "demented." Only those whose minds are good or fair are capable of much improvement or cure. True epilepsy tends to the destruction of the mental faculties in every case, the memory showing impairment first. The prognostic point in epilepsy upon which I place most value is the mental condition.

If the mind has in no wise suffered as a result of the seizures, no matter how long they have lasted, there is always a possibility of cure. I have witnessed cures after eighteen years of epilepsy, during which time more than 60,000 seizures had occurred.

PERCENTAGE OF CURES.

It is a question as to what percentage of epileptics can be cured. No one, in my opinion, can give a definite answer to the question at the present time. Before the bromids were used the percentage of recoveries was larger than now, if reports are reliable, and writers of an earlier period reported these percentages:

Hufeland	5 per cent.
Russell Reynolds . . .	10 per cent.
Trousseau	13 per cent.
Herpin	15 per cent.

Since the bromids have been used it is remarkable that the percentage of recoveries is smaller. (I quote again from Turner, *Transactions, National Association for the Study of Epilepsy, Vol. III, 1906*):

Nothnagel	4 to 5 per cent.
Spratling	5 per cent.
Laehr	6 per cent.
Ackermann	7.6 per cent.
Dana	5 to 10 per cent.
Wildermuth	8.5 per cent.
Habermaas	10.3 per cent.
Alt	12.3 per cent.

My own conservative estimate of 5 per cent. was made as a result of having to deal with so many chronic cases when they first came under treatment.

If a proper colony or institution of the right sort could admit all its patients during *the first year of their disease*, and be able to hold them under treatment *two to three years*, I am confident that 25 per cent. to 30 per cent. of them could be cured.

The future treatment of epilepsy, in my judgment, will be based largely upon a radically different line of work yet to be done in the laboratory—work of a bio-chemical nature, upon a broader recognition of the necessity for treating *the person* who has epilepsy, as well as the symptom complex we call epilepsy. And finally, because the absolute control of the patient for years is essential to proper treatment, we will see more State and private sanatoria founded for this class.

REPORT ON STERILE WATER ANESTHESIA IN THE OPERATIVE TREATMENT OF DISEASES OF THE RECTUM AND ANUS.*

By SAMUEL G. GANT, M.D.,
NEW YORK,

Professor of Diseases of the Rectum and Anus, New York Post-Graduate Medical School and Hospital.

IN order to ascertain to what extent sterile water had been employed in operations about the rectum and anus since the writer made his report upon this method of operating¹ a letter was sent to the members of the American Proctologic Society and a few other rectal specialists, asking them to give the number and variety of cases operated upon under water anesthesia, the results obtained and their opinion of sterile water as a local anesthetic.

The above communication was sent out a few days ago. The replies received I will not read, with the exception of one which is of interest, because it was written by the father of rectal specialists, who was my most severe critic at the time I presented to the American Proctologic

*Read before the Surgical Section of the Academy of Medicine, May 4, 1906.

¹Sterile Water Anesthesia in the Office Treatment of Rectal Diseases (*New York and Philadelphia Medical Journal*, Jan. 23, 1904).

Society my paper upon sterile water as a local anesthetic for operations in the ano-rectal region. It reads as follows:

It has been my pleasure to use the water anesthesia method, suggested by you, in a number of cases. I have tried it in two cases of fistula and in a number of cases of hemorrhoids. The result was very satisfactory to me, because the operations were perfected without much pain attending them. One observation that I made was that the local anesthesia was brought about just as well with pure sterile water as by the addition of a small percentage of cocaine. J. M. MATTHEWS.

The following is a summary of the views and statistics furnished by the other writers:

Dr. Louis J. Krause, Cincinnati—Operations: Thrombotic hemorrhoids, 10; cutaneous tags, 6; fistula, 2; fissure, 1.

View: Believes water an ideal local anesthetic for minor operations about the anus.

Dr. Howard A. Kelly, Baltimore—Have had no experience with sterile water anesthesia, but will take it up soon.

Dr. T. Chittenden Hill, Boston—Operations: Internal hemorrhoids, 63.

View: Sterile water anesthesia causes less post-operative pain than cocaine, and it should be the method of choice in the majority of hemorrhoidal operations.

Dr. F. W. Stevens, Bridgeport, Conn.—Operations: Internal and external hemorrhoids, 51; exploratory laparotomy, 1; fistula in ano, 5; sebaceous cysts, 5; varicose veins of the leg, 3; repairing sphincter for incontinence, 1, and fissure, 5.

View: Prefers sterile water to any other anesthetic except where nerve trunks are to be anesthetized.

Dr. Samuel T. Earle, Baltimore—View: Experience with water anesthesia has not been very satisfactory, but his assistant, Dr. Arthur Hebb, has obtained better results with it.

Dr. George B. Evans, Dayton, Ohio—Operations: Prolapsed hemorrhoids, 10.

View: It is satisfactory and easy to anesthetize in the most cases of hemorrhoids. It is the operation of choice in simple and tubercular fistulae and in persons suffering from diseases of the heart and lung, where it is inadvisable to use general anesthesia, but does not prefer it where several nerve branches are to be anesthetized, nor does he believe it best to belittle the operation for hemorrhoids by doing it under any local anesthetic.

Dr. John E. Jelks, Memphis, Tenn.—Operations: Internal hemorrhoids, 12; fistula, 6.

View: Fistula cases make little complaint, and that only during distention, while those operated on for hemorrhoids complain of only a very slight discomfort caused by the injection of the water and the introduction of the proctoscope or speculum.

Dr. Lewis H. Adler, Philadelphia—Did not have an opportunity to summarize his work under local anesthesia.

View: Is not an ardent enthusiast over the office treatment of rectal diseases for other than minor work.

Dr. A. B. Cooke, Nashville, Tenn.—Operations: Internal hemorrhoids, 38; prolapsus, 2; fissure, 9; fistula, 9; external hemorrhoids, 16.

View: As his experience with the method has enlarged he has become more and more deeply impressed with its value. Does not hesitate to say that in his opinion it constitutes the most noteworthy advance in the surgery of the rectum during the past decade.

Dr. Louis J. Hirschman, Detroit (59 cases)—Operations: Internal hemorrhoids, 13; external hemorrhoids, 5; fissure (excision), 2; removal inguinal glands, 2; divulsion of sphincter, 9; lipomata of buttocks, 3; fistula, 2; uniting sphincter, 3; polyps, 1; colostomy, 1; exploratory laparotomy, 1; closure artificial anus, 2; excision perineal ulcer, 2; removal sabaceous cysts of face and scalp, 5; opening of ischio-rectal abscess, 3;

injury (anal), 1; hydrocele tapping, 1, and incision, 1; thyroidectomy, 1, and removal of needle from finger, 1.

View: He is still using sterile water in all cases where he can get the proper distention, and feels that he gets just as perfect anesthesia as when he uses anesthetic drugs.

Dr. William M. Beach, Pittsburg, Pa.—Operations: Hemorrhoids, 47; proclentia, 3; fissure, 6; fistula, 11, and polypi, 4.

View: The results are very satisfactory in every case; besides, many of the patients thought they were undergoing an examination instead of a radical operation.

Dr. Charles S. Gilman, Boston—Operations: Hemorrhoids, 16; simple fistula, 4; fissure (division of sphincter), 4; tubercular fistula, 1.

View: In selected cases water used intelligently is an ideal anesthetic in internal hemorrhoidal cases, where he thinks its action is best demonstrated. It is safe, there is no pain or shock during the operation, and there is less post-operative pain and hemorrhage than when cocaine, eucaïne or stovaine is employed. He has used saline solution, but it has no advantage over plain sterile water.

Dr. William L. Dickinson, Saginaw, Mich.—Operations: Thrombotic hemorrhoids, 47; cutaneous hemorrhoids, 18; internal hemorrhoids, 63; rectal polypi, 1.

View: In the cases where sterile water has been employed in his practice he usually has been pleased with the results.

Dr. B. Merrill Ricketts, Cincinnati—View: Experience with sterile water anesthesia has been limited. Fully endorses it in single pile.

Dr. James P. Tuttle, New York—View: He had tried the sterile water method in about twenty cases, or rather parts of cases. He had never been able to complete an operation to his satisfaction by sterile water anesthesia, except two or three cases of simple thrombotic or external skin piles. On the whole, the method has not been satisfactory to him.

Dr. J. Rawson Pennington, Chicago—View: In an article (*Jour. Amer. Med. Assoc.*, April 1, 1905) says that in selected cases, and quite satisfactorily too, he has used sterile water for this purpose.

A study of the letters from which these statistics were taken, together with the large experience of the writer, amounting in all to 879 cases, proves that plain or saline sterile water anesthesia is a safe and reliable anesthetic, and that it has a wide range of usefulness.

In the 559 cases recorded above, together with the 320 previously reported by the writer (making in all 879 cases), the anesthesia induced by the injection of the water was generally satisfactory, and no dangerous or annoying complication occurred during or following the various operations, except those now to be mentioned.

In the Evans series of ten cases shock lasting several days followed one operation for internal hemorrhoids.

In the Jelks series of eighteen cases the water completely failed to anesthetize the parts in one case of fistula, and in one hemorrhoidal operation, and was not entirely satisfactory in another.

In the Krause series of nineteen cases it was ineffectual in one operation for fissure.

In Gilman's series of twenty-five cases considerable pain was felt in one operation for fissure (division) during the period of distention.

In the Hirschman series of fifty-nine cases of operations about the rectum, anus and other

parts of the body, some pain was noticed during one operation for laparotomy, one for the removal of inguinal glands, one for excision of perineal ulcer, in one closure of artificial anus, in one thyroidectomy, in the removal of one sebaceous cyst, and in one operation for anal injury.

In Gant's series of 320 previously published cases* the *anesthesia* was complete in 264, there was slight pain in thirty-nine, and in seventeen cases the anesthesia was unsatisfactory. In 300, *operative hemorrhage* was very slight, and in twenty, quite profuse.

There was *post-operative bleeding* in 295, there was a *slight hemorrhage* in twenty, and profuse bleeding in five cases.

There was no immediate *post-operative pain* in 258, suffering was quite noticeable in thirty-five, and in twenty-seven the pain was so great that it was with difficulty arrested by the injection of morphine.

PHLEBITIS FOLLOWING ASEPTIC ABDOMINAL OPERATIONS.

By ALGERNON T. BRISTOW, M.D.,

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PHLEBITIS following abdominal operations in which healing has followed an aseptic course is not an uncommon complication of convalescence. Lennander, Gerster, Coe, VanderVeer and Richardson have all published their experiences. Richardson says that the accident is unavoidable and is in his belief an aseptic process. He modifies this statement by stating further that if it is an infection it is of an exceedingly mild type. On this point there seems to be some difference of opinion, and no one has given any satisfactory explanation of the curious fact that when phlebitis does occur it almost always involves the left saphena and femoral veins, rather than the right, even in the cases which occur after operations for appendicitis. All agree however that it usually follows aseptic healing and occurs about the time that the patient is ready to get up from bed. When we consider the symptoms of this complication, I do not see how we can escape from the conclusion that it is a localized sepsis of mild type, the origin of which has been passed through the circulation to become arrested in the venous system where the flow is least active. This would necessarily be in the veins of the lower extremity. Whether the presence of the rectum on the left side has, as stated by some writers, any influence in slowing down the blood current in the left saphena and femoral veins would be rather difficult of

proof. It is suggestive however that the accident occurs within a few days after the patient has been placed on full diet and has thus had an opportunity to accumulate fecal masses in the rectum. Richardson's belief that the process is aseptic is not borne out by the symptoms: pain, local tenderness in a situation remote from the operative wound, and elevation of temperature. That the infection has passed through the heart seems a necessary conclusion, otherwise we must admit that the infecting agent can advance against the blood current since it frequently appears in the calf of the leg, and in at least one instance, which I can relate, appeared in the right scapular region. Moreover, pathology is less and less willing to admit that there is such a thing as an idiopathic inflammation, just as the surgeon and clinician no longer speak of idiopathic peritonitis. The clinical evidence seems to point to a bacterial origin. This is easier to trace in those cases in which a more or less active inflammation has existed for the relief of which the operation has been undertaken. In appendicitis, for instance, there is almost always a phlebitis of the veins of the meso-appendix, which might readily furnish a mycotic thrombus of microscopic size, which, nevertheless, lodging somewhere in the slow current of the veins of the extremities, might be sufficient to set up an inflammatory process. In that class of case where the infection has occurred secondarily to pelvic operations, undertaken for other than inflammatory conditions, we must remember that the ligated veins, frequently of large size, are in contact with bowel, and remember that an area of lowered resistance in the vicinity of bowel is liable to receive an infection through the coats of the bowel without any actual solution of continuity. Witness those cases of cloudy serous effusion, which we so often see in cases of appendicitis, wherein no communication exists between the lumen of the appendix and the peritoneal cavity. The writer showed years ago that this fluid contained the colon bacillus in pure culture. Such are the cases which we close up with confidence without drainage.

Fortunately, these cases of phlebitis very rarely terminate fatally, and then only through the dislodgment of a thrombus and its lodgment in the pulmonary artery. Localized suppurations do not follow. Thus the opportunity of investigating the source of the inflammation and proving the case in laboratory fashion by producing the *corpus delicti* has been denied the investigator. The writer, however, has recently had a most unusual case of post-operation infection, following a perfectly aseptic healing of a right sided laparotomy for appendicitis, in which it was possible to isolate the organism and prove the infection. The history of the case is as follows:

On Sunday, April -23d, I saw in consultation with Dr. Van Cott, Miss F., aged 22 years. She stated that

*Gant: Diseases of the Rectum and Anus, p. 671, 3d ed. F. A. Davis Co., Philadelphia, Pa.

on the preceding Thursday she had suffered more or less all day with pain in the right iliac region. Friday morning the pain stopped to return in the afternoon, however. Her evening temperature was 102.4. Saturday she was free from pain, and in the afternoon she took a long horseback ride. In the evening the pain returned. Sunday morning the pain was quite severe, and she sent for Dr. Van Cott, who subsequently summoned the writer. Examination showed a moderately tender area in the right iliac fossa, no special rigidity of the abdominal wall, a temperature of 100.4, pulse of 94. The patient said that she had no pain when recumbent but only when she attempted to walk. Patient's parents were absent from the city and the symptoms did not seem to warrant immediate operation in their absence, so she was kept in bed and watched until their return. On the 24th, the temperature rose to 101.4, but there was no increase in the local symptoms. On the return of the parents the young lady was sent to the hospital, and on the 28th instant a moderately inflamed appendix was removed by the usual operation, and the wound closed. From this time on, there was absolutely nothing of moment connected with the operation wound. There was never any pain there nor the slightest evidence of infection, although the wound was explored with a probe subsequently. Neither pain, tenderness, nor induration was at any time present. In fact, the patient said that she did not know she had a side. In spite of the excellent condition of the wound, the temperature after operation continued to give anxiety, ranging to 100.4 in the evening and falling in the morning to 99.2. The average daily temperature was in the neighborhood of 100, with absolutely nothing to account for the fever. Examination of the lungs was negative. There was for a short time a slight basic murmur in the heart. Successive leucocyte counts were 6,500, 7,000 and 8,000, polymorpho-nuclears normal. The patient was of a nervous temperament and finally, as nothing could be found in the wound which was soundly healed, she was sent to her home. On the day before she had complained of a slight pain over the tip of the scapula, but, as she had been wearing sleeveless nightgowns of thin material, this was thought to be of muscular origin. For two days following her removal home her evening temperature exceeded 103, but then fell to an evening average of a little over 100. There was some pain over the tip of the scapula. Examination of the lungs and heart was negative. The vicinity of the wound indicated nothing abnormal nor was there any pelvic disturbance. For a week the patient was under the care of her regular medical attendant, during which time she continued to run an evening temperature and also to have some pain in the course of the teres major muscle of the right side. A blood examination now made by Dr. Murray showed 10,000 leucocytes, but the polymorpho-nuclears still in normal proportion. The course of the muscle now showed a little swelling, and there was pain on pressure. In view of the negative character of the blood examination, and particularly as no hypodermics had been given to the patient in the vicinity of the painful area, it did not seem likely that a suppurative process could exist in an area so remote from the wound which had, moreover, suffered no traumatism. With a view to a closer examination of the chest Dr. G. R. Butler now saw the case with Dr. Van Cott and suggested an atypical typhoid as among the possibilities. The lungs were normal, and there was nothing in the heart to suggest a malignant endocarditis, nevertheless the possibilities of this disaster were not overlooked. During the next two days a swelling developed just anterior to the tip of the scapula which the writer requested Dr. Van Cott to aspirate. This was done and bloody pus found. The same day, twenty-one days after the original operation, the writer, under nitrous oxide anesthesia, opened a deep abscess of the chest wall, running in the general direction of the teres major muscle, and evacuated about an ounce of grumous pus. A culture taken from the pus showed a pure growth of the staphylococcus pyogenes aureus. When ex-

amined under the microscope the pus seemed to contain a few diplococci. A drain was introduced and the patient is now rapidly convalescing.

It seems to the writer this process must have commenced as a phlebitis of one of the small veins of the lower axilla in the vicinity of the teres major muscle, but that instead of undergoing resolution as most of these processes do, it went on to suppuration, favored, perhaps, by the position of the infected focus and the fact that this was subjected to the slight traumatism of recumbency. The writer is constrained to believe that a septic or rather mycotic thrombus of microscopic size escaped from one of the veins of the meso-appendix, and found lodgment in an unusual place, resulting in an inflammatory process more virulent than usual, terminating in suppuration. It does not seem likely that an endocarditis of aureus origin could subside without more serious effects on the endocardium.

Another unusual post-operative infection is the following: March 7, I saw Mr. G. at his residence and found him suffering from a mild type of intestinal indigestion following some imprudence in diet. He had no abdominal pain whatever or any indication of an impending appendicitis. I did not see him again until the morning of March 10, when he called upon me to say that he had entirely recovered and was on his way to New York. That afternoon I was summoned to New York and found him on the floor of an office, where he had been taken with violent pain in the usual situation. In short, he was in the midst of a severe attack of appendicitis. I took him at once to the hospital, and operated less than ten hours after the first pain, which had occurred about ten that morning, or within an hour after I had seen him in my office apparently in perfect health. On opening the peritoneum thin sero-pus escaped, and I removed an inflamed but not gangrenous appendix. I judged the infection to be a colon infection, and did not drain the peritoneum, contenting myself with slipping a film of rubber tissue under the skin from the upper angle, the remainder of the incision being brought together with adhesive strips. The tissue was removed at the end of forty-eight hours and no further trouble occurred with the wound which united per primam, the temperature falling to normal at once. On the twelfth day a mild phlebitis developed in the right lower saphena, but did not extend above the calf. It yielded to the usual treatment, and after suitable rest the patient returned to his business. A few days longer than two months after the occurrence of the phlebitis I was summoned to see him, and found that he had an epididymitis of the right testicle with some tenderness of the cord up to the external ring. The urethra was absolutely normal, and the patient assured me that he had never had a gonorrhoea. An examination of the vein first affected showed that it was still tender on pressure. There was no twist in the cord nor had any traumatism occurred, such as the so-called whip-snap and hemorrhage, of which I have seen one case as the result of a fall. The tenderness of the vein affected, in the calf of the right leg, still existing, shows at least the possibility of a lurking infection there, even at so long an interval after the primary phlebitis.

It seems to me that the phlebitis and the epididymitis in this case are directly associated.

THE PREVENTION AND TREATMENT OF ECLAMPSIA.

By **BERNARD COHEN, M.D.**,

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WHILE advances have been made of late in every department of medical science, yet it must be admitted that we have little accurate, well-defined or scientific knowledge concerning those convulsions which occur during pregnancy, or are present at labor, or appear after delivery.

The truth of Zweifel's expression, that, "eclampsia is the disease of theories," has been proven to me, during a long course of reading and thinking about the disease, inasmuch as there appears to be absolutely no knowledge extant of the causative factor of eclampsia and, the scientific treatment of disease being based upon its etiology, it therefore follows that the mode of dealing with eclampsia must be more or less empirical.

Every man whose practice is such that he may be called upon to attend obstetrical cases should have in mind a definite outline of the treatment he is to pursue should he meet a case of eclampsia, no matter what theory one may have, be it toxemia, uremia, auto-intoxication, anemia, œdema of brain, pressure on vessels of renal system, acetonemia, microbes or hepato toxemia.

The clinical course of the treatment for eclampsia is now fairly well defined and is governed by certain well-established principles which will prevail until a more exact knowledge of this obscure disease requires their modification. The preventive treatment is by far the most important, as it is by close observation of the patient during pregnancy and the consequent recognition of early symptoms, that, in the majority of cases, we are able to ward off the attack entirely. My experience does not warrant my saying that eclampsia is a disease that comes on without any warning, as, many times seeing the premonitory symptoms, I have been able to anticipate the attack and prevent its occurrence.

In two of my cases, convulsions came on after interference had been decided on, but before it could be put into operation. In every case of eclampsia, there are premonitory symptoms usually recognizable in time to prevent the fits. Immediate treatment should be given upon their recognition, but should the too rapid formation of poison prevent this treatment being given, we can at least interfere early enough to save mother and child.

Of course, to a layman or to a medical man who is not conversant with the symptoms of the pre-eclamptic state or is not on the lookout for them, the disease comes like a flash of lightning out of a clear sky. It seems unreasonable to suppose that a poison, strong enough to cause such terrible convulsions as are seen in this disease, can ac-

cumulate in the body without exhibiting any earlier symptom of its toxic nature.

The average woman, we may safely say, is not seen by her physician until well along in pregnancy. Therefore, if any abnormal condition exist, the time for correcting it has generally passed. Woman should be taught to engage the services of a physician as soon as she becomes certain that she is pregnant. He should thereupon regard her as a patient who, from that time on, is to be kept under most careful surveillance. In especial, is she to be warned to attend to the condition of her bowels, it being a good rule always to consider a pregnant woman as constipated until the contrary has been proved. He must see that she has plenty of fresh air and sunlight; that mind and body have sufficient occupation; that she avoids all compression of the waist; that she frequently takes warm baths; that she wears proper underwear. A matter of the utmost importance is her diet, which should contain a decided minimum of nitrogenous substances. All food selected should be such as is easily assimilated and leaving a minimum of waste. Such articles as beef, pork, veal and the alcoholics should be on the prohibited list. In brief, the diet must be easily digested, readily oxidized, non-constipating and non-toxic. The patient should be frequently cautioned to notify her physician of any unusual symptoms she may observe. She should be questioned particularly in regard to frontal headache, stomach, bowel or visual disturbances, swellings about the face, head or ankles. At least once a month, she should submit a single sample of fresh urine for microscopical examination, as well as a sample taken from the total amount collected in twenty-four hours from which to estimate the total solids and the percentage of urea. A healthy, pregnant woman should pass not far from 60 oz. of urine in twenty-four hours, with a specific gravity not far from 1016, with a percentage of $1\frac{1}{4}$ to $2\frac{1}{2}$ of urea. One must carefully note the amount of albumen present, but that which is of paramount importance and which has the highest clinical significance is the measurement of the urinary solids and of urea especially. It is during pregnancy that one finds more often than in any other condition of health or disease, a manifest tendency toward the checking of normal elimination and the consequent retention of waste products. All of the organs, the kidneys, skin, liver, intestines, brain and lungs, are always more or less interfered with. Defective action of the liver means cholemia; retarded liver and lessened intestinal evacuations mean defective sewage of the system; lung interference implies retention of nitrogenous elements and carbonic acid gas; diminished secretion of urine or lowering of the percentage of urea means uremic poisoning. If any one or all of these functions be more or less disturbed we can readily understand how soon the patient can be poisoned. Should any pre-eclamptic symptoms show, one must then take the broad

and comprehensive view of the known pathology of eclampsia and concentrate his attention not on one but on many of the organs of the body, for the purpose of determining the treatment, which will resolve itself into this dictum, that, "nature must have free vent." Relieve the body of the accumulated poisons, for if that can not be done convulsions will surely result. The essential object of the prophylaxis is free elimination. We must use the diuretics, diaphoretics and cathartics. The cathartic which I prefer is calomel, to be used in small, divided doses— $\frac{1}{4}$ grain every hour until 3 grains have been taken. This is to be followed by a tablespoonful of Epsom or Rochelle salts. Calomel is preferred because it is a cathartic, diuretic and antiseptic. A prescription of the infusion of digitalis (using the fresh leaves, 15 grains to 4 ounces of boiling water, one teaspoonful three times daily) is given. Thyroid extract or iodithyrine, as advocated by Nicholson, can be given, if the patient is carefully watched. It certainly relaxes the blood vessels and therefore causes skin and kidneys to be more active. The dose of the extract should be about 5 grains given every four hours. In pregnant women, symptoms of thyroidism are very easily induced. The patient is put upon a diet consisting wholly of milk. This diet must be rigidly adhered to, but it may be varied occasionally by substituting buttermilk for sweet milk, either of which will amply sustain life. The milk may be taken warm, cold, hot, boiled or mixed with hot water, with vichy or with other table waters. A pinch of salt or bicarbonate of soda often renders the milk more easily digested. It should be sipped slowly. Two or more quarts should be given daily. After each meal the mouth should be washed with some alkaline wash. The drinking of water should be insisted on.

If patients should be placed in bed, a large, airy, light room, away from all noise, must be chosen for them. Massage is to be used.

We now come to the treatment of a pregnant woman who has had a convulsion. Here the treatment resolves itself into the non-operative or the operative. The non-operative treatment is entirely symptomatic. Our duty here is to control the convulsions and while so doing, to eliminate the toxins. Naturally, it is our first desire to prevent the convulsions and the only means of permanently accomplishing this is to eliminate the poison which is their causation. This can not be done in a moment, but we can do a number of things almost simultaneously, which will afford temporary relief. Put a roller of cotton bandage between the teeth to protect the tongue; give a few drops of croton oil floated on olive oil and placed back of the tongue to be swallowed reflexedly. This will clean out the intestinal tract. To diminish the strength of the convulsions as well as their number, use morphia hypodermic, giving as much as is necessary, $\frac{1}{2}$ to $1\frac{1}{2}$ grains as required. As eclamptics can stand large doses, one need not fear that morphia will lock up

the emunctories, if croton oil has been given. Do not continue its use indefinitely. We can obtain a sedative effect by the use of good-sized doses of chloral or the bromides per rectum, but as a relaxor of the muscular system (including the cervix) and for immediate effect, morphia has proved the best drug with which to begin work. Venesection should now be performed. Open the median basilic vein wide and allow from 4 to 16 ounces of blood to flow. Then transfuse into the same vein a pint of warm, normal salt solution. Very soon the pulse will fall and the convulsions will cease. Should they recommence, open the vein of the other arm, extract the necessary amount of blood and transfuse with the normal salt solution. This process has been of more use to me than any other. I have seen a number of patients go on to full term with no recurrence of convulsive attacks, but, on the other hand, I have also seen this method fail. Normal salt solution may also be given per rectum, to stimulate diuresis, diaphoresis, and to dilute the poisons circulating in the blood. Chloroform is of use only as a means of temporizing until the morphia takes effect. It should never be used as a sole remedy, as that would be as unreasonable as relying on any one method of treatment. We should also bear in mind its effects upon the structure of an already diseased liver. My experience with veratrum has been practically nil, but many who have used it speak very highly of it. Parvin gives a mortality of only 8 per cent. where it has been used. Theoretically, it would seem to meet all requirements. The pulse rate is reduced, the temperature lessened, the cervix relaxed, while diaphoresis and diuresis are promptly effected. Others who have used it fail to get the same results. If, after waiting for some time to allow the treatment to take effect, the convulsions are violent, the intervals short and the conditions of mother and child more serious, one must interfere, for it is a fact that from 50 to 75 per cent. of convulsive seizures cease with the delivery of the child, and that the chances for the life of mother and babe are much better if the two be separated.

We now come to the operative treatment. Our first endeavor must be to secure an aseptic environment, preferably a hospital, and plenty of competent help. The next question is as to the method to pursue. If labor has not started and the cervix is hard and unyielding and the woman in desperate condition, I should advise Cæsarean section, abdominal route. All of my cases were at term or nearly so and I was able by the use of the graduated steel dilators and by using finger dilatation, after the methods both of Harris and Edgar, to dilate the cervix. As soon as dilatation was accomplished I was able to apply the forceps or do a version and extract the child. This I have reason to consider the best method. It takes considerable time, but destruction of tissue and sepsis are avoided.

In the post-eclamptic state, if coma exist or the

convulsions continue, the hot-air bath or pack may be used to favor diaphoresis. The pulse must be carefully watched. Rectal enemas of salt solution should be given, slowly and high up, a quart every four hours. Croton oil or large doses of Epsom salts may be given through the stomach tube, after the bowels have moved. Morphine may be used if necessary. Oxygen, strychnia and glonoin have their place in the after treatment.

Involution of the uterus occurs normally and if there has been no infection, convalescence does not extend over a much longer period than that following a normal birth.

The child should not be put to the breast of an eclamptic until at least ten days have passed. Until that time, the function of the breast should be preserved if possible.

PROCIDENTIA UTERI.*

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PROCIDENTIA UTERI may be divided into two classes, partial and complete, and in most instances partial procidentia, if not properly treated, will become complete. In the former instance, the cervix at times will reach the external parts, and in the latter the whole uterus, bringing with it the adjacent structures, will protrude from the body, possibly extending half way down to the knees.

This serious malady is usually the result of lacerations and stretching of the pelvic tissues following repeated labors with improper care and hard work. In rare instances it is found in nullipara, associated with general relaxation of all the tissues, or it may follow a severe strain or traumatism.

The older writers describe the treatment of this condition with many varieties of pessaries and tampons; and Dr. T. A. Emmet mentions the treatment followed by a physician in the South who practiced in a small, out-of-the-way place, and whose patients were negroes, who, after seeing Dr. Emmet perform plastic operations on the vagina, said that he had never seen a case of prolapsus that he could not cure in four weeks by keeping the patient in a sling in a marked knee-chest position and filling the vagina once a day with a solution of white-oak bark. Our patients would hardly submit to such treatment, and it would do them very little good if they did.

The use of pessaries at best will only give temporary relief, and in the end will increase the dilatation of the vagina, and so do more harm than good. There are instances where we are obliged to use them.

In most of these patients there is ulceration

of the cervix, and occasionally of the vagina. These conditions should be cured by the use of tampons before surgery is resorted to.

If the function of the vagina could be ignored the surgical treatment of procidentia would be much simpler than it is. In all cases carefully performed plastic operations on the vagina and perineum should be performed so as to put these parts in as nearly a normal condition as possible.

In the incomplete variety the cervix is usually lacerated and very much elongated, and the whole uterus occupies the posterior and lower portion of the pelvis, instead of the normal, which is the anterior and upper portion. In these cases an extensive amputation of the cervix should be performed. As much of the cervix should be cut away as possible without opening the peritoneal cavity, and great care should be taken to thoroughly stitch the cervical endometrium to the vaginal mucosa, so as to prevent occlusion of the cervical canal. At the same sitting an Alexander's operation should be performed. In these cases the round ligaments are usually large, and are sufficient to hold the uterus forward. I have seen round ligaments a quarter of an inch in diameter. Alexander's operation does not lift the uterus out of the pelvis, but brings the fundus forward and cures the retroversion, which is a necessary first step in the development of complete procidentia.

There are cases where a ventral suspension is preferable to Alexander's operation. This is especially so when you believe that the adnexa are diseased and should be examined and possibly operated on.

In my experience, when Alexander's operation, in any form, is indicated the classic operation is preferable to any of the modifications that have been devised. I have had only two cases where it was necessary to open the inguinal canal. In one there was an indirect, incomplete inguinal hernia on the left side, and the lower end of the round ligament was so destroyed that it was necessary to open the canal to find the ligament. In the other the outer end of the ligament broke off, and it was necessary to open the canal in order to grasp the remaining portion. In these two instances the patients made uninterrupted recoveries, and the uterus remained in an anteverted position.

Where the procidentia is complete it can usually be permanently cured by substituting ventral suspension for Alexander's operation; but the operation, as performed by some, which consists in lightly stitching the posterior wall of the uterus to the anterior abdominal wall, is of no avail. The uterus should be thoroughly drawn out of the pelvis, and if the bladder extends above its normal position on the anterior wall of the uterus it should be separated. The organ should be thoroughly stitched to the abdominal wall, extending from the normal attachment of the bladder up the anterior median line of the fundus to

*Read before the Suffolk County Medical Society, at Riverhead, Long Island, April 26, 1906.

a point midway between the uterine ends of the round ligaments. Three silkworm gut sutures are used, passing through all the layers of the abdominal wall and passing deeply into the anterior wall of the uterus, great care being taken not to enter the uterine cavity. There is half an inch between the points of entrance and exit of the sutures on the anterior wall of the uterus. The uterus is slightly scarified between the stitches. These three silkworm gut sutures help to close the abdominal wound. The upper one is removed last at the end of two weeks.

There are several other methods of attaching the uterus to the anterior abdominal wall. When buried stitches are used it is much better to use absorbable material, for when non-absorbable material, such as silk or silver wire, is used it soon cuts to a point where no support is given, and then acts as a foreign body, which is always more or less of a menace. Months, and in several instances more than a year, after the burying of both silk and silkworm gut sutures I have seen sinuses open and remain until the offending material was removed.

To insure success in ventral suspension it is essential to have the peritoneum thoroughly closed over the anterior wall of the uterus, so that strong union will take place between the peritoneum of the anterior wall of the uterus and that of the anterior wall of the abdominal cavity. As the peritoneum is very firmly attached to the uterus and loosely to the abdominal muscles, it is pulled from the abdominal wall and brings with it cellular tissue, blood vessels, nerves and fat, and so forms a ligament, attaching the anterior surface of the uterus to the abdominal wall, very similar in structure to the broad ligaments on either side.

I have opened the abdomen about two years after this operation and found a strong ligament about an inch in length connecting the abdominal wall to the anterior median line of the uterus, extending from the bladder nearly the entire length of the uterus. I know of four women who have given birth to children after this operation, without complications, and of no instance where it has caused complicated delivery.

In most instances all of these operations can be performed at one sitting, but occasionally it will require two.

There are cases of complete procidentia in old women, where there is very marked relaxation of all of the tissues, where the operation that has just been described will not result in permanent cure. After the subject has been thoroughly placed before them, and they are willing to give up all possibility of sexual intercourse, a cure can be promised by panhysterocolpectomy, which consists of the complete removal of the vagina and uterus, stitching together of the broad ligaments, occlusion of the vagina by circular stitches, and complete closure of the external parts. The technique of this operation is extensive, but the results

are perfect. I have performed it three times, and all of the patients have been cured.

It is well to warn against performing vaginal hysterectomy in the usual way and closing the vagina, for the vagina will protrude as before the uterus was removed, and the condition will be worse than it was before the operation was performed.

Abdominal hysterectomy has been advised by a number of gynecologists for the cure of complete procidentia, and the vagina held up by attaching it to the broad ligaments or anterior abdominal wall; but I believe that the most successful method is that advocated by Dr. William L. Polk, which consists in thoroughly freeing the upper portion of the vagina from the bladder and attaching it firmly into the lower angle of the abdominal wound, drawing it well through the muscular layer to the fascia and thoroughly fastening it to all of the structures.

HENRY DARWIN DIDAMA.*

By JOHN L. HEFFRON, M.D.,

SYRACUSE, N. Y.,

Professor of Clinical Medicine, Syracuse University.

TWENTY-FIVE years ago the members of the class of '81 left the shelter of this roof tree. When they entered the halls of this College of Medicine they came under the instruction of a faculty, every one of whom was a strong man, a courageous man and a man ambitious to attain the highest ideals in medical education. The history of no other medical school in one respect can parallel that of this. While in large centers of population physicians conducted joint stock schools and divided amongst themselves the great profit accruing from generous fees from the largest possible number of students, these men, sacrificing their own personal interests, banded themselves together, raised the standards of preliminary and professional requirements, devoted the proceeds from tuitions to better equipment and contributed from their own scanty savings to the end that the Medical Department of the new University of Syracuse should be established upon a foundation firm and enduring.

I wonder how many of my classmates have gone over the old catalogue recently and have noted that with three exceptions, Professors Mercer, Rider and Van Duyn, every one of those noble pioneers in this great movement have passed onward to that "undiscovered country from whose bourne no traveler returns"?

Let me recall those whom we knew and revered, naming them in the order of their departure from the field of their activities. There was the scholarly Wilbur, who was the first in this country to devote his life to the amelioration of the condition of those of feeble mind; the sturdy Porter, earnest and gifted

* An address delivered before the Alumni Association of the College of Medicine of Syracuse University.

teacher of obstetrics and the diseases of women; the beloved Pease, staunch friend of every young doctor and the most expert operator I ever saw in any country, whose lectures on surgery were often inspirational and clothed in language beautiful, appropriate and exact; the dignified and learned Hyde, whom age did not prevent from giving us the rich fruit of his large experience in surgical pathology and treatment; the elegant Nivison, whose lectures on physiology were given in a style unequalled by medical teachers, save by such masters of English composition as Sir Thomas Watson; the elder Dunlap, who, though not a teacher at that time, exercised a charm over the younger men of that day hardly excelled by those active in that faculty; the diplomatic Plant, who, as Registrar made straight the crooked paths of students and, as clinical teacher and as lecturer in children's diseases, elucidated his subject with precision and with the clearness of one who had mastered the art of expression; the indulgent William Manlius Smith, expert chemist, whom we all respected for his exact knowledge, though many took advantage of his lack of discipline, whose services as Secretary of the Medical Society of the State of New York were so valuable that they were continued longer than those of any other man who had served in that capacity; the brilliant, if erratic, Metcalf, whose lectures on therapeutics were refreshing and valuable and whose clinics in medicine were always sure to instruct. All these have passed over to the "great majority" and to their numbers must be welcomed the latest to leave us of our heroes, the subject of this address, Henry Darwin Didama, who finished his career on earth October 4, 1905.

Henry Darwin Didama, the son of Doctor John and grandson of Doctor Simon Didama, was born in Perryville, N. Y., June 17, 1823. His father and grandfather came to America from Delft, Holland, with the "Holland Company," when his father was thirteen years old, and settled in Trenton, N. Y. His mother was a New England Gaylord, and the doctor was wont to say that "he had the best ancestral combination possible, viz., Holland Dutch and New England Yankee." His early education was received in the district schools and at Cazenovia Seminary, and was fixed by his experience as a teacher during the winter of 1840-41. His medical education was begun in the office of the accomplished physician, Doctor David A. Moore, of Cazenovia, continued under Doctor Nelson A. Powers, of Syracuse, and finished in the Geneva and Albany Medical Schools, from the latter of which he was graduated in 1846, at the age of 23.

He settled in Romulus, N. Y., and remained there five years, during which he met and married Sarah Miller, the daughter of the Honorable Sherman Miller. She was an ideal helpmate to a doctor. She sympathized with his high ambitions and appreciated the value of his work as a physician. Gifted with unusual executive abil-

ity, she relieved the doctor from all cares and responsibilities save only those which accrued from his increasing practice. Of her he said: "To her good judgment and faithful devotion I attribute in no small measure whatsoever of success I may have achieved." A worthy tribute to an exemplary wife. In 1851 he came to Syracuse, at the urgent insistence of Doctor Roger W. Pease. He established himself in the old First Ward, Salt Point, and was early recognized as a leader in medical thought and attracted a large clientele. In 1874 he bought the Wescott homestead on South Salina Street, near Jefferson, and made that his office and his home for the remainder of his life.

Three children were born to them, but none survived their parents. Henry Darwin, Jr., died in infancy. Many of you remember his son, Sherman, who died when a medical student, and most of us remember his accomplished daughter, Amelia, who married William M. Niven and who, more intelligently to aid her father, completed a medical course in our college and was of most valuable assistance to him until she was cut down by typhoid fever during a winter's residence in Florida in 1893.

Upon the establishment of the Medical College of Syracuse University he was elected as Professor of Clinical Medicine in 1872. In 1873 he was made Professor of the Principles and Practice of Medicine and of Clinical Medicine, in which capacity he served until his resignation in 1893. Upon the death of Dean Frederick Hyde in 1888, he was unanimously elected as Dean of the College of Medicine and served it faithfully so long as he was able to work. In recognition of his services as a physician and as an educator and of his superior attainments he was given the degree of LL.D. by Syracuse University when he assumed the office of Dean of the Medical College in 1888. In 1894 Doctor Didama was elected Trustee at Large of Syracuse University and was continued in that office until his death.

Doctor Didama was a marked man. He attracted attention wherever he appeared. Tall, six feet one, spare, angular, with features as rugged as the New England hills, whence came his mother, with merry blue eyes, ruddy complexion, abundant hair—white as we knew him—flowing over his shoulders, and with a curly chin beard, no one could look upon him without being instantly reminded of the typical New England Yankee, known all over the world in cartoons as "Uncle Sam." And if one who was thus impressed with his appearance met him, he at once felt that his exterior did not belie him. In his quickness of thought, his witty repartee, his quaint humor, his keen and instant appreciation of the kernel of the subject under discussion, he realized all the characteristics of mind which, by mutual consent of all observers, belongs to no one but to the highest type of the Yankee. He

was no disappointment save to him who might have conceived that he was a dramatic poser.

As a citizen his great intellectual power and his magnetic personality were always given to forwarding the cause of right and justice. One of the most eminent statesmen of our city, who has helped to formulate the policy of our national government, told me that Doctor Didama was always consulted in matters of importance in local political affairs and never failed to give sound advice. For twelve years he held the office of Coroner and his administration of that important office added to his reputation for good judgment and astuteness.

Doctor Didama never failed to let his opinion be heard in all cases in which right and wrong were involved and his expressions were so vigorous, so convincing, that he was of material aid in arriving at correct conclusions. This was particularly noticeable during the discussion of the various issues brought up by the late War of the Rebellion.

He was a man of strong religious convictions. His devotion to the Presbyterian Church and his value as a counselor were recognized by his having been an elder of that church from an early date in his life in old Salt Point in the First Ward Presbyterian Church to the end of his life in a similar office in the First Presbyterian Church on South Salina Street.

He was a man of culture and of wide general reading and interested in every subject that could advance the conditions of mankind. He early learned the value of a vacation for the professional man and his times of compulsory leisure were spent in journeys over the world, which broadened his outlook and stimulated his mind. He was a master of our mother tongue, and, under the *nom de plume* of Amos Cottle, shared his pleasures and his valuable observations on foreign customs and people in letters to the local press. Permit me to quote from the writings of his most intimate friend, the Hon. Carrol E. Smith: "Amos Cottle, not less than Doctor Didama, is a public character of importance; and it is to Amos Cottle, in particular, that I, as journalist, bow my head and pay my profoundest respects. For nearly half a century it has been my privilege to know these personalities well and intimately. I have benefited from the physician's marvelous skill, and, with many thousands of interested readers, have reveled in the rich humor, the brilliant descriptions and the sage reasoning and conclusions of the inimitable Cottle. We have traveled with him across broad and restful seas, scaled the mountains and skirted the valleys of Switzerland, enjoyed the delightful climate and scenery of Italy, sailed up the romantic and historic Nile, walked the ancient streets of Jerusalem, Athens and Constantinople, traversed the continent, and delved in the art treasures of European capitals, keeping pace with this rare traveling companion. We also have gone with him to Alaskan climes, to Cali-

fornia and Mexican scenes, to the green and the white hills of New England and her rock-ribbed coast, and investigated the health resorts of Florida, Georgia and the Carolinas. These, indeed, have been charming trips, and as traveled, again and again, over the printed page, have been perennial joys and benefits to a multitude. Had Henry D. Didama been either author or journalist his name would have headed the column."

Doctor Didama's mental characteristics were like his body—robust and strong. He had a large vein of humor, and he contracted the habit and the reputation of being humorous at all times. As so often happens, his humor bubbled to the surface at times when silence would have been golden. Because of this some called him flippant, coarse and even heartless. But it seemed to us who saw him most intimately that it was his method of relieving a life so strenuous that it could not have been endured otherwise. The same criticism was made of Lincoln, and the doctor was like Lincoln in more ways than this.

It was my privilege to be near him on several different occasions when his heart was wrung with grief or charged with sympathy for the sorrows of others. No one who knew him thus could doubt the tenderness of his love or the genuineness of the sympathy of a great heart. Do you recall his habit of rubbing his face with both hands when he was deeply moved? It was his own peculiar expression of what words sometimes failed to convey.

As a physician Doctor Didama endeared himself to as large a clientele as was ever enjoyed by any physician in Syracuse. When he removed to South Salina Street it was only by a covenant with his old families in the old First Ward that he should give them precedence over new comers that he effected his separation from the scene of his active life of twenty-three years. This, of itself, is a beautiful tribute of the devotion and faith of his earliest friends, a devotion which lasted to the latest days of his active practice. At the zenith of his fame his extensive practice left him scant time for the refreshment of his body. But even then he did not give up his habits of study, but rose at six, took his cup of coffee and studied or wrote his lectures or addresses until eight. He had a perfect nervous equilibrium and worked with method and without friction. It was this endowment and his simple habits of life that made it possible for him to do so much and live so long. He was always an investigator and ahead of his times and as such did not fail to encounter the unfavorable criticisms of some of his contemporaries. His account of his introduction of the alkaline treatment of rheumatism is interesting and illustrative: "I read a paper on the use of acetate of potash in its treatment. It was entirely new to the Syracuse fellows. They had been using calomel and jalap and things of that kind and their patients never got well under six weeks, the time in which the disease would, in any event,

have run its natural course. I told them of several patients who had gotten well under the acetate of potash treatment in a few days and they proceeded to bait me. 'What effect did it have on his pulse?' asked one; 'Did you look at his tongue?' asked another; 'How were his bowels affected?' asked a third. I saw that their purpose was to confuse me and I finally said, 'Gentlemen, there is no use of asking me these questions for the only thing that I observed at all accurately was that the patient got well.'

Another of his earlier triumphs was the recognition of the miasmatic origin of fever and ague and its treatment with what are now well recognized anti-plasmodial remedies by powders, the formula of which is well known to all of his students. In an interview on his eightieth birthday he said: "I had a powder which I put up in twelve papers, eight of them white and four blue, but all containing precisely the same thing. When a patient came to me and said, 'This is my day for shaking', I told him to take a powder. 'You won't shake again this year!' I added, 'if you take one of these white powders morning and night and the blue powder before church on Sunday.' Well, they didn't shake any more that year and my fame went abroad among the salt boilers. They began coming over from Geddes and, finally, when the salt works of Saginaw, Michigan, were opened up and the salt boilers went there, they sent East for my powders and shook no more."

His therapeutics was based on experience and he did not sacrifice efficiency to ease of administration. We used to think that his prescriptions were needlessly disagreeable, but we never doubted that they were founded on a scientific empiricism. His fame as a physician spread so that he was the one eminent medical consultant in Central New York. To efficient therapy he added the ability to make an accurate diagnosis. He seldom took a patient into his confidence, but directed him with precision exactly what to do to become well. In consulting practice this habit was observed, and many physicians were angered by his autocratic methods, though they were compelled to admit that his diagnosis was correct and that the treatment he directed was wise and curative. His success naturally led to his elevation to positions of responsibility. After he began promulgating his ideas of medical treatment, which had proven to be of value in cases formerly not cured or in which the cure was delayed, he rapidly advanced in the estimation of his conferees and they showered upon him honor never equalled by any other member of the profession in our vicinity. He was successively made President of the Onondaga County Medical Society, the Syracuse City Medical Society, the Central New York Medical Association, the Medical Society of the State of New York, the New York Medical Association, the Syracuse Academy of Medicine and Vice-President of the American Medical Association. He was also a member of

the American Academy of Medicine, the American Climatological Society and of the British Medical Society. In each of these positions he achieved enviable distinction. At the split of the Medical Society of the State of New York on the question of code in '81 he was one of the first to walk out of the hall and with the others of similar mind founded the New York State Medical Association, and was made its first President. His own County Society did not follow his lead in this rebellion and it was always a sore spot in his memory. He conscientiously opposed the various revisions of the code of ethics of the American Medical Association, which finally has become practically what the Medical Society of the State advocated in 1881. When he saw the drift of the tide of medical opinion when amalgamation of the two State organizations began to be talked of, he favored the reunion or at least refrained from opposing it.

Doctor Didama's ideal of the model physician is left to us not only in his example, but in an address entitled "The Model Physician," delivered to the class of 1878 and republished so late as July, 1904, in *American Medicine*, under the title "The Ideal Physician." From this address permit me to quote several passages for the double purpose of revealing his thought and illustrating his characteristic style.

"The ideal physician. He is a student. He knows that this is an age of search and research, and that an army of vigilant, thinking men, scattered over the entire world, are cultivating diligently the field of science; turning up precious subsoil truths, which must have remained hidden forever from those who merely scratch the surface of the ground; rooting out the stumps of old prejudices, cutting down and clearing away the rank, noxious growth of false facts and barren dogmas, and bringing forward to the harvest time a plenteous crop of golden ideas and healthful knowledge.

"He loves books. He reads them to satisfy his thirst for knowledge, but principally that he may be better qualified to benefit his fellows. Human health and life are entrusted to his care, and he feels bound, by common honesty, to give his patients the benefit of all the discoveries and improvements which have been made in the healing art.

"He must be familiar with the multiform weapons of defense, not only the old and efficient, but the new and still more efficient; hygienic weapons to fortify the citadel, therapeutic weapons to attack the foe, weapons contributed by the various kingdoms of nature, weapons supplied by the four elements of the ancients, fire, air, earth, and water; fire, which stands for sunshine and warmth and electricity; air, which is a symbol for oxygen and the anesthetics; earth, which includes all the treasures of the mineral, animal and vegetable worlds—from the iron which brings back to the pale cheek the ruddy glow of health—from the oil which makes the face of the tuberculous man to shine, to the leaves of the trees, which are for the healing of the nations; and water, which whether in thermal or medicinal springs, or at seaside resorts, whether as a beverage or a bath, is a bounteous blessing.

"The ideal physician is a teacher, ready and willing to impart knowledge. He is not the noisy echo, which adopts, with easy credulity, and hastens to repeat, without consideration, the latest novelty which is uttered. He is not the sponge, which absorbs, without preference, the good and bad alike, and without improvement, dis-

gorges them on pressure. He is not even the industrious bee, which, while 'it gathers honey all the day from every opening flower'—from noxious nightshade as well as from fragrant apple blossom—gathers it for its own use. But he is a well supplied and well trimmed lamp, which, from crudest oil, liberates and diffuses the imprisoned sunshine.

"The ideal physician irradiates the sick chamber with the light of his cheerful presence. He may not be hilarious—he is not indifferent—but he has an irrepressible good nature, which lifts the patient out of the slough of despond and places his feet on the firm land of health. In desperate cases, even a little harmless levity may be beneficial. Myrrh is good, but sometimes mirth is better. A well-timed jest may break up a congestion. A pun may add pungency to the sharpest stimulant.

"But the ideal physician preserves his individuality. He does not tamely copy the manners of any one, however celebrated. Saul's armor, although admirable for Saul, was promptly rejected by David, as cumbersome and useless.

"The ideal physician will be true to principle and loyal to his profession. He will reciprocate the love of his Alma Mater and labor for her welfare; he should be a sincere follower of the Great Physician who ever went about doing good."

The history of this College of Medicine is unique, as hinted in the opening remarks of this address. It has been given authoritatively by Doctor Alfred Mercer in his Alumni Address of 1883 as no one else can give it. When it was proposed to move the Geneva Medical College to Syracuse and incorporate it as the Medical Department of Syracuse University, a special meeting of the Onondaga County Medical Society was called at the Court House, November 18, 1871, to learn the feeling of the profession of the County in regard to such a removal. Allow me to quote from Doctor Mercer's address:

"The spirit disclosed in the discussion was that, if the College were removed it ought to elevate the standard of culture above the prevailing standard common in nearly all the colleges of the country; that we had inferior colleges enough and that if a medical department were added to Syracuse University it ought to inaugurate a plan for higher medical education."

In forming this sentiment Doctors Mercer, Pease and Didama were leaders. It happened to neither Pease nor Mercer to be so placed that he could be so influential in leading the reform in medical education in the State as was Doctor Didama. Doctor Didama was elected President of the Medical Society of the State of New York in 1879. In his annual address in 1880 he expressed the new ideas of medical education in no uncertain way. It is worth while to quote some of his vigorous sentences:

"What shall this better system of education be? It will not be a system which accepts, without examination, every grist of inferior and worthless grain which may be brought to the mill, drops it into the hopper, subjects it to a rapid and hot grinding process, runs it again through the same mill, set at the same gauge, inspects the delectable product with a mere eye-glance of the ambitious and partial miller—who owns the mill—and then sends it into the market neatly branded A No. 1, extra superfine. It will not be a system which opens its inviting arms without discrimination to every applicant for medical honors, whether he be the well-trained and science-loving student, or an adventurer

fresh from the forest, the anvil or the stable, and whose whole literary education consists in a slight and perhaps contemptuous acquaintance with the three R's. It will not be a system which sends such an applicant, or any other, at the very outset of his medical career, to hear lectures on surgery and pathology and therapeutics, when as yet he knows not a single syllable of anatomy, physiology or materia medica. It will not regard the pupil as a human sausage skin to be crammed for four months with intellectual pabulum, which, however much it may distend, can never nourish him."

After dividing the physicians into three classes, the "eminent," the "conscientious and useful" and "those whose highest ambition is not to deserve, but to receive a diploma," he says:

"The giants and foreordained leaders of the profession may be trusted to take care of themselves. They will surmount all difficulties and break down all barriers. The middle class, the rank and file of the profession, the men of sound judgment and strict integrity and faithful devotion to the humbler but not less important duties of their calling, are entitled to the best facilities, the warmest encouragement and the widest possible culture, so that their capacities may constantly enlarge and their powers be developed to the utmost. But against the further, facile licensing, by colleges and county censors, of that incompetent and dangerous horde of prowling adventurers and camp followers constituting a third class, this State Society, the profession at large and a long suffering community should raise indignant protest. What an impetus would be given to the cause of medical education everywhere throughout the land, if all the schools in this great State would unite in ordaining:

1. That, for the present, the minimum qualifications for admission shall be equal to those required by the best literary colleges in the Union, and that, after four years, the possession of the degree of B. A. or B. S. shall be exacted.
 2. That a complete graded system shall be adopted.
 3. That the course of instruction shall extend at least three years of nine months each.
 4. That constant attendance at lectures and weekly oral and monthly written examinations shall be required of every student.
 5. That anatomical, chemical and histological work shall not be optional but compulsory.
 6. That satisfactory examinations in each subordinate grade shall precede advancement to a higher grade.
 7. That the final examination for the degree in medicine shall be held by an independent Board of Examiners appointed by the Regents of the University.
- "The schools of the future which promptly furnish this training and cordially meet the highest demands of an exacting age are the ones whose diplomas will be sought because they will be found passports to the favor of an intelligent and discriminating public."

In 1883 he was elected the first President of the newly formed New York State Medical Association. This gave him another opportunity for impressing upon a large number of influential physicians the correct ideas of medical education and he did not let it pass unheeded. Time forbids too liberal quotations, but certain passages from his presidential address, delivered in New York on November 18, 1884, will illustrate the vigor of his advocacy of the cause of higher medical education. After a logical presentation of the superiority of the graded system of medical training and a photographic picture of the life of a student of the then prevailing and absurd course of medical lectures, he says:

"In building a dwelling house you prepare a plan—first consulting the good wife regarding the fitness of things—and then you go ahead decently and in order. You lay the foundations deep and broad and strong. You carry up the superstructure carefully and gradually, so that no cracks nor flaws shall afterwards appear. You put on the roof, finish the rooms honestly and wait a sufficient time before you move in with your family. You do not jumble all together, working an hour on the turret, another on the trench for the cellar walls, and still another on window sills and hard finish and joist and rafters."

After further illuminating illustrations he says :

"If in every other department of human industry the natural development plan is pursued without opposition or question, why should medical education be the marked exception? Why, if we wish, as we ought, to utilize to the utmost, the time and talents of a medical student, should we not take him step by step—for that is what the graded course means—through anatomy and physiology, histology and chemistry, up to surgery and practice and obstetrics? Why should we have him fritter away the scant but precious hours of his first course of lectures in listening to what he cannot by any possibility fully comprehend? Would not this be doing what ought not to be done and leaving undone what ought to be done?"

"The natural system of medical education is no longer a beautiful and dreamy speculation. It has been fairly tested and it has been found efficient. Those who know it best give it the heartiest approval."

To the later graduates in medicine such arguments seem unnecessary. They wonder that there could ever have been any debate upon the wisdom of the plan advocated. This natural plan of education in medicine has been recognized so long as the only correct system that they cannot conceive that any method other than this could ever have been followed. But to the medical student of twenty-five years ago and more these propositions were strange, startling and revolutionary. No single individual in our country did more to revolutionize medical education than did Doctor Didama. It is the glory of our College of Medicine that, under the leadership of such men as Didama, Pease and Mercer, it was contemporary with Harvard in first making compulsory preliminary education and a graded course of three school years of nine months each for those who were candidates for the degree of Doctor of Medicine.

As a teacher of medicine, either didactic or clinical, Doctor Didama might well be taken as a model. However exacting his practice, he never neglected his studies. When others slept, he devoured books and current medical journals that he might be abreast of the latest discoveries in scientific investigation and in the means for curing people of their ills. The results of these studies he gave liberally to his students. He knew the fundamental sciences of medicine, he studied diligently pathology, he became an expert diagnostician, but he recognized that "the true physician is the one who cures." He was not led astray by the Nihilists in therapeutics, that school produced by supreme attention to pathologic phenomena. In one of his addresses he says :

"Paraphrasing sacred writ, it may be added: there remaineth therefore pathology, diagnosis, therapeutics, these three; but the greatest of these is therapeutics. Therapeutics, therefore, which includes all means to prevent and manage disease, being the superstructure to which all medical ologies are but foundations and adornments, the very fruitage of this tree of life, the sole beneficent application of all medical science, its importance to humanity and therefore to the physician cannot be overestimated.

His instruction was accurate, painstaking, forceful and practical. His students had nothing to unlearn. They unite in the recognition of Henry Darwin Didama as the realization of his own high ideals of The Model Physician.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By JAMES J. WALSH, M.D., Ph.D.,
NEW YORK.

(Continued.)

PART II.

CHAPTER VI.

BY-LAWS.

The original By-laws of the Medical Society of the State of New York give the best possible idea of what the original intention of the founders of the Society was with regard to the influence it should wield on the professional life and practical medicine of the time. All the details of Society legislation with regard to the licensing of physicians are of historic interest, and the relationship to the county societies shows just what these different bodies considered their rights and privileges. Certain features of the by-laws of the State Society deserve special mention because they emphasized the different policy from that of other State Medical Societies of the time, and especially emphasized the ethical relationships which should exist between physicians and the high standard and professional character which the Society hoped to maintain. They have been changed, sometimes even amended, since the original draft, but now that a century has passed their historic interest is greater than ever.

Some portions of the original organic law read rather curiously in these modern times, and are expressive of a spirit rather different to that of the modern medical society. For instance, it is now the custom in many parts of this country for medical societies to determine what shall be ordinary fees for medical and surgical work under various circumstances, though, according to the by-laws of the New York Society, any member guilty of promoting or encouraging in any way such action shall on conviction be expelled from the Society and be forever thereafter debarred from being again received as a member of it. In general the Society retained the privilege of revoking the license to practice and definitely threatened with expulsion any member who

should be guilty of gross immorality or who shall have improper pretensions to any specific or nostrum. This conjunction of offences, for which so condign a punishment was meted out, forms an interesting reflection on the ethical temper of the members of the Medical Society at the beginning, and is an index of the guiding spirit of all their legislation.

ORIGINAL BY-LAWS.

WHEREAS, the Medical Society of the State of New York has been duly incorporated, pursuant to the Statute of the 4th of April, 1806. And whereas among other grants and privileges, the said Medical Society are invested with powers to make such by-laws and regulations as they or a majority of the members at their annual meeting shall deem fit and proper. And whereas by the said statute, the by-laws and regulations of the respective county Medical Societies are directed not to be repugnant to the by-laws and regulations of the Medical Society of the State. Therefore,

BE it ordained by the Medical Society of the State of New York, That the anniversary meeting of this Society shall be held on the first Tuesday in February, in every year; and all other meetings may be held at such time and place as may be determined by a majority of the Society convened at any legal meeting, and that seven members shall constitute a board, to transact the business of the Society, except that of altering, amending or abrogating these by-laws, when it shall be necessary for eleven members to be present to form a board for such purposes.

And be it further ordained, by the authority aforesaid, That the order of transacting business at the meetings of the Society shall be in manner and form as follows, viz.:

First. The President or presiding officer of the said Society may declare the same to be constituted whenever a quorum is formed, according to the preceding ordinance.

Second. The minutes of the last meeting shall be read by the Secretary, and if no member object to the same, the minutes shall be considered approved.

Third. The President or presiding officer, or any member, may introduce any proposition relative to the duties or concerns of the said Society, and the same shall be disposed of according to the pleasure of a majority of the members present at any such meeting.

Fourth. A majority of the members of the Society present at any meeting may direct an adjournment whenever it shall be deemed proper.

And be it further ordained by the authority aforesaid, That every member shall observe order and decorum at all the meetings of the Society, and shall pay proper respect to their fellow members, and to the President and other officers. And all the members shall take their places whenever the President or presiding offi-

cer shall declare the Society constituted, and whenever a member shall speak, he shall stand up and address the chair, and whenever any two or more members offer to speak at the same time, the President or presiding officer shall determine the priority in speaking.

And be it further ordained by the authority aforesaid, That the President of the said Society shall preside at the meetings, and shall preserve order and decorum in the same; he shall perform the duties of his office as now are, or hereafter may be directed, by the laws of the State, or the ordinances, by-laws and regulations of the Society; he shall nominate and appoint all committees to transact the business of the said Society, unless otherwise directed by a special resolution of a majority of the members present; he shall take the sense of the Society on any motion made and seconded; he shall have a casting vote in all transactions where the votes of the members are equally divided, and shall deliver the decisions of the Society.

And be it further ordained by the authority aforesaid, That the President of the said Society shall, at the annual meeting, and at the end of each year after his election to office, deliver to the Society a dissertation on some appropriate subject; and in case of default in delivering the same, he shall forfeit and pay to the Society the sum of twenty-five dollars; Provided always. That if such President shall duly cause to be presented to the Society a copy of his anniversary dissertation, he may, if the Society deem proper, be excused from delivering the same; but he cannot be exonerated from the fine of twenty-five dollars for not composing and presenting such dissertation, and a copy of such dissertation, so presented, shall be read to the Society by the Vice-President or President pro tempore.

And be it further ordained by the authority aforesaid, that the treasurer shall keep and be accountable for all moneys placed in his belonging to the said Society, and shall thereout, pay such warrants as may be drawn by the president or vice-president for the use of the Society; and shall present at each anniversary meeting of this Society, a minute report of the state of the treasury; and the treasurer shall moreover perform all the duties prescribed by law, and the ordinances, by-laws and resolutions of this Society.

And be it further enacted by the authority aforesaid, that a majority of the Censors shall have power to perform the duties of the whole number; and they are hereby authorized to examine students separately, if they deem the same expedient; and the said Censors shall perform all such duties as may be directed by law, and the ordinances, by-laws, and resolutions of the Society.

And be it further ordained by the authority aforesaid, that all students of medicine who shall have presented, to a majority of the Censors of the said Society, satisfactory testimony that they have studied physic and surgery, as is directed

by the statute for incorporating this Society, and who shall upon due examination by the Censors be found qualified to practice physic or surgery or both; and have their said qualifications certified in such manner as is directed by law, shall, before they receive the requisite diploma from the president, sign a declaration in the words following, viz.:

"I, A. B., do solemnly declare, That I will honestly, virtuously and chastely conduct myself in the practice of physic and surgery, with the privilege of exercising such profession I am now to be invested; and that I will with fidelity and honor, do everything in my power for the benefit of the sick committed to my charge."

Which said declaration, so signed, by every candidate to practice physic and surgery, shall be filed by the secretary in the archives of the Society.

And be it further directed, that the president and secretary be and they are hereby authorized, to grant to every such candidate qualified to practice physic and surgery, agreeable to law, in the name and under the seal of this said Society, a diploma, in the words following, to wit:

Omnibus ad quos hæc literæ pervenerint.

S

Nos, Societatis Medicæ Republicæ Novi Eboraci, Præses, Cæterique Socii, hoc scripto testatum volumus (inserting the name and county of the candidate) Artem medicam et chirurgicam sub viris in medicini peritis, tempore præstituto, studio incubuisse, et in hiis studiis progressus, loculento testimonio nobis probasse et commendasse; Quocirca ex autoritate nobis commissa medicinæ et artis chirurgiæ, in hac civitate, exercendæ et potestatum cum omnibus privilegiis ac has artes pertinentibus concedimus. In quorum testimonium hoc diploma, sigillo nostro munitum, donavimus. Datum (the place, day and year to be inserted).

And be it further ordained, that if any candidate should request a diploma in English, it shall be in the following form, viz.:

"To all to whom these presents shall come, or may in any wise concern—The President and Members of the Medical Society of the State of New York send greeting: Whereas (name and county of the candidate) hath exhibited unto us satisfactory testimony that he hath studied physic and surgery, for the term and in the manner directed by law; and hath also, upon examination by our Censors, given sufficient proofs of his proficiency in the healing art, and of his moral character. Wherefore, by virtue of the powers vested in us by the law, we do grant unto the said (name of the candidate) the privilege of practicing physic and surgery in this state, together with all the rights and immunities which usually appertain to Physicians and Surgeons. In witness whereof we have granted this diploma. Sealed with our seal, and testified by our President and Secretary, at (place, day and year).

And be it further ordained by the authority aforesaid, that all students who may hereafter be licensed by any County Medical Society in this State, shall be required to sign a declaration corresponding to that set forth in the preceding ordinance; and it shall be the duty of each president of the medical society of every county to exact and demand the same, and to file such

declaration in the archives of the Society granting such diploma.

And it is also further ordained, that the diploma to be hereafter granted, to every person to practice physic and surgery, by any county medical society in this State shall correspond with the diploma in the preceding ordinance, adapting the same to the name of every such county.

And be it further ordained by the authority aforesaid, that it shall be the duty of every member of this said Society, to present at every anniversary meeting a copy of the by-laws of the said county society, for which he is delegate, and to furnish this Society with an abridged historical account of the proceedings of every such county society.

And be it further ordained by the authority aforesaid, that each and every member shall present to this Society, all proper information respecting the geology and topography of the county in which he resides, together with an historical account of the diseases which prevail at any season of the year; and shall communicate all such information in his power which may contribute to the public good or advance the knowledge of the healing art.

And be it further ordained by the authority aforesaid, that the said Society shall appoint a committee of not less than five nor more than seven members, as a committee of correspondence, whose duty it shall be, in their joint or individual capacity, to correspond with the literary societies, and men eminent for knowledge, and they shall present such communications as they may deem proper to the Society.

And be it further ordained by the authority aforesaid, that the president or vice-president of said Society, shall, together with the secretary, and three Censors, from a Comita Minora to carry into execution, the laws and ordinances of the Society during its adjournment.

And whereas it is inconsistent with the dignity of the medical profession, for physicians and surgeons, in their corporate capacities to arrange and fix professional charges:

Be it further ordained, that any member of this Society who shall hereafter be guilty of promoting, favoring or encouraging the members of any medical society in their corporate capacity to form, support and fix medical charges, and who shall be convicted thereof before the said medical society at an anniversary meeting, to the satisfaction of a majority of the members present, shall be expelled from the Society, and shall forever after be debarred from being received as a member thereof.

And it is hereby further ordained, that no incorporate county medical society shall fix any medical charges, and such proceedings are hereby declared to be discountenanced by this said Society, and to be null and void and of no effect.

And be it further ordained, by the authority aforesaid, that any member of the Society who

may have been convicted of any serious offense against the laws of this State or of the United States, or who may be guilty of gross immorality, or who shall have improper pretensions to any specific or nostrum, or who shall be repeatedly guilty of improper conduct in the duties of his profession, or his behaviour in this Society, may be expelled at an anniversary meeting, upon a vote of two-thirds of the members present.

And be it further ordained by the authority aforesaid, that when any accusation is lodged with the president, vice-president or secretary, of a nature which may subject a member of this Society to expulsion, according to the last two ordinances, such accusation or accusations shall be transmitted to the member accused, and a day shall be fixed at the anniversary meeting for his trial, which shall be fair and impartial; and the verdict of the member on such trial shall be delivered at the first meeting of the Society after the trial.

And be it further ordained by the authority aforesaid, that all ex-members of this Society shall be honorary members thereof; and that the governor and lieutenant-governor of the State, the chancellor and judges of the supreme court for the time being, shall be *ex-officio* members of this said Society; and all persons of distinguished literary talents who may be proposed as honorary members of this Society, must be nominated at an anniversary meeting, and shall not be elected before the next succeeding anniversary meeting, which shall be done by ballot; and there shall not be more than two honorary members elected in any one year.

And be it further ordained, that all honorary members shall have all the power of ordinary members, except they shall not vote on any question, nor be eligible to any office in the said Society, and a majority of votes shall admit an honorary member.

And be it further ordained by the authority aforesaid, that any county medical society who shall neglect to perform all such acts as may be required to be done by them, by the law incorporating medical societies, or any other law in the State relative to the science of medicine, or who shall do any acts which shall be considered derogatory to the honor of the medical profession, or who shall oppose or neglect to comply with the by-laws of the said Society, every such county medical society shall be admonished touching any such proceeding; and if it be deemed necessary for the public good, that from the improper conduct of any such county medical society, their corporate rights should for a time be suspended, then and in such case it should be lawful and just for this said Society, to make application to the honorable the Legislature for such purpose.

(To be continued.)

CONSUMPTION AND CITY CROWDING.

Mr. Lawrence Veiller, in describing the miserable surroundings of the poor in a city the size of New York, said that these evils were of man and not of God; that they were no part of nature or of nature's laws. He asked if it was necessary that in this modern city of New York 9,000 human lives be sacrificed each year to the white plague, when all that were needed for its cure were fresh air and sunlight and wholesome food. Was it necessary, he asked, that from 75,000 to 100,000 members of the Jewish community be unable to supply themselves with the immediate necessities of life without the aid of charity, or that 34,000 children be deprived of the care and solicitude of and devotion of a parent's love, and be brought up in institutions as wards of the State? Was it a sign of a healthy or a diseased civilization that the State pays annually \$25,000,000 for charitable purposes?

To say that the lower East Side of New York is the most densely populated spot in the habitable globe gives no adequate idea of the real conditions. To say that in one section of the city the density of the population is 1,000 to the acre, and that the greatest density of population in the most densely populated part of Bombay is 759 to the acre; in Prague, 485 to the acre; in Paris, 434; in London, 365; in Glasgow, 350; in Calcutta, 204, gives no adequate realization of the state of affairs. No more does it to say that in many city blocks on the East Side there is often a population of from 2,000 to 3,000 persons—a population equal to that of a good-sized village—and that in many such blocks the density is over 1,000 to the acre.—*Huber: Consumption and Civilization.*

THE ANTI-QUACKERY MOVEMENT IN EUROPE is supported both by the medical profession and the public. The German Anti-Quackery Society (*Deutsche Gesellschaft zur Bekämpfung des Kurpfuschertums*) appeals to "all who regard enlightenment of the public in regard to the true nature of quack practices as an essential matter for the civilization of modern society, and who desire to protect themselves and their fellows against injury in the event of sickness." This society publishes a journal, the *Hygienische Blätter*, which is devoted to the exposure of quacks and quack practices.

The work done by this society and the anti-quackery movement has been productive of much good. An anti-quackery exposition has been held during the past two years in connection with the Naturforscher Congress. This exhibition included quack advertisements, nostrums, remedies, methods of treatment, electro-homeopathy, magnetism, hypnosis, and the "nature healers." This collection of exhibits, exposing the methods of quackery, has been accepted by the Government and adopted "as a means of instruction to promote the public health."

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Editorials.

ATHLETICS AND LONGEVITY.

THE healthy boy demands a certain amount of exercise, and if it has added to it the spice of contest or a tincture of danger he enjoys it all the more. The educational value of this is for the pedagogues; we are inclined to think it is considerable.

The physical dangers of athletics concern the physician. These dangers are immediate and remote. The immediate dangers have occupied much attention of late, but we must not think that the revulsion at the brutalities of some of our sports belongs entirely to recent times. In the reign of Queen Elizabeth a game of football was a systematized riot. Witness the following coroner's report of this period:*

"In the field called Evan's field, when Roger Ludford and a certain Simon Maltus of the said parish, yeomen, came to the ground, the said Roger Ludford cried out, 'Cast him over the hedge,' indicating that he meant Michael Martin, who retorted, 'Come thou and do it.' That thereupon Roger Ludford ran toward the ball with intent to kick it. Whereupon seeing his purpose, Nicholas Martin *cum cubito dextre brachii sui* and Richard Turney *cum cubito senestri brachii sui*, struck Roger Ludford on the fore part of the body under the heart, giving him a mortal blow and concussion, of which he died within a quarter of an hour, and that Nicholas and Richard in this manner feloniously slew the said John."

*The Medical Examiner and Practitioner, R. Tait McKenzie, No. 7, 1906.

The agitation against rough play has accomplished something, for such practices as the above surely would not now be countenanced. Dilatation of the heart and murmurs, developing in young athletes after severe strain, McKenzie* says, are recovered from; and that even when dilatation occurs to such a degree as to cause fainting complete recovery follows a short rest. Abbott, as a result of his studies of athletes at Cambridge, says that this dilatation in healthy young men is perhaps never injurious.

Morgan studied the men who took part in the boat races between Oxford and Cambridge from 1829 to 1869. He received letters from 151 of the 255 survivors, and from the relatives of the others, making a total of 294 who rowed. Seventeen of these regarded themselves as permanently injured by their rowing. He found that the expectation of life with these men was two years greater than that of the average man, according to the accepted tables. While three of them had died of heart disease, there were no sudden deaths or rapidly fatal heart cases. Meylan made similar studies of Harvard oarsmen. He personally interviewed or had reports from the medical attendants of the men who rowed from 1852 to 1892, of whom 123 out of 152 were alive at that time (1902). The longevity among these men, he found, was above the average; they do not die young; and their health and vigor are far above the average.

We might refer still further to the investigations of men who have been associated with athletes and in sympathy with athletics; they would all tend to show that athletics do not interfere with longevity. However, there is a side which is purely speculative, but which must not be lost sight of. Men are animals of varying degrees of strength, vitality, and physical perfection, depending largely upon the character of their ancestry. Only the most perfect of these figure in college athletic statistics. They represent not only the best physical types, but to this is added a degree of intelligence high above the average. Compared with the rest of men they should produce good statistics even at the worst. It is, furthermore, to be borne in mind that the rest of mankind have indulged in bad habits and unhygienic practices, which are as detrimental as athletic excesses, and which have brought down the standard of comparison to a point much lower than it normally should be.

MILK EDUCATION.

THE importance of good milk is a subject which is steadily growing in appreciation.

Some day the Federal Government will take hold of the question, and it will be solved to the satisfaction of all; but for the present each State must deal with it separately. In some States the farmers produce any kind of milk that it suits them to produce. The cows may be sick or well and the milk may contain little or much manure, as fortuitous circumstances may provide. The decision rests with the people whether they will buy it or leave it alone. In other states there are laws, which are enforced, compelling the dairyman to provide milk which is at least clean and free from danger. Many municipalities supplement the State laws by demanding that milk shall have a certain character in order to be marketable within their jurisdiction. The education which is promoting the interests of the consumers goes on apace. The work in New York State is unsurpassed by any, with the possible exception of Maryland.

The State of Maryland has a Department of Health and an independent citizen's movement, which are performing magnificent services for the people. The campaign against tuberculosis in that State has been most effective. Now it has turned its attentions to the milk problem, and is promoting a campaign of education of exceptional vigor. Besides the ordinary measures for encouraging and compelling the production of good milk, a "milk special" was started out. This is a combination of a technical school on wheels and a political stumping tour. The train consisted of an engine and two coaches, one of which was used as an auditorium car. The territory to be covered was thoroughly advertised, together with the names of speakers and subjects. Farmers were invited to attend demonstrations and lectures at the stations at which the train stopped. Stops of forty minutes were made at each point. There were two speakers at each session. Each spoke for fifteen minutes, and the audience was allowed five minutes to get into the car and five minutes to get out. In this way from fifteen to twenty stops were made in a day. The talks were published in the local papers, and were of such a character that make every word count.

Such work as this is practical and profitable. The farmer can be shown how to produce good milk; he can be shown that it pays; and a demand for good milk can be created.

EXPERIMENTAL CEREBRO-SPINAL MENINGITIS AND ITS SERUM TREATMENT.

THE importance assumed by this disease in the past two years has led to many investigations and studies of its cause and treatment. Research carried on at the Rockefeller Institute by Simon Flexner will be published in the *Journal of Experimental Medicine*, but a preliminary report has already appeared.* These investigations show that the epidemic in New York City was due to the *Diplococcus intracellularis*. This organism can be identified with a high degree of certainty as the etiological agent. Flexner reports experiments with antisera, which, while they do not represent conclusions, have proven most satisfactory, and indicate that the hope for the successful treatment of this disease lies in this direction. Large monkeys were used in these experiments. The antisera were prepared in monkeys, rabbits and goats, and were injected in guinea pigs and monkeys.

Flexner concludes that the injection of alien sera into the spinal canal of man should not be undertaken until their physiological action has been worked out fully in monkeys. How far the results obtained with lower animals can be applied to the prevention and treatment of the disease in man it is not safe to predict.

It is to be hoped that further experiments with the subcutaneous or intravenous injections may show good results.

DENATURED ALCOHOL.

THIS unfortunate term, "denatured," has been fastened upon ethyl alcohol which has had added to it wood alcohol or other poison to unfit it for use in beverages. The Government will sanction the issuing of such a mixture, free from tax, after January 1, 1907. The law is intended to allow alcohol to be purchased for industrial purposes at its real cost. Unfortunately this alcohol can not be used in compounding medicines. It will sell for about twenty-five cents per gallon, while taxed alcohol costs over two dollars and fifty cents per gallon.

This law is a compromise between many bills which have been presented to secure tax-free alcohol, and which have been supported and op-

**Jour. of the Am. Med. Assoc.*, Aug. 25, 1906.

posed by many confused interests. Much opposition came from the distillers of wood alcohol. Unaltered free alcohol was strenuously opposed by the temperance people upon the ground that it would lead to a larger consumption of beverages made by the blending of alcohol. The bill providing for the denaturing of alcohol was supported upon the ground that it would make alcohol accessible for use in the arts and repugnant as a beverage.

The removal of this tax will increase enormously the manufacture and use of alcohol, particularly as a fuel and in the arts. If its manufacture can be reduced to twenty-five cents per gallon it promises to supplant gasoline in motor engines.

The next step in enhancing the usefulness of alcohol is to remove the tax upon alcohol used in medicine and for legitimate medical purposes. This is perfectly feasible, and we have no doubt that it will be accomplished in the near future.

Observations.

At the present time there is much discussion concerning the education that best fits a man to enter upon the study and practice of medicine. There is not only much discussion of this subject but much confusion as well. To say that a man should have a collegiate education before entering upon medical study is both confusing and inadequate. It would be better and more simple to say that he should have an education. Education is a glorious institution; it is the next grade in human advancement below culture. It should not be confused with learning, as it often is; nor is it to be spoken of as synonymous with a certain period of time spent amid certain academic surroundings. These are all different things. The education which every man should have, or at least should strive for, is that which is best calculated to conduce to two things: his usefulness and his happiness. I am much in sympathy with that scholarly man who said he could not afford to take the time to go to college because he was too busy getting an education, even though this observation unfortunately does imply something of lack of respect for that most excellent organized educational institution, the college, and which, on the whole, has more to commend it than the haphazard facilities of the extra-collegiate world.



To demand that matriculates in medicine shall have had a college training, if not unwise, is at least unfair, for the reason that the college train-

ing, with all its preliminary requirements, involves an amount of time which postpones too late in life the completion of the medical study necessary for the practice of medicine. Efforts to shorten the college course by allowing the last year or two to be applied to the course in medicine, can only have the effect of interfering with the homogeneity of the college requirements, while they also compel the student to study medicine in the same institution. Such a course is not possible with the college that has no medical department.

Without entering into a discussion of the weaknesses of the educational system to which our American colleges are committed, I believe that the medical student should have some sort of a systematic preliminary education, and the nearest approach to what that should be is found in the college. The defect which could be remedied most easily is the defect of attempting too much. The college can not hope to put the student in possession of all human knowledge. It should help him with that which is most useful, train his mind in habits of observation, logical thinking, memory and industry, and show him the index catalog of the good things that life has to offer.



So far as academic study and information go, the student gets the most important of these before he enters college; they constitute the entrance requirements. The principles of mathematics and the rudiments of the languages and sciences are the things of importance to the medical student, not higher mathematics and the intricacies of tongues which he hopes soon to forget. Unfortunately under this prevalent system the very important things, the principles, he studies in the preparatory school, not with an appreciation of their meaning and value, but as a grind, having for its end the unconditioned admission to his favorite college. He has skimmed through the best of his subjects, and they dwell in the past as a vague dream. The best results will be secured when the student has more rudimentary teaching in college. Let the requirements for admission be less rigid, so that a man may enter at fifteen and devote the first years of his college life thoughtfully and deliberately to those important things which the preparatory school now attempts to teach him, but which the college, beckoning him on, compels him to touch but superficially.



They do these things better in Germany. There the university is a university *de facto*, where the student studies his special subject, and may follow it to the full extent of human knowledge. The gymnasium prepares him for the university; but the gymnasium is also an institution of learning, and has not for its aim and end the quiz

compend function of the American preparatory school. We have a few preparatory schools which are worthy of a better name, and they might wisely be remodelled, slightly amplified, and send their graduates directly to their special university studies. Our so-called universities are something less than universities and more than colleges. They are becoming unwieldy and complex. In the department of arts the contact of pupil with teacher, so valuable in the old-time college, has disappeared. The best thing they have to offer is the contact of student with student under certain regulations and in an atmosphere of culture. Aside from this the student may profit by his opportunities little or much as he pleases, just as he might if he were in any other position in life.



I can not conclude these observations without offering the suggestion that the college will attain to its greatest usefulness only when it becomes a less peculiar institution. By that I mean it should approach more closely the conditions of the life for which it is preparing its students. The monastic life, as an educational scheme, is a failure. The period of a man's usefulness is short, and life is too precious for one to step aside from the path of usefulness and isolate himself, professedly for self-improvement, for a period of years, and then hope to come back and immediately take up work as a useful member of the community. The best way to prepare for the life that one aims to lead is to live it. The best schooling for usefulness is to be useful. When our college system is perfected the student will spend a certain part of each day in some useful occupation—some occupation which in the terms of the world has a commercial value. The best way to learn Greek is to teach it at the same time; and so the enlightened student will teach those who are less enlightened than he. Hoeing potatoes is just as good exercise as golf, and sawing wood is a splendid preparation for the oarsman, if one does these things in the right spirit. The negroes at Tuskegee have discovered this, and President Eliot practically agrees that Harvard must do the same. In medical schools the monastic policy has but recently been disposed of. The medical student no longer gains his knowledge by sitting at the feet of grave and learned teachers, drinking in their words of wisdom and deluding himself that he is securing a medical education. No; he walks the wards, he examines cases, he prescribes, he puts on dressings, he takes histories, he makes analyses. In fine, he prepares for practising medicine by practising it; and this has been found to be the key to medical teaching. He learns that the student is essentially the same as the practitioner. The boy is father to the man. He recognizes no line of demarkation, and, if he has been well taught, a student he remains always.

Items.

MORTALITY FROM CANCER.—According to the statistics of the St. Louis Health Department, cancer is on the increase in that city. Out of 11,486 deaths in the year 1903-04, 391 were caused by cancer; in 1904-05, 11,364 deaths of which 398 were from cancer, and in 1905-06, the total number of deaths was 9,833, and of this number 438 are reported to be caused by cancer.

INCREASE OF TRACHOMA.—During the last two months ten cases of this disease have been reported daily from Ellis Island, a much larger number than usual.

TYPHOID FEVER IN BROOKLYN.—Since August first there has been an unusual prevalence of this disease in Brooklyn. No definite cause of the epidemic has been discovered, but the general opinion prevails that the cause is due to polluted drinking water supplied from the Ridgewood reservoir. The supply streams to some of the contributing reservoirs on Long Island are notoriously subject to pollution.

NEW HARVARD MEDICAL SCHOOL DEDICATED.—The new buildings of the Harvard Medical School were dedicated with appropriate ceremonies on September 25th and 26th.

THE AMERICAN INTERNATIONAL CONGRESS ON TUBERCULOSIS will meet in New York City, November 14, 15 and 16.

THE INTERNATIONAL TUBERCULOSIS CONFERENCE was opened at The Hague on September 6th in the presence of Prince Henry of the Netherlands. M. Burgeois, French Foreign Minister, was made president.

THE COLLEGE OF PHYSICIANS AND SURGEONS OF SAN FRANCISCO is to be rebuilt on its former site. The trustees hope to be able to construct the first story of the building so as to have sufficient lecture rooms to begin the regular course in the fall.

REQUESTS TO BROOKLYN HOSPITALS.—By the will of the late Lewis Luckenbach the Seney Hospital receives \$10,000 and the German Hospital \$5,000.

HOSPITAL CARS.—It is reported that the Pennsylvania, and Baltimore and Ohio railroads are about to have built hospital cars for the care of those injured in railroad wrecks. The Erie is said to be the only railroad in the East having such cars.

IN THE SAN FRANCISCO EARTHQUAKE, April 18th, 452 persons lost their lives. These are the figures given by the local health authorities to the California State Board of Health: 226 were killed by falling walls, 177 were burned to death, 7 were shot, and 2 died from ptomaine poisoning caused by eating canned food of poor quality.

UNSANITARY BAKESHOPS IN NEW YORK.—The Health Department of New York City, in a recent investigation, found 290 bakeries in a condition which was far below the sanitary requirements.

UNSANITARY RESTAURANTS IN KANSAS CITY.—In Kansas City they attend to these matters better than New York does. There the Health Board has a yellow placard, which is posted in certain restaurants, and which can not be removed without the authority of the board. It reads as follows:

CONDEMNED.

The kitchen in this restaurant is conducted in a dirty and unsanitary manner. Food prepared in this condition is dangerous to health.

BOARD OF HEALTH.

ST. ELMO SANDERS, Sanitary Superintendent.

CANCER RESEARCH IN SWEDEN.—The Swedish Medical Association has appointed a committee, with Prof. T. Berg, of Stockholm as chairman, to make an exhaustive study of all the phases of cancer.

DR. KEEN HONORED.—At the 450th anniversary of the University of Greifswald, an honorary medical degree was conferred on Dr. W. W. Keen, of Philadelphia.

APPENDICITIS RESEARCH IN EUROPE.—According to statistics, the number of cases and the mortality from appendicitis is increasing on the continent. The imperial authorities of Germany have appointed a committee, consisting of eight members, to undertake a combined investigation on the subject.

THE MICROBE OF WHOOPING COUGH, according to the Antwerp correspondent of the *New York Sun*, has been discovered by Dr. Gengoa, of the Belgium Royal Medical College. It is said to resemble the influenza bacillus of Pfeiffer.

MILK SUPPLY SHORTAGE.—It is becoming evident that in New York City the supply of milk is unequal to the demand. The price has advanced with the shortage.

EPIDEMIC OF RABIES.—About 400 cases of rabies have been treated since January 1st at the Pasteur Institute and by the Board of Health. It is said that the present epidemic in New York and vicinity has not yet run its course.

FREEDOM FROM APPENDICITIS IN AFRICA.—Dr. Nicholas Senn has made an interesting observation while visiting the hospitals in towns on the East Coast of Africa. The physicians in those institutions informed him that they had never seen a case of appendicitis among the blacks, and most of these physicians had lived on the coast from ten to twelve years, and had collectively examined thousands of patients. The relaxing effect of climate, laziness, and a fruit and vegetable diet would seem to offer the best explanation of this immunity.

Progress of Medicine.

PRACTICE OF MEDICINE.

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THE DECHLORINATION TREATMENT OF DROPSY.

Among "Annotations" in the *Lancet* for July 28 is the following on the treatment of dropsy by the withdrawing of calcium chloride:

In the *Scottish Medical Journal* for February, Dr. F. D. Boyd has called attention to the value of the dechlorination treatment of dropsy—a method which we owe to the French and which has had little vogue in England. Widal pointed out that in renal disease, when sodium chloride accumulates in the body, œdema results and albuminuria increases. On the other hand, when sodium chloride is withheld from diet the albuminuria diminishes and the œdema may disappear. Dr. Boyd relates the following striking example of the value of this treatment. A man, aged 57 years, was admitted to the hospital with swelling of the legs, abdomen and hand. For twenty-five years he had suffered from attacks of bronchitis every winter. Ten years before admission he first noticed swelling of the ankles. In the last four years he had suffered from frequent attacks of dyspnoea and had seldom been free from œdema of the legs. For three months he had been confined to bed. On admission there were bronchitis, general anasarca, ascites, considerable effusion into both pleural cavities and dilated heart. The radial artery was thickened and the blood pressure was low. The urine was scanty and contained albumin, but no formed elements were found. A light diet and one and one-half pints of fluid were given in the twenty-four hours. During the next six days the œdema slightly increased and the arterial pressure rose. Then a salt-free diet, consisting of bread made without salt, meat, fish and fowl, cooked without salt, and potatoes cooked without salt and eaten with fresh butter, was prescribed. The amount of the fluid taken was kept at one and a half pints in the twenty-four hours. On the second day improvement began; the arterial pressure fell, and the quantity of urine more than doubled. Diuresis was maintained until all œdema had disappeared. The intake of chlorides on this diet was about two grains in twenty-four hours. There was an enormous excretion of chlorides which followed closely the excretion of water. The weight of the patient fell from 190 to 132 pounds, and in seventeen days he became free

from the œdema which had lasted for years. Cryoscopy showed a marked depression of the freezing point of the blood, indicating renal inadequacy. The blood contained 0.58 per cent., fluid from the legs 0.75 per cent., and fluid taken from the chest 0.74 per cent. of sodium chloride. The latter figures are excessive. The amount of chloride in the blood remains fairly constant. When chloride is taken in excess of the excretory powers of the kidneys it accumulates in the tissues and œdema results. When chloride is withheld from the diet the converse occurs; chloride passes into the blood and œdema disappears. Of course, other factors are concerned in the production of dropsy. Yet frequently, even in dropsy resulting from grave cardiac and renal disease, Dr. Boyd has seen œdema disappear on withdrawing salt from the diet when all other means failed.

THE SIGNIFICANCE OF ALBUMINURIA.

Joseph P. Tunis, investigating the practical significance of a trace of albumin in the urine, secured answers to the following three questions from twenty of the leading physicians of America:

1. Is there such a condition as physiological albuminuria?

2. Have you had under your observation any case or cases where a trace of albumin has been present in the urine for ten years or longer in an apparently perfectly healthy man?

3. Do you not think that the mortality among cases showing continuously a trace of albumin is much greater than among an equal number of healthy lives during the same period?

The replies show a considerable variety of opinion and experience, but summarizing them the author comes to these conclusions, among others:

The term "physiological albuminuria" is almost universally regarded as misleading, unsatisfactory and inadequate.

As long as albumin is a constituent of the urine the individual voiding it cannot be regarded as normal.

The mortality among such persons must necessarily be higher than among an equal number of individuals who do not show this phenomenon.

Several medical men stated in their replies that they had seen such cases as those mentioned in Question No. 2. Others of equal experience had seen no such cases.—*American Journal of the Medical Sciences*, July, 1906.

SARCOMA OF THE MEDIASTINUM

Voltolini reports a case of malignant mediastinal tumor with exceptionally rapid course. A forty-five-year old man was seized with an acute inflammation of the bronchial passages, and was at first thought to be suffering from grip. Symptoms became so rapidly worse, however, with swelling of the upper half of the body, œdema and cyanosis of the face, dispnœa, distention of the veins, and thromboses, that an obstruction of the vena cava superior or the innominate veins

was suspected. By the X-rays a broad shadow was seen above and to the right of the sternum, and the diagnosis of mediastinal tumor was made. Antisyphilitic treatment was without avail, and the patient died in a little less than two months. Autopsy showed a round-cell sarcoma of the anterior mediastinum, which had grown very rapidly.—*Deutsche Medizinische Wochenschrift*, 1906, No. 9.

VASCULAR TENSION.

Holbart Armory Hare, writing on vascular tension says that there is a class of cases in which high arterial tension is present which deserves notice, namely, those persons of somewhat advanced years who have gradually developed a high tension of moderate degree, and to this tension the heart, vessels and tissues have become adjusted, so that it has become a "standard tension," so to speak. With the onset of an acute illness the physician may find this standard tension somewhat exaggerated, and, impressed with the general principle that a high tension is evil, he proceeds to lower it to normal instead of to the new normal standard of the individual under observation. This is usually unwise, and each patient must be studied carefully in this respect.—*American Journal of the Medical Sciences*, August, 1906.

PENTOSURIA.

Pentosuria is a condition so rarely discovered that only seventeen true cases have heretofore been reported, with none, until recently, recorded in the British, French or American literature. Theodore C. Janeway, of New York, now reports two more of these cases. The pentoses are sugars, containing five carbon atoms, are optically inactive, and do not ferment with yeast. Apart from its theoretical interest, pentosuria is of importance clinically because of its confusion with diabetes in almost every case. Janeway's two cases were brothers, Germans, aged 27 and 28 years, respectively. Physical examination and previous history in each case seemed negative. One patient had been refused life insurance some months previous because of "sugar." Diet had no effect upon the excretion of sugar, and glycosuria was always absent.

The author advises that any urine which reduces Fehling's solution in an atypical way, the color remaining unchanged for a minute or so after boiling and then suddenly turning a greenish yellow or muddy orange throughout, should be subjected to further tests. If it yield good crystals with the ordinary phenylhydrazin test, does not ferment with yeast, and is optically inactive, pentose is probably present. The more exact methods for its determination are then necessary.

Concerning its clinical significance, no case has ever been under surveillance a sufficient length of time to speak with absolute certainty of its

course or prognosis. However, no bad results have yet been noted, and the prognosis is certainly better than the mildest diabetes. The only treatment consists in carefully explaining to the patient the difference between his ailment and diabetes, and the removal of any previous dietetic restrictions to which he may have been subjected.—*American Journal of the Medical Sciences*, September, 1906.

BENZINE AND GASOLINE POISONING.

The increasing use of benzine and gasoline has resulted in an occasional case of poisoning, though few have as yet been reported. Four of such fatal cases have recently been reported in the foreign journals. In the *Muenchener medizinische Wochenschrift*, 1906, No. 9, Burgh tells of an eighteen-months-old child who swallowed a little more than an ounce of benzine. He groaned loudly and became pale, the pupils reacted only feebly, the skin was cool and covered with perspiration. In spite of washing out the stomach, death followed in four hours. At autopsy the semi-lunar valves of the aorta and the chordæ tendineæ of the mitral valve were found to be a bright rosy red in color; the blood was fluid and of a cherry red color; the lungs were filled with blood and showed capillary extravasations; the air passages were filled with a foamy, bloody fluid, and the brain, liver and kidneys showed congestion.

Characteristic of benzine poisoning seem to be the hemorrhages into the lungs, which are especially great and numerous. Other conditions point to death from suffocation; the red rose color of the aortic valves and cherry-red color of the blood reminding one of death from carbon monoxide inhalation. In the *Wiener medizinische Wochenschrift*, 1906, No. 8, Zoernlaib reports two more fatal cases, almost similar, and one case where the immediate use of an emetic and the stomach tube saved the life, preventing any noteworthy symptom of the poisoning.

Two cases of gasoline poisoning have recently come to the attention of the reviewer. One of these, the infant daughter of a physician, drank a cupful of gasoline, and almost immediately afterward shrieked and fell to the ground unconscious. The stomach tube was used within a few moments, but profuse hemorrhages from the lungs soon occurred, and death rapidly followed. The other case was a drug clerk who emptied half a glass of gasoline, mistaking it for water. Emetics and irrigation of the stomach were immediately resorted to, with the result that the man was able to work later in the day.

PRELIMINARY SYMPTOMS OF DIABETIC GANGRENE.

Preceding the onset of diabetic gangrene, says Grube of Bad Neuenahr, there are unusually certain symptoms of interrupted circulation, which are for some time previous an indication of the condition which is to follow. These include anesthesia or analgesia, especially of the

toes and soles of the feet, a livid appearance of the skin, occasional or persistent pains in the feet, or suddenly occurring pains in the legs below the knees which retard walking. Sometimes there are punctiform hemorrhages into the skin of the feet or lower limb. Grube has had good results in treating this condition by placing the extremity concerned for one hour daily in a hot air apparatus at a temperature of 60-65 degrees C. (140-150 degrees F.). An especially favorable sign is when an extremity which does not perspire can be made to perspire once more.—*Muenchener medizinische Wochenschrift*, July 17, 1906.

THE HYDROTHERAPEUTIC TREATMENT OF CHLOROSIS.

In the treatment of chlorosis, Professor Rosin, of Berlin, has had excellent results merely with hot baths. He says that in this disease the administration of iron or other remedies is not effective because some lack in the system is supplied, but because the circulation of this substance in the system causes an irritation and therefore an activity of the blood-forming organs—the red bone marrow. Hot baths do this same thing, actively influencing circulation, blood pressure, and metabolism, and thereby exerting a tonic effect on the blood-producing organs. The treatment demands a period of from four to six weeks. The hot baths are given three times weekly, preferably during the first half of the forenoon. The water should be of a temperature of 140 F. (40 C). At first, ten minutes in the bath is long enough; later the time may be lengthened to twenty minutes. A cold cloth or ice-bag is kept on the head during the bath. After the bath the patient is douched with cold water, rubbed dry, and then must rest for an hour. After three or four baths improvement is perceptible, and often after three or four weeks the patient seems entirely cured. The author warns against treating simulating diseases, such as incipient tuberculosis or the several others, in this manner, but says that in chlorosis great benefit is always to be had and cures are generally attained.—*Die Therapie der Gegenwart*, July, 1906.

EARLY DIAGNOSIS OF TABES DORSALIS.

Concerning the early diagnostic signs of tabes dorsalis Charles S. Potts calls attention to the fact that ataxia is not an essential symptom, for the disease is in many instances present for a considerable length of time before the ataxia appears, and in rare cases the ataxia remains absent. The presence of persistent pain, especially of the lancinating and girdle types; of paroxysmal attacks of gastric pain and vomiting, or other symptoms characteristic of the various crises which may occur in the disease; of painless swelling of one or more of the joints; of transient attacks of diplopia; of primary atrophy of the optic nerve; of paræsthesia, such as numbness, tingling, and sensations as if walking on velvet; of difficulties

in urination; of loss of sexual power without apparent cause; of physical exhaustion produced by slight cause; and of perforating ulcers, falling out of the teeth, herpetic eruptions of fractures occurring from slight cause—any one or several of these should make us suspicious and cause us to look for a second class of symptoms without which a diagnosis cannot be made, and with one or more of which it can be justified. This group of symptoms includes the condition of the reflexes, pupillary symptoms, sensory paralysis, and muscular hypotonia. The other diseases of the nervous system simulating tabes dorsalis, such as multiple neuritis, combined sclerosis, syphilis of the cord, and cerebellar tumors, all have their characteristic symptoms which usually enable a distinction from them to be made.—*New York Medical Journal*, July 21, 1906.

SEATS OF THE SPIROCHETA PALLIDA.

The spirocheta pallida has heretofore been found by various investigators in the following organs of the syphilitic new-born: liver, spleen, kidneys, suprarenals, intestine, pancreas, lungs, skin, heart muscle, and placenta. Hans Schlimpert, in Dresden, has succeeded in demonstrating the organism also in the stomach, mesentery, mesenteric glands, gall-bladder, common bile duct, peripheral nerves, thyroid, thymus, tonsils, tongue, and the mucous membrane of the mouth and pharynx. From his studies Schlimpert concludes that the spirocheta pallida is able to penetrate intact cylindrical or squamous epithelium, and also that all the secretions and excretions of the syphilitic new-born are to be regarded as infectious.—*Deutsche Medizinische Wochenschrift*, June 28, 1906.

SYPHILITIC CONTAGION FROM TERTIARY LESIONS.

Charles Mallory Williams collects from the literature forty-one cases in which syphilitic infection has been received by exposure to the tertiary lesion, thus disproving a widespread belief that tertiary lesions are not contagious. The reason why infection from tertiary lesions is so rare the author ascribes in the first place to the fact that tertiary lesions are so much rarer than the secondary. Then also their site is not generally so favorable to the spread of the disease, the gross appearance of the gumma is such as to give warning of danger; and finally tertiary lesions as a rule appear at an age when there is less chance or likelihood of infecting others. The considerable lapse of time between the original infection and the appearance of tertiary lesions is often invoked to explain the apparent lack of contagiousness of the latter; and though doubtless true in many cases, the author believes, cannot be extended to cover those cases in which typical secondary lesions appear even so late as thirty years after infection.—*Medical Record*, July 14, 1906.

THE THERAPEUTIC VALUE OF ERGOT.

Oliver T. Osborne says he has come to believe that ergotism, with its areas of anesthesia, paralysis, and peripheral gangrenes can occur only from eating ergotized grain, which is now rarely or never allowed to reach the consumer. He has never seen, nor does he know of anyone else who has ever observed chronic poisoning from the administration of ergot.

The indications which ergot meets, he says, are:

1. To contract the blood vessels, raise the blood pressure, and stimulate the heart in conditions of shock, collapse, and circulatory depression. For this purpose there is no drug except suprarenal which can compare with it in value.

2. To contract the blood vessels of the brain and spinal cord, especially of the meninges, when they are acutely inflamed, irritated, or congested. Given hypodermically in cerebrospinal meningitis, the author believes it does more good than any other drug. He finds it useful in neurasthenic conditions or general weakness with sleeplessness when given at night, and to relieve congestive headache when there is not high blood tension.

3. To quiet the nerve pains in inflammation, and irritation of the nerves, especially when such irritation is of central origin. Besides the benefit and actual advantage is the negative advantage that it can do no harm.

4. To promote activity of the bowels when there is intestinal muscular debility, paresis, or paralysis, as in tympanites after operations, or where there is obstinate constipation. Following operations the author believes it for this purpose equal or superior to atropine, eserine, or the various cathartics. In persistent ordinary constipation he has often had splendid results from the addition of ergot to whatever laxative treatment was instituted.

5. To contract the uterus in uterine hemorrhage.

6. To ameliorate asthma which is due to nervous irritability or reflexes. It is in those cases in which there is more or less persistent wheezing or frequently recurring, almost nightly attacks that ergot has proven of most benefit.

7. To modify or diminish excessive secretion of the thyroid, as occurs in some forms of hysteria and in Graves' disease. In the latter condition, with lowered blood tension, hot flashes, profuse sweating, increased nervousness and sleeplessness ergot is of benefit, though, of course, not to the exclusion of such drugs as strophanthus, perhaps the bromides, thyroidectin, or other antithyroid serum, combined with rest of mind and body, and diminished meat diet. Ergot is of benefit in cases of hysterical excitement. Of course it should not ordinarily be given during the menstrual epoch.

8. To quiet the nervous system, and aid in overcoming the morphine, opium, alcohol, or

other drug habits, and to increase the potency of any dose of morphine that may be required for nerve pain.

One more condition in which the author used the drug successfully was in an extreme case of diabetes insipidus in a boy ten years of age. Where all other remedies failed ergot has brought about steady improvement during a year and a half.—*New York Medical Journal*, July 14, 1906.

THE FREQUENCY OF INTESTINAL HEMORRHAGE IN TYPHOID.

In a series of sixty-eight consecutive cases of typhoid fever Tileston made 422 examinations for the detection of blood in the feces, to determine the frequency of "occult hemorrhages." By means of the quaiac or aloin tests he found occult hemorrhage in about 25 per cent. of all cases of typhoid fever, and a little more frequently in severe than in mild cases. However, he found the application of the tests of very little value as a means of foretelling gross hemorrhage, and of very little value in diagnosis, owing to the inconstancy and comparatively late appearance of positive reactions.—*Boston Medical and Surgical Journal*, July 12, 1906.

SURGERY.

EDITED BY

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INFECTIONS OF THE KNEE-JOINT AND THEIR TREATMENT.

Allen describes his treatment whereby the knee is opened by a transverse incision below the patella and lateral incisions to give free access to the upper part of the joint, the lateral ligaments being left intact. The joint is flexed, thoroughly washed, and while in the flexed position, every portion of the joint is packed with iodoform gauze, particularly about the crucial ligaments and behind the condyles.

By the flexed position and packing, perfect drainage is obtained. When septic absorption ceases the gauze is withdrawn, a less amount inserted, and the leg is gradually straightened.

The dressing usually requires an anesthetic. The patient recovers with a stiff joint.—*Surgery, Gynecology and Obstetrics*, July, 1906.

ACUTE SEPTIC INFECTION OF THE THROAT AND NECK; LUDWIG'S ANGINA.

G. G. Davis, of Philadelphia, defines Ludwig's angina as an acute septic infection, which involves the mouth, throat, neck, submaxillary and parotid regions. He says that the infection may arise either from a single, but not always the same, organism, or may be a mixed infection

of great complexity. In nine out of twelve cited cases the diplococcus was found occurring alone and eight times with other organisms, mostly staphylococci. In this series of cases there were three infections with the pneumococcus, all mixed infections but one, Davis also states that the infection started from some lesion in the mouth or throat.

The parts attacked will depend on the location of the injury at which the infection entered. Semon has cited cases in which the inflammation involved the tonsil, epiglottis and larynx. In some cases the discharge breaks into the larynx. Œdema of the larynx may require tracheotomy and lead to death. When the teeth are the starting point, the inflammation involves the lower jaw and surrounding tissues. In many cases the exact point of infection is unknown and attention is first attracted by the swelling of the tissues of the floor of the mouth and beneath the jaw. No matter how the disease commences, it spreads progressively along the connective tissues by direct continuity. It is not transmitted by lymphatics.

The deep tissues are markedly affected, causing a peculiar "wood-like" induration without much redness of the skin. Indeed, the process experiences difficulty in piercing the deep fascia, hence the skin and subcutaneous fascia are often but little affected.

There is little tendency to the formation of pus. When the epiglottis or larynx are involved œdema supervenes and causes suffocative symptoms. Early incision often gives exit to serum, and no pus is found. It makes its appearance later, and is dark colored and offensive.

In fatal cases the process follows the cervical tissues down the neck and into the mediastinum, and produces a septic pneumonia. In laryngeal cases death may occur early from suffocation. Otherwise it runs its course in from six to twelve days.

The temperature does not run high as a rule, especially when the streptococcus is the prevailing infection.

Davis states that the disease in its early stage is a purely local affection, which can be cut short by fearless surgical treatment. "He who waits for pus before incision waits too long."

When a case presents itself with a board-like swelling beneath the jaw, it is evidence of a probable cellular tissue infection. An incision may be made in the median line between the symphysis and the hyoid bone, and carried through the tissues until the point of the knife can be recognized by the finger inside the mouth beneath the tongue. The incision is devoid of danger and is followed by no hemorrhage. If made early no pus will be found, but only blood or their serum. If the swelling is more towards the angle of the jaw or in the parotid region, it is best to incise the skin and then bore into the swollen tissues with a pair of hemostats, expanding the blades, and inserting drainage tubes

if necessary. In bad cases the larger the incision the better.

In œdema of larynx and epiglottis, ice and spray inhalations of cocaine and adrenalin may be of service. Tracheotomy should not be delayed too long. A high tracheotomy is as serviceable as a low, and much less dangerous.—*Annals of Surgery*, August, 1906.

RADIOTHERAPY AND CANCER.

From the clinic of Joboulay, Gauthier and Douroux make the following report: Cancerous ulcerations of face, eleven cases: I and II. Two *superficial* epitheliomata of the nose, patients 67 and 75 years of age; cured. III. One cancerous ulceration of ala nasæ, patient aged 31; "modified." IV. Epithelioma of chin, secondary to epithelioma of lip, patient aged 52; diminution of pain. This patient eight months previously was operated upon for the lip cancer with removal of glands also. Fifteen sittings of ten minutes' duration every second day.

V. Cancer of the soft palate, secondary to epithelioma of superior maxilla, removed two years before. No important modification of growth produced by rays. Modification of pain however and fetor.

VI. Epithelioma of post-auricular region, eight years' duration; sittings every other day from June to October, with progressive improvement, but not complete cure.

VII. Epithelioma of nose, patient aged 78; improvement under treatment six months, every third day. Improvement progressive for four months; after that lost ground.

VIII. Epithelioma of nose, patient aged 64; treated for two and one-half months with ointments and caustics without result; submitted then to thirty-six sittings at Jaboulay's clinic; slight benefit. Patient states that she felt relief after each treatment, but local condition was not much changed.

IX. Epithelioma of nose, patient aged 56; epitheliomatous ulcer of six years' duration. Thirty-five sittings, followed by "almost" complete cure. Enlarged glands remained palpable in mastoid and submaxillary regions.

X. Epithelioma of left ala nasi; patient aged 67. Radiotherapy every three days, sitting ten minutes duration. Complete cure in one month. Patient remained cured for one month, then following an injury the ulceration returned and tumor with glands extirpated and found to be epithelioma.

XI. Degenerated moles of cheek; woman, aged 45. Patient given two sittings a week and treated for one month and a half at which time it was possible to detach the neoplasms with a tampon, leaving a healthy surface underneath. Cure complete.

Three cases of epithelioma of the back of the hand were treated, with one "cure," and three failures. One case of melanotic epithelioma of thumb, with seven axillary and supra-clavicular

involvements, was treated unsuccessfully, except for a marked relief of pain.

Six parotid tumors were treated, with amelioration in four cases and negative results in two.

Five cases of breast cancer were treated, with one death attributed to treatment; amelioration of symptoms in four cases; no cures. Six cases of visceral tumors were treated as follows: One case of myelogenous leukæmia with enlarged spleen; no change in size of splenic tumor after treatment. Two cases of ovarian cancer; no result. One case of malignant disease of typhoid; no result. One case of carcinoma of stomach; aggravation of symptoms; more frequent vomiting and more pain. Cancer of left kidney, recurrent; failure. Three cases of osteosarcoma were treated without result. The authors observe that their greatest success occurred in *superficial* epitheliomas of the nose. In the other cases of cancer, although cure did not occur, pain was lessened in the majority of cases. The authors consider, however, that the moral effect of the sitting has something to do with this amelioration, although they are convinced that the ray has an undoubted analgesic effect.

The conclusions at which the authors arrive after searching the literature of the subject is that the only cancers which are susceptible of cure by the X-ray are superficial cancers of the nose or cheek without long involvement or adhesion; and that all other cancers are unsusceptible of cure by this agent.—*Archives Provinciales de Chirurgie*, Tome XIV, No. 6.

TOTAL RESECTION OF THE SAPHENOUS VEINS IN THE TREATMENT OF SUPERFICIAL VARICES OF THE LOWER LIMBS.

In two long articles on this subject, with illustrative cases, Terrier and Alglave epitomize their conclusions as follows: Failure to cure many cases of varix by such operations as that of simple ligation or partial excision is due to the fact that the deep anastomoses between the deep and superficial veins are not dealt with by these methods, thus permitting relapse. Complete excision, inasmuch as the perforating branches are of necessity tied during removal of the main superficial trunks, prevents recurrence by this route. The authors propose four operations which they illustrated by numerous half-tone plates:

1. Complete resection of both saphenas (when both are affected) and as large a portion as possible of their varicose branches.

2. Total resection of one or the other saphena, when only one vein is affected.

3. Resection of the internal saphena in the lower leg, when the varices are restricted to that region.

4. The "garter" operation, associated with single or double resection, but as complete as possible, of the saphenas in ulcer of the leg high up.—*Revue de Chirurgie*, June and August, 1906.

OBSTETRICS.

EDITED BY

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OPERATION FOR PUERPERAL PYEMIA.

Achibald Cuff (*Jnl. Obstet. & Gyn. of the British Empire*, Vol. IX, No. 5) reports a case, the seventh successful operation so far recorded. The woman was confined by a midwife. Fever developed two days later, assuming a pyemic character within three weeks. The maximum temperature was 105.6, the pulse 132.

Examination revealed a moderately firm mass, apparently in the right broad ligament, about the thickness of three fingers, and extending from the uterus to the pelvic wall. It was not firmly fixed. The abdomen was opened in the fourth week. The mass in the broad ligament was found to consist solely of thrombosed veins.

The peritoneum was reflected and the vessels tied on either side. The ovarian vein, which also was thrombosed, was ligated just below its junction with the vena cava. None of the vessels was resected.

The highest temperature after operation was 100.2, and there were no rigors. Slight sweats continued for several days. Recovery was prompt and complete.

The writer observes that in no reported case has abscess developed at the site of the infected veins after ligation.

TOXEMIC VOMITING OF PREGNANCY.

Dr. J. Whitridge Williams (*Am. Jnl. Med. Sci.*, Vol. CXXXII, No. 3, 1906) reaffirms his views regarding the pernicious vomiting of pregnancy. Serious cases, it will be remembered, he classifies as reflex, neurotic or toxemic, according to the etiological factors concerned.

The reflex variety, though exceptional, is well established. While such pelvic abnormalities as uterine retroflexion or ovarian cyst in pregnancy are not always attended with pernicious vomiting, in other instances, the vomiting is promptly relieved by correction of such abnormal conditions. This has occurred in cases in which suggestive treatment, previously tried, had failed, and in which the urine afforded no evidence of faulty metabolism, thus excluding neurotic and toxemic causes.

The neurotic variety may be observed in women who had manifested no lack of nervous control prior to pregnancy. In such cases examination has disclosed no physical condition which could account for the vomiting and no evidence of serious metabolic disturbance. Moreover, the absence of characteristic lesions has been proven at autopsy in the rare cases which have ended fatally by starvation. The neurotic character of this class of cases the author thinks is further established by the fact that frequently

they are cured by measures the action of which can be explained only by their moral effects.

The commonest and the most serious form of pernicious vomiting is the toxemic. Of the exact nature of the disturbed metabolism we are ignorant. All we know is that usually it ends in death, and often within a few days after the appearance of grave symptoms. The last stages are attended with easy regurgitation of coffee-ground material.

In toxemic vomiting, the urine, unlike that of eclampsia, is not diminished in quantity except in so far as is due to scanty intake of liquids and, until shortly before death, does not contain albumin or casts. The amount of urine, too, as determined by the Doremus method, may be apparently normal. Casual examination, therefore, gives no warning of the gravity of the condition. Yet in this class of cases definite chemical examination by competent methods at an early stage reveals changes indicative of a profoundly altered metabolism. These consist in decided decrease in the amount of nitrogen excreted as urea and an increase in that thrown off as ammonia. While the total nitrogen may be practically normal, the percentage of nitrogen eliminated as ammonia may be greatly increased and the ammonia coefficient instead of being 4 or 5 per cent., as in normal pregnancy, may be as high as 20, 30 or even 47 per cent. The proportion of amido-acids is also increased, and acetone may be present in excess.

The hepatic lesions observed at autopsy very closely resemble those of acute yellow atrophy. They affect especially the central portion of the hepatic lobules, the cells of which ultimately become necrotic. Degenerative changes are present in the kidneys. The liver lesions, the author believes, are primarily the result, not the cause, of the metabolic changes. Yet these lesions may accentuate the metabolic abnormality.

In practice it is extremely important from the standpoint of both prognosis and treatment to differentiate the three varieties. Most essential is the determination by reliable methods of the total nitrogen and the ammonia coefficient. If the latter exceeds 10 per cent. the diagnosis of toxemic vomiting is established and the pregnancy should at once be terminated. The diagnosis of reflex or neurotic vomiting is not justified till the absence of serious metabolic disturbance has been proven by a competent urinary examination, and the ammonia coefficient found normal. Reflex vomiting is ruled out by the absence of the recognized pelvic causes.

Three additional cases of hyperemesis of pregnancy are reported which go to confirm the correctness of the author's previous conclusions.

Objections which have been suggested to the writer's views are discussed. A high ammonia coefficient he grants can occur in other conditions than the pernicious vomiting of pregnancy.

That the urinary changes may be the result merely of starvation due to incessant vomiting

is improbable in the light of clinical experience. Of two women, both equally ill and both suffering starvation through inability to retain nourishment, one may show a high, the other a low, ammonia coefficient.

Wolf has called attention to the fact that a high ammonia coefficient attributable to abnormal fat metabolism may be present in stout women. In Williams' seven cases, five were thin women, and none was stout.

The probable identity of toxemic vomiting and acute yellow atrophy occurring in pregnancy, the writer accepts; not so the toxemia of eclampsia. The latter condition is distinguished not only by the hepatic changes but by the clinical history and the urinary findings. In eclamptic toxemia the liver lesions are thrombotic in character, and they originate in the portal spaces, while in toxemic vomiting and acute yellow atrophy the lesions begin in the central or midzonal areas of the lobules. In eclamptic toxemia there are scanty urine, casts, albuminuria and usually œdema. In toxemic vomiting the urinary changes are limited in the main to the nitrogen partition. In eclampsia a high ammonia coefficient indicates a favorable, in vomiting a grave prognosis.

In conclusion the writer observes that much remains to be worked out. He thinks we must admit the possibility of several varieties of toxemia in pregnancy about some of which we as yet have no knowledge.

MITRAL STENOSIS AND PREGNANCY.

Herbert French and H. T. Hicks (*Jnl. Obstet. & Gyn. of the British Empire*, Vol. X, No. 3) treat the subject *in extenso*, with an elaborate study of three hundred tabulated cases of cardiac disease in pregnancy. On the following points concerning valvular heart disease and pregnancy there is general agreement:

1. Of all the varieties of chronic valvular heart disease, mitral stenosis is that most commonly accompanied by heart failure during pregnancy;

2. Aortic lesions without mitral disease are rare in women; few cases of pregnancy in women who have aortic without mitral disease came under observation;

3. When symptoms of heart failure have preceded pregnancy they are made worse by pregnancy;

4. Repeated pregnancies at short intervals cause greater risk of heart failure than do few pregnancies at longer intervals.

On other questions than the foregoing the authors have formulated conclusions somewhat at variance with the generally accepted views. They are as follows:

1. That of women having mitral stenosis, with or without other lesions, comparatively few are sterile;

2. That they are not especially liable to abort;

3. That the majority bear children well;

4. That where heart failure develops in rela-

tion to pregnancy it is very often not with the first pregnancy, but after several pregnancies;

5. That the treatment should be the same as for a non-pregnant patient with mitral stenosis;

6. That it is not just absolutely to negative marriage in all women with mitral stenosis. If the woman has survived the age of twenty, with good cardiac compensation, the likelihood that pregnancy will accelerate the time of heart failure does not seem so great as has been declared in text-books.

GENITO-URINARY DISEASES.

EDITED BY

EDWARD L. KEYES, Jr., M.D.,

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NEW YORK.

RECENT REPORTS ON PROSTATIC SURGERY.

Prostatectomy is no longer a minor operation. Its vulgarization by the enthusiastic reports of Freyer, Young, Goodfellow and Parker Syms during the past few years has encouraged many attempts by incompetent hands, and thus precipitated many failures. Whiteside¹ reported 33 collected cases observed one year or more, of which 11 showed good results; 12 were improved; three made worse, and 7 died. He also quotes Cabot's statistics of 44% cured, 24% improved, 15% unimproved or made worse, and 17% died. More recently Tenney and Chase² find the mortality of suprapubic prostatectomy 10%, that of perineal prostatectomy 8.4%. About one-half the deaths occurred within one week. Of those operated on between the ages of 50 and 59, 5.8% died; between 60 and 69, 9.5% died; between 70 and 79, 15% died.

Such articles have encouraged the moderates to speak. Van der Poel³ discourages the so-called prophylactic prostatectomy. He encourages the use of the catheter unless that it is impracticable or impossible. Christian⁴ operates when catheterism is impracticable, difficult, or painful; when there are recurring attacks of acute retention, or when retention is complete and there is chronic cystitis. Rovsing⁵ states that only 16% of prostatics require any treatment, and that the catheter should be tried before operation is resorted to. Follen Cabot⁶ urges preliminary perineal cystotomy as reducing the danger of prostatectomy in severe cases (Chetwood advocated the same measure at the recent meeting of Genito-Urinary Surgeons), and in the discussion A. T. Cabot spoke of the value of the retained catheter to the same end.

From opposite sides of the world Maitland and Eastman⁷ urge galvano-cauterization of the

¹ Am. J. Urol., July, 1905.

² J. Am. Med. Ass'n, May 12, 1906.

³ Med. Rec., May 26, 1906.

⁴ Internat. J. of Surg., Dec., 1905.

⁵ Hospitaltidende, No. 42, 1905.

⁶ Australian Medical Gazette, Apr. 20, 1906, and Am. J. Urol., June, 1906.

⁷ Am. J. of Urol., Apr., 1906.

prostate through a perineal incision, the former using it preferably for sclerotic cases, the latter for soft prostates.

Willy Meyer⁸ pleads for the Bottini operation; that it can be borne when any other operation would kill, and will be accepted when a cutting operation would be refused.

Rovsing⁹ still clings to vasectomy for large, soft prostates, claiming that it cures 60%, has no mortality, and produces no result in only 10%.

Reynolds¹⁰ discusses the merits of massage, catheterism and injections of nitrate of silver in the early stages. As to the type of operation, the English follow Freyer in preferring suprapubic prostatectomy, while perineal prostatectomy is generally preferred elsewhere, though Kümme¹⁰ and Hartman prefer the suprapubic route as a rule.

PEDIATRICS.

EDITED BY

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ALBANY, N. Y.

HYPERLACTATION.

Dingwall-Fordyce considers under this head those cases in which maternal nursing, either wholly or partially, has been indulged in for longer than twelve months. The cases in which this limit has been over-stepped successfully or justifiably is infinitely small. Hyperlactation is in a majority of cases a vicious habit bred of erroneous belief that lactation insures the avoidance of pregnancy. It is also used partly from economy and partly as a means of draining the maternal breasts.

The author made a study of 645 children to determine the frequency of this practice. Of these 35% were bottle fed or on the breast for less than six months; 43% were breast fed wholly or partially for six to twelve months, and 22% were cases of hyperlactation.

This condition would seem to be a common practice among the working class. The resulting dangers are not only manifest upon the mother and baby but on the later children. It is a severe physical strain upon the mother and there is the possibility of a super-vening pregnancy. Statistics show that this occurs in 24% of all mothers of this class. When it occurs it frequently happens that the mother is unable to satisfactorily suckle the second child for any length of time. Maternal milk during the second year of lactation is insufficient to properly nourish the child.—*The British Journal of Children's Diseases*, July, 1906.

⁸ Am. J. Urol., June, 1906.

⁹ Med. Rec., Feb. 17, 1906.

¹⁰ Deutsche Med. Wochenschr., No. 14, 1906.

ALCOHOLIC DEXTRINS AND MARASMUS.

Under the term "Marasmus," Langford Symes includes cases resulting rarely from the administration of improper food, cases of immaturity, and those of pyloric spasm and pyloric hypertrophy. These are the cases which defy all our efforts and most approved methods of feeding.

The author describes in detail three cases of extreme atrophy in which modified milk and cream mixtures, peptonized milk, percentage feeding, malted foods, ass's milk, and a wet nurse, all disagreed and failed to nourish the infant. In all these cases there was a marked improvement after feeding the babies on XXX Dublin Stout. Stout is defined as an extract of malt containing abundant carbohydrates, but no sugar or starch, and a small quantity of alcohol, averaging five per cent. All the serious cases of infant atrophy with great collapse and cold extremities are benefited by alcohol, which is here combined with carbohydrate in a ready form for administration. Proteid can be supplied by beef juice, and fat by cream or yolk of egg. It is not unpleasant, and the child takes it well from a bottle. It mixes with milk, not only without harm but also aids its digestion.

The author's method is to order, Stout, half ounce; hot water, half ounce; fresh beef juice, half to one dram; sugar, two to three drams, every four hours.

No vomiting, hiccough, flatulence or diarrhoea has been observed, and in no case did it intoxicate the child or make him drowsy. After a time extract of malt is substituted for the Stout and the child gets on to milk again.—*The British Journal of Children's Diseases*, July, 1906.

THE PRESENCE OF FATTY ACIDS IN THE INFANT'S STOMACH.

For many years there has been much speculation as to the cause of the relatively high grade of acidity found in the stomach contents of infants. The total acidity is always far greater than the acidity from hydrochloric acid. Some observers have attributed it to the action of bacteria, and others to the presence of lactic acid. Sedgwick has made some careful observations, and concludes that a great part of the acidity is due to the presence of fatty acids. He was able to demonstrate the presence of a ferment in the stomach which breaks up the fat into fatty acids. This enzyme is only active in the stomach. It was found in the stomach of guinea pigs in the first hours after birth and in babies never later than two weeks after birth. The fatty acids isolated from the stomach are soluble in ether, insoluble in water, and non-volatile.—*Jahrbuch für Kinderheilkunde*, July, 1906.

County Societies.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, September 18, 1906.
Scientific Program.

Under Charge of the Committee on Public Health.
Dr. E. H. Bartley, Chairman.

1. "The Water Supply of New York," by Charles N. Chadwick, Commissioner of Water Supply of New York.
2. "The Underground Water Resources of Long Island," by Prof. Isaiah Bowman, Dept. of Geology, Yale University.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

STATED MEETING, September 24, 1906.
Scientific Session.

1. "The Municipal Supervision of Typhoid Fever," by Shirley E. Sprague, M.D.
2. "The Diet and Treatment of Typhoid Fever," by Morris Manges, M.D.
3. "The Bath Treatment of Typhoid Fever in Private Practice," by Simon Baruch, M.D.
4. Discussion on the Treatment of Typhoid Fever in Private Practice, by A. Alexander Smith, M.D., Charles E. Nammack, M.D., Nathan E. Brill, M.D., Walter Mendelson, M.D.

New Books.

WALTER REED AND YELLOW FEVER. By HOWARD A. KELLY. New York, McClure, Phillips & Co., 1906.

This is a tribute to a man whose appreciation is for future generations. We have not yet awakened to a realization of the importance of his work. It is not right to declare Reed a genius, because he is not. He was something better than a genius—he was a simple-hearted, high minded man, of ordinary intellect, possessed of a lofty sentimentality and infinite kindness. His interest in the most important things in medicine led him into the field of bacteriology and pathology, and fortuitous circumstances placed him at the head of the Government Commission to investigate yellow fever in Cuba. Had Carroll or Lazear been chairman of the Commission the relation of the mosquito to the disease would have been discovered; and the names of these two men should be exalted in history beyond any measure of recognition that yet has been suggested for them. Together with Reed they labored on the field, Carroll and Lazear allowing themselves to be bitten by infected mosquitoes. Carroll recovered, but Lazear died, and he was the martyr to science whose name is destined to occupy an imperishable place in history. However, the great work of the Commission was accomplished; Reed was at its head; he directed and supervised the work; and it was well done. It was so well done that it resulted in the greatest discovery which American medicine has given to humanity, and it can truly be said that no man contributed more to its success than Walter Reed.

This book of Dr. Kelly's tells the story of yellow fever and its conquest. It gives one a view into the life and character of Dr. Reed—that lovable man, whose ambition was to make his professional work useful; that rarest man in all the Medical Department of the Army, who preferred the title of "Doctor" to that of "Major." It is a tribute which places medicine under an obligation to Dr. Kelly. Well written and full of fascinating facts, it holds the reader to the end. But however rich it may be in history and sentiment, there is no page which does the author greater credit, no

touch of sympathy or pathos which wrings from the heart a warmer thankfulness, than these simple words of dedication: "To JAMES CARROLL and to the memory of JESSE WILLIAM LAZEAR this work of love and affection is dedicated."

THE PRACTICE OF PEDIATRICS. By American and English Authors. Edited by WALTER LESTER CARR, A.M., M.D. Philadelphia and New York, Lea Brothers & Co., 1906.

This is a valuable contribution to the practice of pediatrics. It is written by specialists in the various departments of pediatrics. Two main points are considered in each chapter—a clear clinical picture of the disease under consideration, and its treatment. The general plan and scope of the work is of such a character as to make it most valuable to the reader, and the whole editorial plan and execution reflect much credit upon Dr. Carr, the editor, to whom the medical profession is under obligations for this excellent work.

Among the chapters to which we would call particular attention, is the one on injuries at birth, by Dr. Edward P. Davis. This chapter is full and explicit. It gives a method for dressing a case of fracture of both clavicles which is ingenious and practical, and is destined to help many an unfortunate youngster to a start in life. The chapter on development, growth and hygiene, by Dr. Leroy M. Yale, lays down rules, which if followed would give us a race of healthy children. The chapter on infant feeding, by Dr. Thomas S. Southworth, is complete and comprehensive. The author has no extreme theories, but treats the subject in a practical manner, and in accordance with what is generally regarded as the best. A noteworthy feature of this chapter is that, among the essential foods for the child, he enumerates oxygen. This he says is found in fresh air, and is so much more important than any of the other foods that the child must have it from twenty-five to thirty-five times each minute. We commend this thought to pediatricists.

The chapter by Dr. David Bovaird, Jr., on diseases of the alimentary tract, is an admirable work in itself. It systematically takes up the diseases of the mouth, stomach, small intestine, colon, and rectum; and is a most comprehensive and practical piece of literature. It is well illustrated. The colored plates, showing diseases of the mouth, and the microscopic appearances in diseased stools, are especially worthy of mention. This chapter, aside from its value in diagnosis, is practical in that it tells what to do for these conditions.

The chapter on infectious diseases should be mentioned as most practical and up to date. The chapters on the exanthemata, by Dr. Floyd M. Crandall, are well written, and place the reader in touch with the most advanced knowledge of these diseases. The colored plates showing scarlet fever, Koplik's spots in measles, the general eruption of measles, and smallpox, all add much to the value of the book.

Each chapter presents the individuality of the author, and gives the methods of treatment which has met with the greatest success in his hands.

CONSUMPTION. By JOHN BESSNER HUBER, A.M., M.D. Philadelphia, J. B. Lippincott Company.

This is one of the most readable works on this subject that has been written. It deals with consumption not only from the scientific and medical standpoint, but in its sociological relations as well. The keynote of the book is the prevention and cure of the disease. The author has recognized the important role played by consumption, and has given a comprehensive exposition of the effect which the disease has had upon civilization.

He views the subject broadly. Medical science, he says, can not cope alone and unaided with this difficult and prodigious world-problem; many forces—economic, legislative, sociological, humanitarian—must be enlisted.

We hope that this book will be widely read, especially by laymen. If every layman would read it, the tuberculosis problem would be solved. To give a complete review of the book would require much space. Each

chapter stands apart and must be dealt with separately. The book opens with a reference to the history of tuberculosis. "It is with a real sense of melancholy," the author says, "that one contemplates the long death-roll of those of the world's great men and women who have succumbed untimely to the tubercle bacillus, which is and has been through countless generations by far the most potent of all death-dealing agencies." The author describes the consumptive type in history, literature, and art. He sees phthisis in Botticelli's Venus, and in the Beata Beatrice.

In a most attractive manner are discussed heredity and the economics of the disease. Ten thousand persons die annually in New York City of consumption. These figures lend themselves to showings in many economic lights. The race problem shows that among the crowded peoples in New York, the Jews, who are the most crowded and, in general, live the most unhygienically, have the least consumption among them. The author attributes this to a racial immunity which has destroyed long ago the susceptible and left the insusceptible survivors and their offspring, and to the fact that the Jews do not eat infected foods, and to their temperance in the use of alcohol.

The outdoor life is discussed, showing many means for living and sleeping in the open air. Enough stress is not laid upon the fact that this outdoor treatment is simply returning to the natural and normal conditions, and if the patient had lived that way before he had consumption he would not have to live that way afterwards, because he would not have it.

Sanatoria, the early diagnosis, the inspection of milk and meats, the classification of cases, untoward factors, are all discussed. Many matters of sentiment and religion are touched upon. The use of individual communion cups the author does not consider essential. He says, "There is here a fitness in considering religious emotions; man can not live by prophylaxis alone."

The educational value of this work is very great. It is written in a popular vein, in an admirable literary style, and contains many eloquent passages. Here and there one encounters sentiments which are neither scientific nor in line with modern thought; but most of us harbor superstitions, which were put into our heads in childhood, and which time has welded into our very fibre.

THE EYE AND THE NERVOUS SYSTEM. Their Diagnostic Relations. By Various Authors. Edited by WM. CAMPBELL POSEY, A.B., M.D., and WILLIAM G. SPILLER, M.D. Illustrated. Philadelphia, J. B. Lippincott Company.

This is a work of a thousand pages, written by some twenty-two authors, and covers the nervous disorders of the eye and all of the diseases of the nervous system presenting eye manifestations. It is a work of fascinating interest, and while it will be of much service to the neurologist and to the ophthalmologist, its great value is to the general practitioner. Especial stress is laid upon diagnostic signs. The examinations of the eye are entered into thoroughly, and what one may learn from such examinations.

A most interesting chapter is that on the neuroses caused by eye strain. This chapter presents a comprehensive discussion of the headaches and other peculiar symptoms dependent upon this condition. The exhaustive work of Gould is frequently referred to.

The chapter on exophthalmic goitre is full, but lacks the newer features of treatment. Several chapters, such as chapters on the gait as a symptom of nervous disease, and degeneracy, seem to have a very remote bearing upon the eye. They are good chapters, however, and will well repay one for reading, whether he is interested especially in the eye or not. This chapter on degeneracy is especially worthy of favorable commendation. It repeats the academic mistake, that acquired characteristics are not transmitted; but if we took from our library shelves the books dealing with

heredity, which repeat the same error, passing it on from one academic author to another, we should have but few left to refer to.

This book is well illustrated, and is destined to occupy an important place in the literature of medicine.

ECZEMA. By SAMUEL HORTON BROWN, M.D. Philadelphia, P. Blakiston's Son & Co., 1906.

This book arranges the common knowledge of this disease in an available form. The feature of the book is its dogmatic manner. Statements are not qualified. The author tells the reader what to do in directions which are explicit. This is a rather rare handling of this subject, for when dealing with eczema the dermatologists are given to much qualification of their suggestions.

Deaths.

- CHARLES G. BACON, M.D., of Fulton, N.Y., died August 19; aged 91 years.
- NIELSON ABEL BALDWIN, M.D., of Brooklyn, a member of the American Academy of Medicine, died at the Seney Hospital, August 29, after an operation; aged 67 years.
- JOHN N. BASSETT, M.D., died at his home in Canton, N.Y., after an illness of two days, from cerebral hemorrhage; aged 56 years.
- WILLIAM A. BLISS, M.D., of Brooklyn, and formerly of Fishkill, N.Y., died August 19; aged 65 years.
- BERARDINO CALABRESE, M.D., of Buffalo, an Italian by birth, and physician to the Italian Consulate, died August 16; aged 68 years.
- GEORGE H. CRUM, M.D., of Elmira, N. Y., died August 29; aged 67 years.
- MARY B. DEWEY, M.D., of Saratoga Springs, died August 20; aged 84 years.
- J. W. ELLIOTT, M.D., of Deposit, N. Y., died August 9, after an illness of over two years; aged 71 years.
- EVERARD D. FERGUSON, M.D., died at his home in Troy, N. Y., September 8, 1906; aged 63 years. Dr. Ferguson was a vice-president of the American Medical Association. He was the first secretary of the New York State Medical Association, and afterwards president. He was a member of the Rensselaer County Medical Society, and the Medical Association of Troy and Vicinity; founder of the Samaritan Hospital, Troy; and one of the most esteemed physicians of New York State.
- M. L. GREENFIELD, M.D., of Rockland, Mass., and for twenty years a practitioner of Verona, N. Y., died August 9; aged 47 years.
- BENJAMIN E. HAYS, M.D., of New York City, a veteran of the Civil War, died August 19, at the Presbyterian Hospital; aged 69 years.
- JOHN JAY HIGGINS, M.D., of New York City, died August 28; aged 79 years.
- JESSE W. JANSEN, M.D., died at his home in Binghamton, N. Y., August 27; aged 45 years.
- JAMES M. NIDER, M.D., formerly an interne in Roosevelt Hospital, New York, died May 26, in New York; aged 32 years.
- ROBERT J. PRESTON, M.D., of Lewiston, N. Y., died August 21; aged 65 years.
- JAMES E. SMITH, M.D., of Albany, N. Y., a veteran of the Spanish-American War, was stricken with apoplexy, August 13, and falling, fractured his skull. He lived but twenty-four hours. Aged 38 years.
- MELVIN E. PAGE, M.D., a specialist in diseases of the eye and ear, died at his home in Oswego, September 9, 1906; aged 40 years.
- WILLIAM D. WALRADT, M.D., of Castleton, N. Y., died September 6, 1906.
- LEROY MILTON YALE, M.D., of New York City, a specialist in orthopedics and pediatrics, and a man of much culture, died at his summer home at Quissett, Mass., September 12, 1906; aged 65 years.

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Original Articles.

CLINICAL CONSIDERATIONS OF ACUTE GLANDULAR AFFECTIONS.

By MARTIN W. WARE, M.D.,

NEW YORK,

Surgeon to the Good Samaritan Dispensary, Instructor in Surgery Post-Graduate Medical School, Adjunct Surgeon Genito-Urinary Dept. Mt. Sinai Hospital.

YOUR Chairman requested that I address you on a topic of common interest; I have therefore chosen one which has engaged much of my attention for the past ten years in dispensary practice. It is that of acute and subacute gland inflammations.

Such acute inflammation of the lymph nodes is readily apparent to the veriest tyro by the presence of enlarged and tender round or ovoid bodies, varying in size from a split pea to that of an egg. They are situated in the course of the large vessels chiefly in the flexures of the body and may be single or multiple. As judged from an observation of 20,000 cases, they occur in the order of their frequency in the cervical, submaxillary, occipital, inguinal, axillary, cubital, popliteal, buccal and iliac regions.

These gland inflammations in contrast to infection of other viscera are not infected by way of the blood, but result from bacterial invasion along the lymph channels. Thus, occasionally we encounter a lymphangitis as a forerunner of the lymphadenitis. At times the glandular enlargement coincides with all the manifestations in the local infection. At other times, and that more commonly, there is a period of latency amounting to weeks before the gland, by its characteristics of inflammation, betrays the infected feature of a wound which healed apparently very kindly. Bearing in mind, therefore, the mode of infection, it is necessary, in order to complete the diagnosis of an adenitis, to trace its source of infection. To attain this end the covered and concealed parts of the body must be carefully gone over.

Origin of the Infection.—The cases of cervical and submaxillary lymphadenitis during childhood and adolescence, we have found in an overwhelming number of instances, are traceable to carious teeth of the first and second dentition

and pyorrhea alveolaris of adults. The infections of the tonsil as the primary source occupy a second place in adults and only come to the fore during infancy before the teeth have erupted, and this obtains in like degree with all other lesions of the mouth—aphthæ, soor, stomatitis and herpes, also measles and diphtheria.

For the inflammation of the occipital glands we hold pediculi and the lesions of the scalp incident to this affection responsible; and any other infected wounds.

In the case of inguinal gland swellings a lesion recent or healed will be discoverable about the extremities. Very commonly this may be traced to an ingrowing toe-nail and the ano-rectal region must be included.

The fissured mammæ of the female and lesions of the arm and forearm, existing or healed, are causative of axillary gland enlargements. Though frequently it is possible to identify a cubital adenitis with an infection on the ulnar side of the forearm and hand, the converse, however, does not obtain with like enough frequency to entitle the former to be considered the rule.

Comparatively situated to the cubital lymph nodes are the popliteal lymph nodes. These are not as frequently affected, and no such rule with as near a certainty can be formulated for the source of their infection as for the cubital glands.

Overlying the masseter and buccinator muscles and along the course of the facial vein are the glands of the cheek, which rarely become infected by lesions of the face—herpes, furuncles, acne, etc. Their situation is worthy of notice because they are likely to escape recognition in their ulcerated and fistulous condition, being confounded with other lesions.

Least commonly encountered are acute inflammations of the glands above Poupart's ligament in the course of the iliac vessels. When present the inguinal glands are also affected.

The lymphatic gland tissue in the retropharyngeal and lateral pharyngeal spaces gives rise to the retropharyngeal abscesses.

A general inflammation of the glands is found as an accompaniment of the secondarily infected lesions due to scabies, pediculi and prurigo and the exanthemata, and as an expression of the systemic infection known as glandular fever.

Pathology.—The gland is enlarged and if the inflammation be limited by the gland capsule the gland may readily be removed with this ad-

* Read before the Eastern Medical Society of the City of New York, April 13, 1906.

herent to it. On section the gland will have a reddish-gray color with minute hemorrhages. In a later stage the pulp of the gland will be friable and the capsule may be so adherent to surrounding structures that it will remain in contact with them. Occasionally, in virulent affections, the gland, of a bluish-black color, will burst from its tense capsule and be found loose in cellular tissues. In the suppurative stage the intact capsules may harbor mere fragments of friable gland tissue and pus, but more frequently all gland tissue is destroyed and pus alone is in the capsule.

Microscopically, whatever the nature of the bacterial invasion may be, we find an overgrowth in the cells that make up the gland and an addition of the polynuclear leucocyte. Some of the cells do not take up the stain well, indicating a necrosis. Where the gland is of a bluish-black color the number of red blood corpuscles will overshadow the leucocytes; thrombi are in the vessels and red blood cells are free in the interstices. The thickened capsule will be infiltrated with cells, red and white, but the septa passing into the glands will not be recognizable.

Bacteriology.—The staphylococcus is most commonly found in all of the inflamed glands. The streptococcus is the organism that will be most frequently met with in retro-pharyngeal gland inflammations and in the inguinal glands. In the putrid gland inflammations of the submaxillary and cervical regions saprophytic organisms will accompany the pus organisms. For the suppurative bubo, virulent or avirulent, the Unna-Ducrey bacillus is responsible, and for the bubo rarely accompanying gonorrhoea, the staphylococcus and not the gonococcus is most commonly the cause.

Symptomatology.—In young infants the swelling of the glands is marked by high fever, irritability and restlessness and when the glands are situated in the neck the infant suckles with difficulty and assumes the position of torticollis. In children inflamed inguinal glands impede walking and cause a gait like that of hip disease. If situated in the axilla the motions are impaired, the arm held in adduction and if situated in the elbow or popliteal space the forearm and leg respectively are kept flexed.

In the early period before the inflammation has extended beyond the capsule, the gland, though tender, will be movable; later on, with the extension of the inflammation beyond the capsule, the gland will be fixed to adjoining glands and the surrounding and overlying parts.

Subsequent Course.—Having attained a considerable size the swelling may remain stationary for weeks and may be accompanied by acute local manifestations and considerable systemic disturbances and yet the absence of any fluctuation may not warrant the assumption of the presence of pus. On the other hand there may be a progressive enlargement and still fluctuation be wanting. But as these glands lie beneath a

tense fascia and are invested by a capsule, the pus in this very confined space more often gives rise to a feeling of elasticity. In the absence of fluctuation it is the persistence and the increasing tenderness that point to the presence of pus. A very high fever may prevail at the onset of cervical gland enlargements of considerable size and yet no pus exist.

In very advanced cases, where the pus has escaped into the cellular planes, it is the picture of a cellulitis that confronts us. The skin is reddened, edematous, brawny, and if the pus is large in quantity we may get the signs of fluctuation. Such extent of gland inflammation, aside from its destructive process, is generally accompanied with edema of the adjacent tissues. In addition there is also a swelling due to pressure upon the veins. In the neck this condition may spread to the larynx and impede respiration or the volume of the swelling itself may press upon the larynx and trachea. In the case of the inguinal and axillary glands there is danger, because of the nearness of large veins, that a swelling of the leg or arm may result with or without edema due to thrombosis of the vessels.

Apart from these local complications there is the possible danger of a sepsis or pyemia, or, in the case of a streptococcus infection of the retropharyngeal glands, erysipelas not infrequently sets in.

The gland once inflamed may remain enlarged for all times and is in peril of successive exacerbations, in any of which it may suppurate. Once having suppurated, if left to itself, it will perforate spontaneously. Such perforation is attended with subsidence of most of the symptoms with a great likelihood of a closing of the opening and a refilling of the gland. The perforation is always accomplished with much pain, suffering, destruction of tissue and the danger of sepsis.

If the glands though large, swollen, adherent and matted together at times do not suppurate after weeks, they are likely to become a prey to the tubercle bacilli; in fact, it is very difficult to differentiate them from tuberculous glands. At times they exist many months in an enlarged condition harboring in their interior pus of the staphylococcus infection, behaving in this regard very much like the chronic osteomyelitis due to the same organism.

All the glands of a group are not affected simultaneously, and it is not an uncommon experience for each gland in succession to undergo suppuration. In infants we frequently see first the glands of one side of the neck affected and then those of the opposite side.

The course of all gland infections is tedious, extending over many weeks, and months at times.

Diagnosis.—As stated at the outset of this paper, the diagnosis of a gland infection *per se* offers no difficulties. In the cervical gland in-

flamations there is no characteristic indicative to the organism. The post-scarlatinal adenitis runs so protracted a course at times as to awake the *suspicion* of a tuberculous infection, only too frequently to be verified later on.

The location of the retropharyngeal gland abscess which points externally is characteristic enough to demand attention. It generally points at the posterior border of the sterno-mastoid. At times we have incised what appeared to be a cervical gland abscess or a retropharyngeal abscess and which proved to be a mastoid abscess that gravitated beneath the fascial planes. The most commonly affected gland is that situated at the bifurcation of the carotid.

Acute periostitis of the jaw and particularly that so frequent with the diseases of the wisdom tooth may be difficult to differentiate from an adenitis, but the ankylosis common to a diseased wisdom tooth, or in the absence of this, oral inspection, soon clears the situation.

The retro-auricular glands may simulate a perforated mastoid abscess, but the absence of an otitis media and the absence of tenderness over the apex of the mastoid aid in the differentiation. The diagnosis of the presence of pus may be judged by a very rapid increase in the size of the gland and the tense elastic feel rather than fluctuation associated with marked tenderness. In this connection it is important to recognize that the vast majority of cases of cellulitis and abscess in the cervical, axillary, inguinal and popliteal spaces are due to perforated gland abscesses.

We deny the existence of any such condition as traumatic adenitis as in every instance the source of infection was traceable, and the *bubo d'emblee* is an appellation based on the misapprehension that the point of infection not being discernible, the infectious agent entered the lymph channels without a lesion.

Tuberculous lymphomata may become acutely infected and go on to rapid suppuration, and obstinacy in the healing of any broken down gland should awaken the suspicion of tuberculous, although it may be dependent, on the other hand, upon an old syphilitic infection.

Treatment.—In every instance where the source of infection is manifest, it should be treated. A wound is to be cleaned and treated with antiseptic dressings; lesions of the mouth likewise call for antiseptic washes. A decayed tooth of the primary set is to be extracted, that of the permanent set treated if possible.

The treatment of the gland itself resolves itself into efforts to prevent suppuration and once the presence of pus is manifest, to evacuate the same as the speediest means of limiting the suppurative process.

In the painful stage of adenitis the most soothing remedy is the use of ice bags frequently renewed. Until it is certain that suppuration is averted the use of external applications such as mercurial ointments, and iodine is to be avoided,

for in the acute stage of adenitis they are much more disposed to irritate the skin and cause a dermatitis, preventing any other applications. The use of the Presnitz pack, consisting of several layers of gauze moistened with a mild antiseptic such as acetate of aluminum or alcohol and water equal parts, and the whole covered with a layer of oil silk, will be found soothing where the ice bag is not tolerated.

In the use of suction cups which causes a venous stasis we have a method of applying Bier's treatment to adenitis. These cups are left on for fifteen minutes to one hour twice a day. In the interval the wet packs are used. This simple method can be applied both before and after suppuration has been established. It has proven very satisfactory to us.

These means failing, we doubt the efficacy of the use of any of the measures such as iodine, mercury, iodide of potash or ichthyol ointments. After the fever has subsided iodide of potash, internally, in small doses, or for infants syrup of iodide of iron, is of service. When there are several small foci of pus the use of the flaxseed poultice furthers their fusion into one abscess.

The continuance of fever, the persistence of pain and tenderness and a steady increase in the size of the glands, even in the absence of fluctuation, call for an incision. In the neck the incision should be so placed as to cause a minimum of scarring. These incisions are to follow the suggestion of Kocher and should be placed transversely and conform to the folds of the neck, that is, the natural cleavage of the lines of the skin. In making such an incision parallel to the lower ramus of the jaw for submaxillary adenitis, we have frequently encountered a paralysis of the depressor anguli oris and depressor labii inferioris. It may last many months, but is rarely permanent. We should content ourselves merely to incise and drain the gland abscess. This implies no curetting, irrigation or antiseptic application. Ordinarily a dressing of dry sterilized gauze suffices, but if a cellulitis is also present a wet dressing of liquor aluminii acetatis should be substituted.

Dissection is indicated in the exceptional instances where there are a number of small friable glands harboring a drop of pus in their center. Under these circumstances the glands will have to be shelled out of their capsule, the latter remaining behind.

Most times merely a free skin incision will suffice to evacuate the gland abscess. Deeper gland abscesses are best opened by Hilton's method. The skin is divided, a grooved director forced into the gland and a dressing forceps guided along this into the abscess and the forceps withdrawn with its blades wide apart. Into the gland cavity a strip of gauze may be placed or a drainage tube and gauze. The strips of gauze should be allowed to remain until they are loosened by the growth of granulations. It is the outer dressing which requires frequent

changing. If the gland abscess be situated at great depth as in retropharyngeal abscess, drainage with a tube is preferred, for it has twice occurred to us to have hemorrhages of great severity follow the removal of the gauze due to pressure and erosion of a large vessel, in one instance with a fatal outcome. Such retropharyngeal gland abscesses which point at the posterior border of the sternomastoid are opened by a transverse skin incision—the fascia at the posterior border of the sternomastoid has to be divided before it separates to envelope the muscles, and failure to do so will be followed by dissection along the wrong plane. If it be rightly divided pus may escape at once if the abscess has burst the gland capsule, otherwise we have to work our way bluntly posterior to the vessels and, according to Hilton's method, perforate the gland with a grooved director and enlarge the opening in the gland with the blades of a dressing forceps.

A chancroidal adenitis involving a single gland may be successfully treated according to the puncture method—evacuation of pus and the injection of 10 per cent. solution of silver nitrate or 10 per cent. emulsion of iodoform in glycerine. More commonly the chancroidal bubo is a conglomerate mass of glands. Here puncture is of no avail and nothing short of extirpation of the glands, leaving the wound wide open, affords the quickest cure.

I have twice had to operate on infected glands in the course of the iliac vessels. They are readily accessible by an incision parallel to Poupart's ligament. The peritoneum was then stripped back and the infected glands removed. As there were many suppurating ones and drainage was called for, the drainage tube was brought out beneath Poupart's ligament. The wound in the abdominal wall was sutured in order to guard against hernia.

ARE PRESERVATIVES IN FOOD INJURIOUS TO HEALTH?*

By E. E. SMITH, M.D.,

NEW YORK.

THE essential requirements for the maintenance of the healthful human body are air and food. In the development of our modern civilization, less modification has been demanded in the adaptation of the supply of air to the new conditions than of the supply of food. From the very nature of things an abundance of air is always at hand, unless, indeed, it is limited or actually shut out by man. Not so with food, however. The production and maintenance of a proper food supply calls for human effort. Moreover, it has in the past, does now and always will constitute the foremost object

of human industry. Accompanying the growth of mankind, both as to number and wealth, the resulting establishment of civic relations and their increase in complexity and the development of the desire for epicurean indulgence, this paramount industry, in the adaptation of the supply to the demand, has likewise grown and developed, presenting at each step new problems the solutions of which, by deciding human maintenance and health, have also determined human progress.

Among such problems, one presented early and whose solution has also passed through developmental stages is the keeping of food. This has been more and more demanded by a variety of interests. The need of supplying large aggregations of population renders it necessary to transport food for long distances, as does also the gratification of the desire for a greater variety than the production of any given locality affords. Likewise, the inconstant relations of the seasons of production and the times of consumption create the need of keeping many kinds of food, even for considerable periods of time. This latter need is enhanced by the natural and unavoidable variations of supply in the different seasons. The crops this year may be overabundant and next year poor, so we would reap while we may. Again, the deprivations of isolated communities may to a large extent be economically overcome if food can be healthfully kept for periods of time.

Such interests early led to the adoption of methods of preserving food. Of these, the use of salt and smoke antedate the records of history, while the first use of alcohol, vinegar and crude balsams is equally uncertain. The employment of sulphurous acid probably began with the use of sulphur fumes by the Greeks. Saltpetre, possibly used by the Egyptians, is not definitely known to have been added to meats till comparatively modern times.

The advent of chemistry has led to the recognition of the constituents active in the materials of the older methods of preserving food, and in some instances has resulted in the direct use of these constituents in the place of the older processes. Thus, it has been recognized that creosote is chiefly responsible for the preserving qualities of smoke; and, correspondingly, this latter is now to some extent replaced by crude "pyroligneous acid," in which creosote is the chief preservative agent. Again, vinegar is at times replaced by acetic acid, and the balsams by benzoic acid, their active constituents. So, too, sulphurous acid no longer need be derived from the immediate burning of sulphur, but is purchased from the chemist, either dissolved in water or combined as sulphites. New preserving agents have likewise become known, chief among which are salicylic and boric acids and their salts and formaldehyde.

The use of these agents presents important questions for sanitarians to consider, foremost among which is the influence of the various pre-

*Presented at the meeting of the Section on Medicine of the New York Academy of Medicine, May 22, 1906.

servatives upon the health of those who consume the food. Much attention has been given to this matter. The diversity of opinions held by authorities at the present time bespeaks the difficulties and complexities of the problem and justifies further consideration of the subject.

There are several reasons for the lack of unanimity of opinions. The question is a broad one, in its final aspect being, "Is it expedient to permit the addition of preservatives to food and, if so, what preservatives to what food in what amounts, and shall such additions be indicated and how?" It requires little consideration to appreciate that before this question can be answered we must determine the bearing of the various component factors of which the question as a whole is made up. It will be seen that it calls for knowledge in several medical and biological specialties, as well as in economics and the rules of law. I believe that one reason why we lack definite knowledge upon the subject is because each one who has investigated the matter has done so chiefly from his special point of view, and, instead of limiting his conclusions to this particular point of view, has extended his conclusions to an answer to the question as a whole. It is a fact, that notwithstanding the public agitation that has been given this subject, there is so little definitely known in regard to it that few if any final conclusions can be based upon our present knowledge.

Another reason for diversity of opinion is the diversity of interests involved. The very fact that an inquiry is undertaken is evidence that there is a point of interest of the investigator. From the very nature of things, a government expert is an advocate of public safety and requires proof that a given substance or policy is not detrimental, while on the other hand the expert for the commercial interest is apt to be willing to maintain that a thing is harmless except in so far as it is known to be harmful. Independent experts lean to the one side or the other according as their affiliations incline them. Thus, the physician whose patients have commercial interests at stake, is apt to look at things from their point of view, while others, unconsciously desirous of appearing as public benefactors, augment and even, perhaps, imagine perils to the public health. We cannot get away from this influence of personal interest. Probably the best that we can do is to establish the various facts by competent scientific investigation, with proper verification, and submit all the facts for the reaching of a final conclusion to a body of men, not so large as to be incompetent, but yet so organized as to neutralize, so far as possible, individual interests.

It appears, then, that we cannot at this time attempt to answer the broad question of the expediency and limitations of the use of food preservatives. We may, however, contemplate how we shall approach the consideration of this important matter. An analysis of the situation jus-

tifies us in viewing the subject under three divisions:

1. Are food preservatives themselves directly injurious to health?

2. May their presence in food be indirectly a cause of injurious conditions in food?

3. In view of 1 and 2 to what extent is it expedient to permit the use of preservatives in food?

It is with the first of these only that we shall have to do at the present time.

If the degree of injury which preservatives in food produce is considerable, so that their action may properly be designated as poisonous, it is to be expected that such action would be recognized in the considerable experience in their extensive use which we have had in the recent past and are having at the present day. The fact that we have no certain knowledge of their injurious nature from such experience is itself evidence that, if injurious, the degree of injury is not such as to characterize these substances as poisonous. I believe we can at once conclude that, as ordinarily used in food, preservatives are not poisonous. In the sense in which we are accustomed to use this term. We may, then, concern ourselves with the inquiry whether they produce any minor degree of injury to health such as would lead us to properly characterize them as unwholesome. Does their use in food cause a change in structure or departure from the normal methods of action of its organs so as to constitute an injury to the human body? Since, as has already been stated, any conclusion in the matter is not reached as the result of experience in the use of these agents, we must derive our knowledge from the results of experiments.

It is well to satisfy ourselves that we have clearly in mind the subject of experimental investigation. Are preservatives in food injurious to health? is not to be confused with the inquiry. May substances used as preservatives in food be taken in amounts capable of producing injury to health? To this latter question we can reply without investigation that without a doubt they are so capable, as indeed, is everything else, even food itself. The fact, however, that, if taken in excess, food may be injurious does not establish that food is a true poison or is unwholesome, as is ordinarily meant.

The real question is whether preservatives may be regularly used in food without being directly injurious to health. In the experimental study of this question, we would naturally first determine the character of the injurious action of excessive amounts of the substance in question; next, determine the minimum amount capable of giving rise to any injurious action; and, finally, determine whether the amounts added to food are sufficiently removed for safety from the minimum injurious quantity to justify such use.

I do not purpose at this time to consider the evidence we possess of the injurious action of the individual preservatives, but hope to do so at another opportunity. I will state, however, that,

while in the case of certain preservatives, experimental results have been obtained that suggest lines for further inquiry, as yet we have so little conclusive evidence of the harmfulness of any commonly used preservative that it is wise to leave our minds open to future convictions, whatever policy conservatism in the use of preservatives may lead us to adopt during the period of growth and development of a real knowledge of this subject.

OBSERVATIONS REGARDING VARIOLA AND VACCINIA.*

By J. D. MARS, M.D.,

FLORIDA, N. Y.

ONE of the most valued discoveries in the history of medicine is that of vaccination by Jenner in 1796. Although this important method of inoculating against a dreaded disease was given to the profession more than a century ago, yet epidemics of smallpox are by no means rare even in our own enlightened country. A little more than a year ago, in the State of Michigan, more than seventy towns and villages were infected with variola at the same time. While many epidemics of smallpox do not appear as malignant as formerly, yet the fact that large outbreaks still do occur is sufficient evidence in itself to show that the disease is not under control to the extent that one might suppose it should be in view of our methods of preventing it.

It is not my purpose to add new facts to the literature on variola or vaccinia, but to recall some of the points which have been known for years, but which do not seem to be regarded with the significance which their importance demands. The cases reported below came under my observation while they were being treated in the Medical Clinic at the University of Michigan.

It is interesting to note how variola appears to have a selective action; to seek out those individuals on whom it wishes to exert its malignant influence. Certain persons seem to be especially predisposed to the virus, and these persons the disease attacks with great certainty. At times it selects those only indirectly exposed, while allowing others more directly exposed to escape. This is well illustrated in the history of one of the cases given below. The patient was a student who took her meals at a house which accommodated seventy-five others. At one of the tables three or four students appeared for meals with an eruption which was later diagnosed smallpox. The patient that came to the Clinic did not eat in the same room with those who had the eruption, and as far as she was aware, did not come in contact with them, certainly not in such close contact as did those who ate at the same table with the diseased persons, and who

escaped. The virus, however, selected this victim by a very indirect exposure, and she contracted the disease. Incidentally it may be pointed out that no systematic vaccination was carried out in this large boarding-house even after it was discovered that individuals with smallpox eruption had been coming there daily.

Not all persons exposed contract the disease, nor does exposure to a mild case give any promise that the individual exposed will have a mild attack, if he has it at all. Very often persons contract smallpox and can give no history of exposure whatever, as in two of the cases treated in the Clinic. They were both students, but members of different departments, and lived in different parts of the town. Both began this university work in the fall, neither had been out of town up to the time they came to the hospital, about seven weeks after college began. Neither of these cases had any knowledge whatever of exposure to smallpox.

Another point worthy of careful consideration is that of inefficient vaccination. Many persons think that because they have a scar resulting from vaccination they are immune to smallpox. This is a popular opinion among lay people, but no argument is needed among physicians to show that this is a false belief, and no opportunity should be lost to correct this popular idea. The scar may be only the result of an infection following vaccination and contain none of the characteristic pits of a successful vaccination, hence vaccination scars should be carefully examined, and unless they contain the true pits resulting from the vaccine vesicle they can be said to be of no value in protecting against smallpox. The size, that is, the area which a scar occupies, bears no relation to the degree of immunity obtained unless the scar is characteristic. The time for which a successful vaccination will confer immunity cannot be stated definitely, and it is always best for one who has been exposed to smallpox to be vaccinated immediately, even though he has been vaccinated a number of times with "no take," or even if he has a successful vaccination scar. Because one has been vaccinated once or a number of times with "no take" it does not follow that he is immune to smallpox. This with some other points will be brought out in the vaccination histories of four cases treated in the Clinic, and also in the vaccination histories of two nurses who cared for the patients.

CASE 1.—This patient was vaccinated three times within very recent years and each time there was "no take." He was then told that he was immune to smallpox. He contracted the disease, however, and passed through all its stages.

This is important, since it shows that even after repeated vaccinations with no result, a patient cannot be absolutely assured that he will not get smallpox. It should be noted, too, that "no take" does not prove immunity to vaccination. This is well illustrated in—

CASE 2.—This was a nurse who was sent to the Isolation Ward to care for the smallpox patients. This

* Material for this article was obtained while serving as intern in the Medical Clinic of the University of Michigan under Prof. George Dock, to whom I am greatly indebted for many valuable suggestions.

nurse was vaccinated for the first time about one and one-half years ago with negative results. Her second vaccination was about two weeks before going to the Isolation Ward and with "no take." A third trial was made the day before going on duty and again without success. A fourth attempt was made five days later. This time three incisions were made and a vaccine point used for each incision instead of two incisions with one point for both of them as in the former trials. The result was "two takes" out of the three incisions. One incision showed three typical umbilicated vesicles and another one. This shows the importance of persistent vaccination, especially when one runs the risk of exposure to the disease.

The method of vaccination followed in the clinic within recent years employs parallel incisions rather than scraping the epidermis, with the belief that there is less liability to secondary infection. The technic is as follows: The site selected for vaccination is thoroughly scrubbed with soap and warm water, then with alcohol and ether; bichlorid or any other strong disinfecting solution is not used, since all of it may not be washed off, and thus kill the vaccine virus; also there is increased irritation, making the chance for secondary infection greater. When the part is cleansed, two parallel incisions, each about an inch in length, and at least an inch apart, are made just through the epidermis, so that a small amount of serum exudes. The vaccine point is then rubbed gently but thoroughly into each of the two incisions, and after the serum has dried, the clothing is replaced without any protection to the inoculated parts.

A word may be said in regard to the points used. Commercial ivory points, put up in patent breakable glass tubes, were employed in all cases. These are clean and convenient, but the amount of virus in each tube varies greatly. In some there is a fair amount of material, while in others there is very little, and frequently that is dried to the tube which contains it, and cannot be scraped off, thus rendering the point practically inadequate for good vaccination. This may be a reason, perhaps, why there is "no take" after one vaccination and positive results after using another point only a few days later.

CASE 3.—The second nurse. The history shows nothing out of the ordinary. The nurse had been vaccinated five times in all; the first about ten years ago when she had a "good take." She has a scar with the characteristic pits and the four vaccinations within the past one and one-half years were entirely negative.

CASE 4.—This patient was first vaccinated four years ago. The first did not take and she was vaccinated two weeks later. As a result of the second trial she has two spots on her left arm, hardly perceptible, but showing very superficial pits with slightly thinned skin. There are no depressions and no true foveations. The patient was vaccinated with glycerinated lymph and at the time this was done she developed an eruption similar to the one for which she came to the clinic. At the time of her vaccination she was out of school two days, with a good deal of fever and pain in the eyes. She has not been vaccinated since, and apparently considered herself immune to smallpox. This imperfect vaccination shows the danger that one may run in this condition. A "poor take" such as in this case gives evidence of but a short immunity.

CASE 5.—This patient is the wife of Case No. 1.

She was vaccinated for the first time four years ago in Utah. From the description given, glycerinated vaccine was probably used. Only one trial was made and this was unsuccessful. She was vaccinated again on the same day her husband came to the Clinic. This did not take, and when she came for treatment two very faint lines, two c.m. and one c.m. long, respectively, were seen on the left arm. The smallpox eruption had disregarded the vaccination entirely, for in the upper end of the long incision a vesicle about three mm. in diameter with a very narrow areola and a pale thin summit was developing. As an experiment the patient was inoculated a little to the left of the incision with the serum from the vesicle, but the inoculated area soon healed and nothing came of it.

This case suggests how a "slow take" endangers in time of epidemic. It is an old theory that by vaccinating a person after he has been exposed to smallpox the vaccination will develop quickly and beat out the disease. For this, however, a quickly acting virus is needed, and one which acts as slowly as do many of those used at the present time cannot be relied upon to accomplish this result.

CASE 6.—This patient had never been vaccinated up to the time he came to the hospital. This needs no comment, but it excites our wonder as to why a person growing up to be even a university student had not availed himself of the opportunity to become protected against smallpox.

Passing to the disease itself as it affected the patients, it can be said that it was mild in all its stages. The incubation period could not be determined, of course, in the two cases who gave no history of exposure.

In the wife of one of the patients the first symptoms began fourteen days after the eruption appeared on the husband. In the fourth case the incubation stage could not be made out definitely, for this patient could give no more direct history of exposure than that she had taken her meals at the same house with those who were treated for smallpox out of the Clinic, and she could not tell how long this had been going on until she herself was taken.

In the invasion stage three of the four cases complained of frontal headache, and in two it was very severe. All had chills and fever of greater or less degree. One described it as chilly sensations followed by burning sensations. None of them vomited, and only two were nauseated. One noticed pain in the back, and in this case it extended into the legs, and was quite marked. This patient also complained of dizziness and pain in the stomach. Increased lachrymation was present in one case. The eruption appeared on one patient on the third day, on two on the fourth day, and on one on the fifth day. The papules were first noticed by one patient on the chin, another on the cheek, a third on the cheek and forehead, and the fourth on the face. The patients were not under observation early enough to determine whether an initial rash was present or not. The eruption was discrete in all cases. By the time the patients presented themselves at the Clinic, the majority of the lesions were in the vesicular stage. Not all of them were um-

bilicated, but many were, thus in each case being of aid in the diagnosis. In two of the cases typical umbilicated vesicles appeared in the larynx, causing moderate soreness and some huskiness of the voice. The secondary fever was not at all marked in any case. Two of the cases ran a normal temperature throughout the disease. One developed a secondary fever of 101° on the eleventh day, which became normal again on the fourteenth. Another had a temperature of 101.2° on the tenth day. This dropped to normal in two days, and continued so.

Treatment.—The treatment carried out in these cases was very simple. The room in which the patients were confined was kept light and cool, for increased heat made the patients uncomfortable and increased the itching. They were allowed to be dressed in light clothing and to be up and around when they felt like it. The lesions were sponged with bichlorid of mercury in 1-500 solution every four hours; the eyes were washed with saturated boracic acid solution, and a warm Dobelle gargle given for the lesions in the mouth and pharynx at the same intervals that the bichlorid was used. One of the patients developed a slight rash over small areas of the arms and legs; this was undoubtedly due to the continued use of the bichlorid, as it soon cleared up by discontinuing the sponging over these areas for a time, and later being careful to apply the solution only to the lesions, and not spreading it over the entire surface. No specific action is claimed for the bichlorid sponging, although a single lesion which developed on the index finger of one of the cases, after entering the Clinic, was constantly kept in gauze saturated with bichlorid, and not until the fourth day did the papule enlarge. It then increased in size, became painful, but dried without becoming vesicular or pustular. The sponging was cooling and agreeable to the patients, lessening the itching and certainly adding to the cleanliness. Full diet was given, and the bowels kept active by enemata, when needed. The patients slept with light bed covering, so as not to increase the itching, but when the latter was severe, a sleeping mixture of chloral and bromid was given. In these cases this had to be repeated but once, and in one case nothing was required at night for the pruritis. When the crusts dried, each patient was given a hot tub bath, to which plenty of green soap was added. This was repeated two or three times at intervals of twenty-four hours, till all the crusts were removed. Immediately before discharging him, each patient took a warm bichlorid bath, dressed in clean clothes which had just been brought in, and left the building without returning to the room in which he had been sleeping.

In giving this inadequate sketch it is only attempted to emphasize some of the more important known facts concerning variola and vaccinia, with the hope that they may impress some one at some time and may be of some slight service.

BIOLOGISTS IN PUBLIC SCHOOLS, AN AID TO MORALS AND PROSPERITY.*

By HELEN C. PUTNAM, M.D.,

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"TO LEARN WHAT IS TRUE IN ORDER TO DO WHAT IS RIGHT."
—Huxley.

THOSE who choose the profession of medicine for their life work have the privilege, as well as duty, of serving in two capacities, one as physicians, the other as citizens.

As citizens we share the general concern over present political inefficiency and corruption, corporation greed, and indifference to law. We understand that all these defects rest finally with the individuals composing society; with those active in control, and not less with the men—and even women handicapped as they are without the ballot—who silently acquiesce. We understand that if every child were trained along normal lines, the adult's love of power and love of money would be modified by other motives and exercised after other fashions. *Vox populi* would accord more often with *vox Dei* than with the voice of the "boss." The extremes of wealth and poverty would not be so great nor so frequent.

As physicians we are just now concerned over the amount of preventable illness, preventable abnormalities and degeneracies. We know, as physicians, how essential are normal physiologic processes to material success and to morals.

During recent years a few students, whose numbers are growing rapidly, have impressed the fact that we are concealing hundreds of thousands of foci of disease, all together equal to or exceeding those reported to health officers and properly quarantined for the protection of the healthy. Beyond possibility of dispute, ignorance of the prevalence of these contagions is permitting them to honeycomb our commonwealth as they have older civilizations. They are undermining American homes, lowering health and mentality, while laying on all citizens a burden of taxation to support our increasing institutional population of delinquents, degenerates, and defectives.

Here again we trace the trouble to the individual. If each individual had the available knowledge and were prepared for life along normal lines, ill health would be much less, criminal abortions would practically cease, and these "social diseases" with their sequelae would—like smallpox, diphtheria and soon undoubtedly tuberculosis—greatly decrease. Finally, public opinion would more nearly accord with natural laws. It would aid individual integrity to a not less degree than at present many of our popular standards hinder it.

Morality is often defined as conformity to natural laws tending to the well-being of the

* An address given by invitation of The Lehigh Valley Medical Association at the public evening session of its twenty-sixth annual meeting, Paxinosa Inn, Easton, Pennsylvania, July 11, 1906.

race. Whether this is or is not the whole truth as to moral laws, it is without doubt a large part of the truth. However great one's will to do right, one must also know what is right. Since the duty elected by physicians is the application of the laws of science for the good of the individual and society, we can but ask ourselves—being loyal Americans—what we, using our special professional intelligence, can do toward guiding the nation from these perils, greed and disease, each a manifestation of individual lack of intelligence; how we can add to the popular knowledge of natural laws, to aid in establishing good and preventing evil. While we cannot solve the whole problem, we have an insistent duty to do our full share. We are responsible, too, for some of the wrongs that exist.

The subject of my address indicates one important step we should advocate—perhaps the most fundamental of all—giving children teachers broadly trained in the study of physical life itself. I do not ask for biology. We already have too many names without the substance. Let us formulate a standard for a teaching biologist and use every influence to have such appointed.

Physicians can appreciate that the mental and temperamental qualities making a good executive and teacher of the three R's are rarely combined with the investigating and progressive spirit of the naturalist, even if time were sufficient to acquire the necessary knowledge in both such different fields. One teaches by authority, the other by original observation. Physicians, too, can appreciate the value to children in these impressionable years of trained instructors *well* informed on our physical basis of mental and social existence. True, biologists will cost more than \$600 a year, the ordinary teacher's salary.* They will cost \$1,500, \$1,800, \$2,000; but I hope to convince you that if we insist on the *best* they will save to the nation in money alone several times more than they cost.

Within the past year I spent two months visiting public schools in nineteen cities in search of the teaching of physiology and hygiene. I found eight biologists. Their work and the absorbed interest of their pupils are most suggestive.

The biologic branches are botany, zoology and physiology, each carrying along at the same time a little necessary elementary instruction in physics, chemistry, local geography, hygiene and sanitation. "Nature study" is a better name, meaning a general knowledge—but scientific as far as it goes—of the world he lives in and of himself given the pupil by one who is broadly as well as minutely prepared, instead of by one with a superficial smattering. I should like to give you some suggestions I picked up of the economic value of biologists' teaching nature study to children.

Two biologists with their pupils were studying

household insect pests. A few general teachers were doing it but in a very limited way.

Flies were found to be much more interesting and much more injurious than they had known. With hints from the teacher they collected eggs, watched them hatch into larvæ, saw the fly come out of the pupa case. They mounted between plates of glass the egg, larvæ, puparium, male and female flies. They learn through this work the life story of the fly; that it lays its eggs in manure heaps and dead animal matter; learn how numerous they are, what flies live on, how they carry filth and disease from sputum and other animal discharges to the next object they light on, which may be one's face or food. The children almost of their own initiative start a crusade against uncovered manure heaps, foul garbage pails and other common uncleanness. They learn to believe in screens and covered food supplies. They learn, too, nature's method of killing these filth distributors by birds and toads.

The life story of the mosquito they found still more fascinating from the little "rafts" of 180 eggs, found in a waste water tub, through the stages of "wrigglers" and larvæ to adults—a period of 15 days for a new generation to form. They figured out this problem: if one mosquito lays 180 eggs which in 15 days hatch into mosquitoes one-half of which are female, and every female hatched does the same, how many mosquitoes shall we have in 45 days? That one insect may be responsible for some millions of others within two months causes the child to take special interest in seeing what becomes of a cupful of wrigglers poured into the aquarium where a few little fish are kept; but still more interest in the results of a few drops of kerosene on an aquarium of wrigglers.

The children organized committees, each for its own neighborhood, hunted out stagnant water and gave the kerosene treatment with zeal. Their public spirit was encouraged by keeping records of this home work. The anopheles was searched for and found; and flies, mosquitoes, bedbugs, fleas, rats and possibly other animals *as carriers of germ and parasitic diseases* were discussed.

After similar practical methods the life stories and natural enemies of other household vermin were found out: roaches, fleas, bedbugs, buffalo bugs, moths, meal worms. They tried to figure the loss from damage to clothes and food, and to estimate the cost of extra labor.

Collecting butterflies and wild flowers for study in schools has threatened in more than one locality to destroy beautiful and desirable species. But the collection of these household pests is a good riddance, while the knowledge gained is equally scientific, and saves health, labor and property. Many parents see a profit in this kind of nature study.

Some of these biologists studied *insects destructive of vegetable life*. It is estimated that nearly *one billion* dollars annually are lost by these pests—they halve the producers' crops. Add to

* I am told that the average of teachers' salaries is less than \$300 yearly!

this the fungous diseases, the pernicious San José scale, a most serious danger to fruit crops, and a score of less prevalent nuisances, and it is evident that popular information in these lines alone would return the cost of instruction many times over.

We have in New England just now a serious scourge, the gypsy and brown-tailed moths that strip whole sections of foliage in a few days, shade trees, parks and woodlands. Approximately three million dollars have been expended to exterminate them, but just before the end was attained political inefficiency, due to popular and individual ignorance, stopped the appropriation; and now no one can estimate what it will cost us, for this pest has spread from a little neighborhood in eastern Massachusetts, where it was hoped to confine it, through Rhode Island into Connecticut, and yesterday's papers say that it threatens the eastern border of New York. The study of the life stories of gypsy and brown-tailed moths has been taken up in a few schools. They are highly interesting. The children are forming field clubs and it is an honorable achievement to bring in the largest number of cocoons at the morning report.

Knowledge that birds are the best destroyers of these insect pests promises to be more efficient than Audubon societies and milliners' or game laws in protecting our wild birds. Some children gave up pet cats, and the general sentiment concerning cats has been much modified since they learned that wild and tame cats kill an average of fifty nestlings each, yearly. Angora cats as the source of fleas in houses were discussed by one class. I have personally known the houses of a whole city neighborhood literally swarming summer after summer with fleas whose eggs were sprinkled around from the long hair of Angoras kept by one family. When the family moved away the nuisance ceased. If those children had studied the life stories of fleas under a biologist, much discomfort and labor would have been saved, for few neighbors intend to breed nuisances.

Professor Shaler, in his "Domesticated Animals," says that since the turkey was taken to Europe soon after the discovery of America no other animal has been domesticated. Dr. Hodge, of Clark University, thinks it time, after 400 years, to extend our conquest of nature by cultivating the common toad. It is harmless, he argues, will live for years in the same garden, troubling no one for care or food, and snaps up every insect within reach. A few toads will keep a garden free from slugs, perhaps our greatest "discourager" of gardening.

Dr. Hodge secured the co-operation of Worcester children in beginning the attempt by a prize of \$10 for the best report *at first hand* on "*The value of the common toad.*" The immediate practical result was that the toads were no longer molested in a pond where before he had counted hundreds dead or mutilated. The prize was more

efficient than a law preventing cruelty to animals. Very much of children's and of adults' interest in living things, which has been expressed by the primitive instinct to kill and to torment, has been modified by acquaintance with their life stories into hunting with the camera or opera glass.

Hast thou named all the birds without a gun?
Loved the wood-rose and left it on its stalk?

Some biologists studied the life stories of *plants of economic value as foods*. Time does not permit me to more than allude to the great future for the business of cultivating new plant foods, a few of which were being studied. We have in American markets only about 20 kinds of vegetables. They are perhaps 2 per cent. of those that might be grown. Approximately 1,000 edible plants are known.

Some studied plants yielding oils and dyes, or of use for fabrics. Children learned to recognize the poisonous plants in their locality, both for self-protection and to assist in their extermination.

The life stories of trees—seed, sapling, monarch, their friends and enemies—led to elementary ideas about forestry, and the influence of trees on soil, water supply, climate, and the course of civilization, as well as to appreciation of their beauty in the landscape. The child was encouraged to plant a peach stone and raise a tree.

Knowledge of economic worth grew with this teaching, was carried to homes and often became immediately useful; also not less valuable intelligence of other kinds through care of school gardens and home gardens, while searching fields and woods, brooks and pools, at sunrise or in late afternoon hours when birds sing most, after rains, by lantern light, in early spring, in summer, autumn and even winter. This open air exercise merits not less esteem than modern athletics. It cannot all be done in very large cities, yet household insects, backyards and window boxes, aquaria and vivaria, shade trees and parks, with occasional trips to the suburbs, are utilized to good purpose.

Such interests in outdoor life and the immediate affairs of living can but invite to the country and to ownership of little homes, or to beautifying them whether room, tenement, cottage or mansion. It can but make popular sentiment for parks and playgrounds, clean streets and deliverance from many of our common nuisances. With the laborer's day shortening, it is a problem worth serious consideration how public education can guide the free hours. Work is a conservator of morals. New occupations that are wholesome must be made to rival temptations to waste time and health.

To take a broader outlook, such teaching can but aid our vast agricultural and other productive industries through the stimulating interest, reflected in the current press and elsewhere, in intelligent prevention of destructive agencies, and further development of the natural resources

around us. Our rank and stability as a world power rests upon these industries.

One pressing problem is solved by these biologists: how schools can rightly teach children the origin of life—which few parents undertake until too late, which many cannot teach rightly, which many never teach at all, neglecting this one of the two vital concerns of living, with so many tragic results to the individual and to society.

In the study already outlined pupils learned that all life comes from a seed or egg fertilized by some other; they watched the sprouting and hatching; the early protection and feeding by parent plants and animals. Details of the fertilization of plants by insects—as fascinating to children as to scientists—of cross-pollination, self-pollination and of artificially modifying species were studied by actual experiments, while problems of heredity, environment and new generations were worked out in the life stories.

One biologist traced the evolution of the circulatory system from one-celled animals up to mammals, and of the brain and nervous system, the respiratory, reproductive and digestive systems. These boys and girls were from 13 to 16 years old, children of farmers, machinists, clerks, laborers, a minister, Swedish parents, Scotch and others. Each used a Bausch and Lomb students' microscope. They collected their own specimens, drew what they saw and talked it over, kept careful note-books, and wrote frequent reports summing up all they had learned on each topic. A few weeks ago the teacher sent me their papers, just as they were written, on "Reproduction in Animals," many of them illustrated. Each child's work was individual. There was no copying or "parrot" work. He drew and described what he himself saw.*

* A detailed account with reproductions of papers and drawings is published in the *Bulletin of the American Academy of Medicine*, April, 1906. "Report of the Committee to Investigate the Teaching of Hygiene in Public Schools. Second Section: Studies of the Present Teaching of Hygiene through 'Domestic Science' and 'Nature Study.'"

As this edition of the *Bulletin* is exhausted, reprints of this edition can be had by addressing the Office of the *Bulletin*, 52 North Fourth Street, Easton, Pa. Price, 20 cents.

They saw the amœba divide into two amœbæ. They saw other unicellular animals fuse in one, and then divide; in the many-celled volvox they saw how two kinds of cells unite, grow into a new volvox and escape from the mouth of the parent. They saw the "budding" of the hydra and the bud, cast off, becoming a new hydra; they studied fresh water sponges and multiplication by egg and sperm cells. Through other types, several illustrating external fertilization, they traced the evolution of sex up to starfish, and to worms, where they studied the common flat-worm hemaphrodite with self-fertilization; and the interesting earthworm hemaphrodite with cross-fertilization; and parasitic tapeworm and trichina; then the vinegar eel, viviparous. Next they had the fresh water clam, of the mollusks where the evolution of separate male and female individuals becomes established, higher forms but rarely reverting to the lower. Next under ar-

thropoda, with brood pouches for fertilized eggs, they studied the life stories of cray-fish, spiders, butterflies, grasshoppers, ants, bees, flies, etc. Lastly, among vertebrates, they studied fish, frogs, snakes, pigeons and rabbits.

Of all this wonderful evolution either of reproductive system, or of digestive, circulatory or other systems, they learned, it is true, only the simplest outlines, but *correct* and clear as far as they went. They were as intent over the study as over a game, and begged for the privilege of working overtime and staying after school.

Finally they were given a talk on the sacredness of the family and importance of right living while young. "Social diseases," their injury to little children and to so many hundreds of thousands of our best women and men (their immoral associations being merely mentioned), the duty of preventing these contagions as we do smallpox or diphtheria, as we are beginning to prevent tuberculosis, were touched on in the same scientific spirit as the study of insect pests. All was received in that spirit. Parents at home were appreciative. This was so because *this valuable knowledge had come after nature's method, gentle progression day by day from simple truths to greater ones*. A child's clear mind knows no embarrassments until the clouds in some older one throw these shadows there.

I was struck by another feature of the papers. They were so far beyond the usual product at thirteen to sixteen years, in choice of words and logical thought (even in spelling and punctuation), that it was impossible to believe them original until the answers to my questions proved my doubts wrong. I explain this superior English by the facts that throughout the year their frequent written studies had been individually discussed with the instructor; and that her scholarship was so fine that the pupils reflected her excellent English and mental habits as less fortunate ones reflect the ordinary teacher. It was partly due also to the peculiarly developmental nature of the subject.

The keenest impression brought out of my two months' school study is of the *plasticity of the childish intelligence*. What some schools were positive could not be accomplished others were doing apparently with ease. The mark of the superficial teacher was as distinctly impressed on her pupils as the uplift of the wise one on hers. It makes public schooling a more critical affair than politicians and voters treat it.

Another vivid impression I have brought away is this: *We are wronging children by prolonging their infancy too late*. We are giving them trivialities at the time when wise teaching should present larger realities and beauties in such simplicity as to make a lasting impress for good upon the childish imagination. For example, in nature study much that is merely interesting should be replaced by other study of life that, while equally interesting, is actually useful knowledge and progressively unfolds the true values

and significance of living. But it needs biologists to do it.

It is argued that knowledge does not always make right living, although ignorance is the commonest accompaniment of vice. Over 20 per cent. of prisoners can either not read or can barely do so. Not 5 per cent. have finished grammar school. It is logical to urge *defective* knowledge in the *educated criminal*.

I came across these odd maxims not long ago: "Darkness is nothing; merely absence of light." "Cold is nothing; merely absence of heat." "Evil is nothing; merely absence of good." While not wholly true that evil is nothing—"merely absence of good"—it is a fact nevertheless that successful reformatories concentrate on filling the vacant mind with good, and the awkward body with skill. One of the greatest surprises I experienced in visiting women's reformatories was that girls from New York's "Tenderloin" could not *dance* even tolerably. They were equally stupid in every direction.

At Bedford reformatory* they often allow young women as a reward to visit the neighboring estate of one of the trustees. One afternoon his charming daughter was strolling with them down a walk deeply bordered with Japanese lilies and irises of varied hues. They exclaimed over one flower after another, and under the tactful leading of the hostess they commented on the landscape, the view of hazy mountains, the cloud shadows, the sunlit lawns, groupings of shrubbery and graceful trees. One girl did not speak, until at the end of their walk she drew a long breath as if waking from sleep, and said: "I—had—no idea—the world—is—beautiful!" Born and reared in the slums of New York, with a little reading and ciphering in the schools, "she knew that streets are hard, and prison walls are hard, and life is hard," but had no idea the world is beautiful. Hers was a mind, a large part of which was empty. So are the others.

Bedford, our most progressing reformatory for women over eighteen, with all the skill that special teachers of industries and other useful learning are master of, is *filling empty brains*. Repentance is not asked for. They keep each girl so busy she has no time to recall old days. Their motto on the walls of the gymnasium, cottages, workrooms, and schoolrooms, is Saint Paul's personal philosophy for leading a good life. Saint Paul says he is not yet perfect, and he does not yet know all about how to become so, but one thing he is sure of, we should press on steadily—and this is the motto—"Forgetting the things that are behind and reaching forward to the things that are before:" simply another way of saying that at Bedford brain cells matured in evil must be left to atrophy from disuse, while undeveloped parts of the intelligence must be exercised in the arts of skilled cookery, housewifery and house decoration; in gardening, care of lawns and flowers and every other outdoor occupation the

accomplished superintendent can devise to steady nerves and bring health and skill. Even school-book work is made to serve the daily occupations of the women. Hygiene is taught by a physician, and music, drawing, dressmaking, millinery, weaving, by special teachers.

After several days' watching this busy, inspiring life I asked the superintendent, one of the very few who are constructively studying the criminal woman: "Dr. Davis, does this hold them when they go out?" Her work is hardly eight years old, and she paused before replying. "I will tell you of a girl I heard from to-day. She is like many others. She had spent years in the dens of New York. She came a physical wreck and a morphine fiend, as so many of them are. We cured her of that first, and built up her nerves with outdoor work. She gradually began to be interested and came to do better and better. But she said, and said to the end of her sentence, 'Yes, I enjoy it all. I am glad you've cured me of the opium habit. That was a mistake and I'll not go back to it. But when I'm out, I'll go back to the old life, for I have more money to spend in a week than you can earn in a month. I'll not drudge.'

"So," Dr. Davis continued, "we didn't put her out on probation before her time was up. But we taught her the very best we could. We cultivated her love for music and made it good music. Then at the end of her three years we found a place for her in a shop we knew, and a boarding place with a family we knew. They took her to church with them and she went to the church clubs. Her music and basket-weaving and embroidery made her friends, and she's been there two years. She hasn't gone back yet."

How do you explain it? The power of three years' habits in a life filled with interesting occupations had unconsciously changed her tastes with the awaking of new faculties, and the glamour of the old pleasures was lost, when she caught glimpses of them again. How many of us have found a book utterly stale that we remembered as fascinating? How many, after years of imperfect vision, have put on glasses to find that which had been admired was not worth it, and that was admirable which had not seemed so?

A noted educator, approving the splendid results at Tuskegee Industrial School for Colored People, said: "There is no other educational incline so steep. And I can *find no such good schooling for my own son.*"

Very many of our tramps and criminals are *nature's protest* against our too classic curriculum in public schools. From 80 to 90 per cent. of them are returned to useful citizenship when larger and more definite understanding of the value of life is given them in reform schools, through training in shop and studio, farm and garden, and bookwork adapted to the needs of living. If backward and incorrigible children in special schools can be brought up to grade

* New York State Reformatory for Women at Bedford, N. Y.

by selected teachers, why not employ better methods in the regular schools? In other words, it is a mistake to reserve so much of our special efforts to develop normal intelligence until it costs society and the individual so much extra. One hundred and twenty-five years ago Harvard, to have good work done, began to have special instructors in place of general teachers.

Our public schools were founded to fit the few elect for college and the ministry; later, the law. Colleges are not yet satisfactorily fitting for schools of medicine. They offer little inducement to public schools to study the things most necessary to existence, and hardly one and a quarter per cent. go from public schools to college.

The business of public schools should be to fit the great 99 per cent. for living. But with comparatively few exceptions, training in the real interests of life is left out, or given meagrely, or incorrectly, or unattractively. The general teacher is expected to drill children in obedience, and in rudimentary formal exercises with those tools of living, language, ciphering, memorizing. Yet we find that children, while investigating the life stories of important plants and animals and their enemies, have ample opportunity under skilled leaders, of training with those tools, at the same time learning to *see for themselves*, and to *report correctly*, to *reason from cause to effect*, and to *investigate for truth*. History of the world around them, and biography, too, appear on a larger scale than in mere memorizing dates and names, the dry bones of history.

Social questions of great present import become comprehensible to children when their surprised eyes see them illustrated in communities of ants and bees, and in the ways of other living things in the world around. These phenomena have set to thinking many wise statesmen, philosophers and religious teachers. Bismarck, the great chancellor, said: "If I had to choose the form in which I would prefer to live again, I am not so sure that I should not like to be an ant. You see that little insect lives under the conditions of perfect political organization. Every ant is obliged to work—to lead a useful life; every one is industrious. There is perfect subordination to the good of all, discipline and order. They are happy for they work." Lessons in co-operative social life are here that no other method could present to children with such realism.

The churches are very earnestly asking that children be taught religion, believing that here is where schools have failed in producing a higher citizenship. I cannot say as to that; although it is a fact that schools have omitted teaching religion, as they have omitted teaching life, meanwhile drilling in the tools of both, language, mathematics and memorizing.

But certainly investigating the truths of nature gives actual training in those qualities commended by religious teachers. The youth is not only practiced to report the truth, but *to take pains*

to find the truth. He must be gentle and kind with these little creatures; he must feed and tend them, and be patient in watching the processes of nature unfold day by day. This begets sympathy, pity, a sense of justice, a desire to defend the good and helpless from harm; foresight, thriftiness in attention to details; and appreciation of the value of physical integrity for himself and others. The study of these handiworks and laws of the Maker supplements as nothing else can the spiritual teaching the church would have; and, under wise guidance, leads to a reverence far deeper because of the marvelous wonders disclosed.

Boys and girls with eyes that *see* the world they live in, and with an understanding of simplest first principles of life—parenthood and inheritance, environment and co-operation, the preservation of good and destruction of evil—will have, when they mature, other things of interest besides the making of money; will understand the higher values of other attainments than commercial power; will enjoy helping by co-operation more than destroying by competition; will find greater satisfaction in developing natural forces for bettering the whole community than in extorting tolls for their own aggrandizement.

The twentieth century opens with three giant powers contesting for mastery: destructive lawlessness both among the rich and among the poor; constructive intelligence; and the stupidity of ignorance.

The thought I commend to you sincerely is that in this hard struggle, it may be a cruel one, physicians—if true to their special mission—should insistently influence popular education to *centralize upon the realities* of this world teeming with life, as an essential for higher citizenship and universal well-being; and the first step to take is to *supply a lack conspicuously apparent in schools—the trained student and teacher of the phenomena of life.*

A DEFINITION OF THE PRACTICE OF MEDICINE.

In two respects the medical profession deserves the grateful recognition and regard of all other callings in modern life. We have always insisted that the practice of medicine is a profession and not a trade. Trade is occupation for a livelihood: profession is occupation for service of the world. Trade is occupation for joy in the result; profession is occupation for joy in the process. Trade is occupation where anybody may enter; profession is occupation where only those who are prepared may enter. Trade is occupation taken up temporarily, until something better offers; profession is occupation with which one is identified for life. Trade makes one the rival of every other trade; profession makes one the co-operator with all his colleagues. Trade knows only the ethics of success; profession is bound by lasting ties of sacred honor.—PRESIDENT FAUNCE of Brown University.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By JAMES J. WALSH, M.D., Ph.D.,

NEW YORK.

(Continued.)

PART II.

CHAPTER VII.

EARLY PRESIDENTIAL ADDRESSES.

The first presidential address delivered before the Medical Society of the State of New York, by Dr. Wm. McClelland, if there really was a formal annual address prepared for the second meeting, has not been preserved. The earliest annual address is that of Dr. Nicholas Romayne, the second President, at the Society's third meeting in February, 1809. It is possible that this was the first formal presidential address, and as such it deserves a place in the Society's history. The second and third addresses, delivered by Dr. Romayne, have also been deemed worthy of reprint, because they give an excellent idea of the development of the scope and usefulness of the Society as it appealed to men of intelligence and practical ability one hundred years ago. The second address serves to show how much Dr. Romayne himself had realized the Society's possibilities during his year's experience as its President. The third address has not been, so far as I know, hitherto reprinted from the early transactions, which are very rare and difficult to obtain.

ANNIVERSARY ADDRESS TO THE MEDICAL SOCIETY OF THE STATE.

(Delivered by Nicholas Romayne, the second Tuesday of
February, 1809.)

GENTLEMEN:

In obedience to the ordinances of this Society, it is my duty at this time to address you.

The statute "enacted on the 4th of April, 1806, to incorporate Medical Societies for the purpose of regulating the practice of Physic and Surgery," marks a new era in the progress of science in the State. The Legislature has evinced a confidence in the Medical Profession, that the powers with which it is invested will be exercised with moderation and justice, and that new efforts will be made to promote the knowledge of the healing art and to extend its usefulness.

The history of all the learned professions proves that none of them becomes extensively useful or respectable, except under the immediate restraint of its own members. It is the well-informed Physician or Surgeon who must be the proper judge of the nature and extent of the medical profession and of the qualifications and fitness of those who can be entrusted to exercise the same with safety and advantage to the public. It is such characters alone who are capable of guarding the community against that propensity of the human mind to credulity and the marvelous, which subjects a portion of mankind to the empire of ignorant and enthusiastic pretenders.

People in general must always be imperfectly informed in that special body of useful knowledge which distinguishes any one of the learned professions. If men are most liable to error and deception in their opinions on medical subjects, it must be considered that the healing art embraces an extensive range of objects, and that to comprehend its principles requires a more sound appeal to the understanding and judgment than is commonly possessed.

Every community does honor to itself which treats with liberality men conspicuous in the learned professions for their genius and talents. It is only among an illiterate people that they become the subjects of jealousy and persecution. Where ignorance and prejudice abound there empiricism is maintained; and as the genial influence of science and human improvement prevail, quackery and every kind of imposition diminish.

The successful practice of rational medicine is so much connected with an improved state of society that physicians are interested in becoming the patrons of the arts and sciences and all the various branches of education. The success which has attended the exertions of medical men in these particulars, especially in France, England and Germany, is conspicuous, and has been honorably acknowledged by those nations.

You, gentlemen, in the early establishment of this Society, have manifested a laudable disposition to favor the progress of Science. The members of this institution have been directed by the by-laws to scientific researches. Literary premiums have been offered for the last year to invite investigations on the topography, geology and mineralogy of the different counties of this commonwealth and on the nature and cure of those malignant fevers which have often had such fatal effects on our people; nor have the good effects of these exertions of this Society been unpromising or unworthy of notice. Some communications have already been made, which, when the circumstances of this Society will permit them to be presented to the public, may not be found uninteresting to the legislator, the patriot, or the friend of science.

The Society will no doubt continue to encourage such extensive researches and investigations, as by their happy result may add to the growing importance of the State. In a new and interesting country the resources and riches of which are not yet unfolded, and the effects of its varied climate on the human constitution, as yet but imperfectly examined, ample rewards must attend the labors of ingenious men, if judiciously directed.

The science of medicine embraces the study and knowledge of nature and of those arts which are conducive to the subsistence, comfort and convenience of man. To fulfill our duties to the public the Society will consider it useful to examine the various vegetable productions of the State, to ascertain their medicinal powers or useful qualities, and to examine the fitness of the soil and climate for the reception of exotic plants. The territories of the United States, extending from the borders of Canada to the northern boundaries of Mexico, contain such variety of soil and climate, as seem calculated for the cultivation of all the medicinal plants and for the support of the different species of animals which inhabit the globe. It is not many years since indigo, rice and cotton plants were introduced into the Southern States, and the merino sheep, lately brought from Spain, promise to furnish clothing and afford wealth to our people. Nor will you be inattentive to encourage an examination of the mineral productions of the country as a source from which many medicines may be obtained, and as furnishing important requisites for public defence and national independence.

The waters of the ocean which wash the Southern District of the State are as strongly impregnated with sea salt as those in the Bay of Biscay, from which such quantities of salt are made in France. By establishing salt works on Long Island sufficient quantities of salt might be made to supply the United States.

The late worthy Mr. Solomon Simpson, of the City of New York, possessed valuable specimens of silver ores from the mines in the country of West Chester. In the middle district of the State there are several valuable mines. Besides those of iron, there are mines of manganese, and from the specimens which have been obtained, probably also of antimony.

The eastern district not only furnishes great quantities of iron ore, but the mineral springs with which it abounds prove the existence of subterraneous bodies which are constantly subject to chemical changes.

In the western district the valuable saline springs

evidence the probable existence of large bodies of solid salt at no great distance from the surface of the earth, as the waters seem equally impregnated with salt in dry or rainy seasons. Valuable iron ores and large bodies of plaster of paris or sulphate of lime are found in this district. The Sulphur Springs, near the Seneca Lake, show the probable existence of masses of that mineral substance in the bowels of the earth. In these waters the sulphur is kept in solution by a portion of compound salt and an extra portion of sulphuric acid which abounds in the depositions of the sulphur.

The coal mines, which exist in Louisburgh and Rhode Island, in Pennsylvania and Virginia, render it probable that there are connecting strata of coal through this commonwealth and which may be the subject of future discovery.

The ingenious and observing in the medical profession will not be inattentive to those facts which may contribute to elucidate the origin, nature and cure of those malignant fevers which have raged as a pestilence in many parts of the State, and for which experience has yet afforded no settled mode of cure.

While the subjects for medical and scientific research are thus extensive, it must afford you, gentlemen, much satisfaction to reflect on the progress of professional knowledge in the public seminaries of the United States. In the Colleges and Academies of the University of this State the number of students of Medicine exceed one hundred. In the University of Cambridge, in Massachusetts, the students pursuing medical studies are sixty. At Dartmouth College, in New Hampshire, the medical students are upwards of seventy, and in the University of Pennsylvania there are upwards of three hundred, besides the students in the Medical College of Maryland. Professor Silliman, of Yale College, has now a class of one hundred students attending his instructions on Chemistry.

Though the nations of Europe are engaged in sanguinary wars, yet at no period have her philosophers been more successful in brilliant discoveries. During the last year Mr. Davy, the professor of chemistry in the Royal Institution at London, pursuing a train of ingenious investigations, has made some of the most important discoveries of which modern times can boast, or which have been presented to the world since the days of Sir Isaac Newton.

This indefatigable inquirer found, by a series of experiments on the alkalies, potash and soda, that they were convertible by certain processes into metallic substances and which he called potassium and sodium, and of which these alkalies are the bases.

In examining the properties of the new metals, Mr. Davy experienced difficulties from their violent attraction for the constituent parts of almost all substances. If, however, covered with a thin transparent film of newly distilled naphtha, by which they are defended from the air, their physical qualities can be accurately examined. The metal of potash resembles mercury in its appearance. At the temperature of sixty degrees, it is less fluid than mercury; at one hundred degrees its fluidity is perfect; at fifty degrees it is malleable, and at thirty-two degrees it is crystallized.

The experiments of Mr. Davy have been repeated by the French philosophers with perfect success. Struck with the wonderful discoveries of this gentleman, the Emperor of France has awarded him a munificent present.

The discoveries of Mr. Davy have invited with success the attention of the Swedish chemists. The French and English chemists have also discovered metals of lime, barytes and of magnesia. They have also succeeded in proving the metallic nature of ammonia, and rendered it probable that the very air we breathe contains metal in a gaseous form.

Though these brilliant discoveries have been made by the philosophers of Europe, yet the lovers of science and the arts in the United States have not been inattentive to a variety of useful improvements and interesting discoveries. Such, indeed, is the progress of our people in agriculture, manufactures and the useful arts, as to invite the respect of the civilized world.

Dr. Romaine having been re-elected President of the State Society, delivered at the annual meeting in 1810 the following address:

GENTLEMEN:

In addressing you, at this Anniversary Meeting, as Members of the Medical Society of the State, I cannot be insensible to the respectful consideration you merit from the community. Settled in the different Counties of this extensive State, enjoying domestic comforts, and the advantages to be derived from the professional employments, you subject yourselves to inconveniences; you submit to the loss of private emoluments, to meet at this place, in social harmony and concert to exercise the duties confided to you by law; to superintend the regulation of the Medical Profession in the State, and to favor the diffusion of knowledge of the Healing Art.

Nor are these powers confided to you by the Legislature, of small importance to the public. If the usefulness of the Healing Art be admitted, the necessity of regulating that profession must be obvious. However difficult be the task to perform, yet it is to your wise and salutary regulations that the public must resort for advice against the frauds of ignorant and designing pretenders. It is by your regulations that the community must be guarded against professional injustice or hardships; and it is under your authority and by your example that the practitioners of the Healing Art in this State must, by the fulfilling their respective duties, and extending their usefulness, obtain the respect of the people, and thus an honorable consideration for our profession.

The Statute of the 4th of April, 1806, contains many wise provisions for the regulation of the practice of Physic and Surgery in the State, and for improving the condition and extending the usefulness of the Medical Profession. The practitioners of Medicine, lawfully exercising their profession, in the several Counties of this State, were by that law permitted to associate themselves in incorporated societies, and each of them were directed to elect a Member to form this central Society of the State, which is invested with a controlling power, by virtue of their Bye-Laws, over the transactions of the County Societies.

Wholesome regulations for these purposes must be self-evident. Mankind are not fitted suddenly, but by slow degrees, for the privileges of self-government; and the perfection of human regulations must be the result of experience and reflection. It is not twenty years since a law was first enacted to authorize the Magistrates to require qualifications from those whom they might privilege to practice Physic and Surgery throughout the State. The professional rights and immunities which are now invested in the incorporated Medical Societies will, no doubt, be exercised with circumspection, and in the progress of their transactions, will manifest those useful regulations which may be conclusive of the justice and policy of their establishment.

The duties, however, of this Society, when considered in all the various relations to the County Societies and community at large, are highly important. To execute them happily and with most advantage to the public, must require from you much circumspection and serious reflection; and it will be a subject for your consideration, whether this Society may not be usefully aided in their deliberations by the salutary counsels of some of those gentlemen who are most conspicuous in the State for their liberality and Medical knowledge.

Certainly, to give stability to this Society, and a requisite degree of independence, are essential to enable it to perform with justice, the respective duties expected by the public. And no doubt, whatever, for this purpose, may be suggested, by the wisdom of your deliberations, will be confirmed by Legislative authority.

In the progress of the proceedings of this Society, some attention has been paid to devise means for the prevention of those frauds which are often practiced on the community by ignorant and designing pretenders in Medicine. But this subject, when attentively con-

sidered, has always been involved in difficulties so extensive, that a remedy has hardly been found for the evil.

At a former session of the Legislature a law was passed, which debarred those who were not lawfully authorized to practice Physic and Surgery, from recovering, by legal process, any compensation for their services or remedies. Perhaps the provisions of this law went as far as Legislative power can be wisely extended. Whenever it has exceeded these bounds, the people have too commonly considered the power of the law as favouring of persecution, and instead of diminishing the mischiefs of quackery, they have been increased. The propensity to empiricism is, in some measure, connected with the constitution of the human mind, and induces men, when labouring under disease, to look to delusive sources for relief. Nor are persons capable of correctly judging for themselves, when tortured by pain, or distressed by affliction.

Though the evils of quackery seem so difficultly prevented by Legislative power, yet it is always remedied by the influence of public opinion, which becomes more imposing, as the state of society is cultivated and improved. When Practitioners of Medicine are diligent and judicious in the exercise of their professions, they manifest to men of any discernment, their superior skill and success in the cure of diseases; and will show, in a striking point of view, the difference between the well educated Physician and Surgeon, and the mere pretender to professional knowledge.

It may also be remarked that Physicians have not been sufficiently attentive to correcting certain opinions, which commonly prevail in communities, respecting Scientific Virtues and an Universal Remedy. With little trouble or address, it would be easy to satisfy the meanest capacities, that such is the difference of constitutions and habits among men, that what would be useful to one person, might be prejudicial to another; that what would be proper in one stage of a disease, might have deleterious effects in another; that the best and most valuable Medicines only prove remedies when they are administered properly, and under favourable circumstances; and that the knowledge of their successful application must be acquired from accurate conceptions of the philosophy of the human body, of the laws of health, and of morbid actions under disease. As the progress of Medical knowledge is more evident, our ideas of Specific Remedies, and of their fallacy become more correct; and it is fact, generally admitted, that the efficacy of all secret medicines, and their wonderful powers, are lost, as soon as the nature of the article be made public.

I shall not contend how secret medicines may operate on the mind, and influence the actions of the body, nor dwell on the incorrectness of our passions, and opinions, when not restrained by the power of reason.

In forming the ordinances of this Society, you have not been unmindful of the interest of the public, and your own professional dignity. You have prohibited the Medical Societies, in their corporate capacities, from fixing or regulating medical charges. Careful in supporting the respect of the Medical Profession, you have been attentive to regulate transactions which might injure it in public opinion.

While you have admitted the propriety of reasonable compensation, to be obtained for professional services, you have been sensible that no general regulations could be made to apply without manifest injustice. In the Medical, as well as in the other liberal professions, there must be difference of qualification, arising from age and experience, from different opportunities of education, and from genius and talents. Again, in the community we observe the various conditions of men, from the extremes of poverty and wretchedness, to that of wealth and luxury. In diseases, even of the same genus, we observe a difference in their nature in different persons; the one requiring serious attention and study, while the other imposes on the mind no difficulties. To exact much professional compensation from those in contracted circumstances, might be oppressive;

and not to require ample reward from those, who abound in wealth, would be injustice to the profession.

Medicine has long been considered one of the liberal professions, in which services were to be compensated by the munificence of the public, not by arbitrary exactions or legal demands, which, in the professions, are always odious to the people. It was by conduct truly liberal that, in early ages, the Medical character was often considered in the exalted point of view. In the Scriptures, the character of the Physician is often mentioned with respectful consideration. Hippocrates rejected all the wealth and honour which the Persian monarch had to bestow, and refused him his medical aid, because he was the enemy of his Countrymen, the Greeks. In Modern Europe, wherever the Medical Profession is respectable, professional services are liberally rewarded by voluntary compensations.

Hitherto, in the United States, the Medical profession has been placed on the footing of the mechanic arts; and the Courts of Justice have allowed compensations for Medical services upon the common principles of a *quantum meruit*. But it would be injustice in us to suppose, that our countrymen; who are so conspicuous for their liberality and enlightened views, who form now one of the richest communities in the civilized world, would be wanting in justice to the Medical profession, if the principles upon which compensation should be expected, were explained or generally understood. Changes from former habits can only be gradually effected; but that justice which the profession has a right to demand, it is confidently hoped, will in time be liberally yielded.

These expectations, may be the more readily cherished, from the favourable impression which the establishment of the Medical Societies, have made on the public mind. You cannot be uninformed of the satisfaction, that has been expressed, on different occasions, by numbers of our respectable citizens, that those to whom they confided the preservation of their health, should meet together in social harmony, to improve their profession, and extend the knowledge of the healing art.

To aid the progress of professional improvements, the regular publication of an abridgement of your Journals may have a useful effect. The liberality with which your proceedings have been hitherto conducted, cannot fail of giving importance to this Institution, and favouring the confidence of the public in your exertions.—[Passage of non-medical interest omitted.—ED.]

Every circumstance connected with the new Institution which contributes to the success of the establishment, merits attention. Though the minds of the people of this State are often agitated, from political zeal, and party considerations, and of which you, as members of the community, must more or less partake; yet it must be mentioned to the honour of this Society, that its members have always kept in view, that the Commonwealth of Science is of no party, that it cherishes a spirit of universal benevolence and improvement, and that it favours a liberal intercourse among men, that it indeed consecrates the fraternity of the great family of mankind. Thus when our countryman, Dr. Franklin, who disarmed the clouds of thunder and taught lightning to play harmless about our feet, the discovery was made for the benefit of all nations. So the great family of mankind are daily enjoying the improvements of our countryman, the Count Rumford, in domestic economy. And among foreign nations, can you view Jenner, who taught us to elude a loathsome, and often fatal, disease, the Small Pox, but as the friend of human kind? Can you consider Davy, whose brilliant discoveries and laborious researches does honour to the age in which we live, but as a brother, engaged in the fields of science, and exploring and unfolding the hidden combinations of matter. And are not the philosophers of France, Germany, and other parts of the world, whose labours and genius are engaged in extending human happiness and exalting our nature, part of yourselves? Are you not encouraged by their high example to diligent investigation and attentive research, to afford some addition to the stock of human knowl-

edge, and to view as unworthy of your notice, the bickerings of party, or the cries of public animosity?

While you must reflect, with much satisfaction, on the principles of justice and moderation by which you have been influenced in constituting this Society, as well as in the progress of your proceedings, the instructive example of your conduct, will teach your successors, that the temple of science was viewed by you, as that of peace, and that its tranquility could not be disturbed, without aiming at the destruction of the only remnant of the Divine origin, which bad passions, have left in the character, and conduct of men.

This Society has not only taken a lively interest, in whatever has tended to promote the diffusion of Medical knowledge, but has given excitement to those efforts, which are making to cherish education throughout the State; and it must afford the highest satisfaction to every member of this Institution, that the result has been so favourable to Science. The City of New-York, at present, affords a greater number of Students of Medicine than at any former period; and they manifest a zeal in their application, which promises the happiest success. The Trustees of the Academy at Fairfield, in the County of Herkimer, with generous sentiments toward the Medical Profession, have afforded their patronage to two Professors, who are engaged with zeal, and assiduity, in teaching some of the branches of medicine.

The Botanic Garden in the City of New-York, founded by Dr. Hosack, continues to be cherished by that indefatigable Botanist, and enriched by additions of domestic and exotic plants. In a short time there will be here collected, under one view, all those plants, which are used by the native Indians for Medicinal purposes. The usefulness of this establishment has been already the subject of your investigation, and you have generously recommended it to the patronage of the Honourable the Legislature.

Dr. Bruce, Professor of Mineralogy in the University of this State, is now engaged in publishing a mineralogical journal, which will be a periodical work, and promises to be of national importance. This publication will, no doubt, merit the patronage of this Society, and will induce the respective members to enrich it with the result of their investigations of the mineral kingdom. This journal will give a minute account of the mineral productions in the United States, and such discoveries as may be made by future investigation. It will highly deserve the notice of the public as being the first attempt in this State to encourage mineralogical researches.

During the last year, Dr. Mitchell, Professor of Natural History and Botany in the University of this State, delivered his courses of instruction on those branches of Science, with such success, as to attract the attention of many respectable citizens. These discourses were luminous in explaining the Natural History of the United States, and will, no doubt, contribute to diffuse a taste for this kind of knowledge, and encourage a spirit of investigation and research. The public have been favored with the outlines of Professor Mitchell's lectures, in the last number of the Medical Repository, and which will be read with much satisfaction by all classes of citizens.

The spirit of inquiry among the philosophers of Europe, which for some time past has been attended with so much success, is continued with unremitting attention. The brilliant discoveries of Professor Davy, respecting the Metallic nature of the Alkalies and the Earths, were laid before the public last year. About four months ago, this ingenious inquirer, stated at the New Institute in London, as the result of analysis and attentive research, that of the palpable substances, there were but two in nature in an elementary state, viz., Oxygen and Metal. The Earths and the Alkalies had been demonstrated to be Metallic Oxyds, either by exhibiting them alone, or in alloys with mercury or other metals. The inflammable bodies, Sulphur, Charcoal, Phosphorus, and the basis of the Boracic Acid had all been decomposed, and yielded metal. Accordingly, Hydrogen was conjectured to contain a Metallic basis, susceptible to eight degrees of Oxygenation, and

by difference of combination, to constitute inflammable matter, Alkali, Water, Oxyds, and even Acids.

The facts more lately developed tend to subvert the systems of Lavoisier, and the French Chemists, which for some years has claimed the assent of the Chemical world. The experiments made in confirmation of the French doctrines were so specious, that they were admitted by the celebrated Dr. Black, and other eminent men in Europe, while the American Philosophers, Mitchell and Priestley, continued to entertain doubts on the subject of those experiments, as not sufficiently conclusive, to subvert the doctrines, founded on the Inflammable Principle, or Phlogiston, of Becker and Stahl.

While your attention may be directed to whatever will, in the remotest degree, improve the Medical Profession, and extend its usefulness, there is one subject which seriously calls for your deliberations. A fever of a most malignant nature, appeared a year or two ago in Connecticut, in the winter season, and proved fatal to many respectable citizens. The reports respecting its nature, makes it a disease probably different from the Yellow Fever, or the common Putrid or Nervous Fevers of the Country. This Spotted Fever, as it is called, has appeared within a few months, in some parts of the County of Orange, and has in many instances proved fatal. It may appear in other parts of the State. In your present session you will doubtless set on foot such inquiry respecting the nature and successful treatment of this disease, as may merit the attention of the public. You have already offered premiums to promote Medical researches. Though the funds of the Society be limited, and arise from the voluntary contributions of its members, yet, on the present occasion it must redound to the honour of this Institution, to offer a Prize Medal, for the best Dissertation, on the nature and cure of this malignant Spotted Fever.

It is by such acts of disinterested benevolence and humanity, that the members of this Institution will obtain the respect of their Countrymen, and receive the high rewards which await the merciful and the just. It is by your generous efforts to arrest the tide of pestilence, and relieve the bed of sorrow, that you will merit the blessings of those who are ready to perish.

CLINICAL REPORT.

Tumor of the Breast Cured by the X-Ray.

By **FINLEY R. COOK, M.D.,**

NEW YORK.

The following is an interesting and unique case:

The patient, Mrs. T., age 27, mother of three children, came to me on October 12th, complaining of pain in the left breast. She stated that for more than a year past she had suffered more or less with pain in the breast, especially on using the left arm, that the pain had been severe for the past three weeks, that she had not been able to do any housework at all, and had not been able to sleep well. She complained also, that for a year past she had felt a tumor in the breast which seemed to her neither to have diminished nor to have increased in size.

Upon examination, a hard, nodular mass, the size of an English walnut, was found beneath the left nipple. It was freely movable under the skin and over the deeper parts; tender to pressure; no enlargement of glands.

She received one exposure to the X-rays. A medium-tube, three amperes current, a distance of six inches and time exposure of seven minutes.

Four days later she returned, saying that she had experienced no pain after treatment.

Upon examination, very carefully made, no trace of the mass could be made out. The tumor had entirely disappeared after one X-ray treatment.

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Editorials.

RECIPROCITY IN MEDICAL LICENSURE.

THE desire for uniformity of laws governing medical practice in all of the States, or for a general federal law to bring order out of the present inequalities, is not beyond the possibilities of hope. There is a strong feeling, however, that each State must work out its own salvation, and legislators are disinclined to interfere with the sovereign rights of States.

Dr. Albert Vander Veer, Regent, of New York, presents the subject of reciprocity in medical licensure as the present solution of the inequalities of the laws of the different States. (*New York Medical Journal*, October 13, 1906.)

After an examination of the requirements for the license to practice medicine in the various countries of the world, he expresses himself that to-day the New York statutory requirements for admission to the practice of medicine are equal to the highest required by any State or government in the world. The requirements in New Jersey, Michigan, and Ohio have also seemed high enough to warrant New York entering into a reciprocal agreement to recognize the medical license of these States. Such an agreement has been entered into during the past year. Reciprocity obtains between these States upon the basis of a license earned by examination. The candidate for the benefits of this law must show

credentials from the State Board of Medical Examiners which licensed him. The credentials must show that at the time of his application he is a reputable practitioner.

Dr. Vander Veer shows that the preliminary education required for admission to the medical schools must be the same in each State, and the certification of the education department of the State as to standards maintained by secondary schools will be accepted by the education department of other States. The effect of this agreement between licensing medical bodies will be to harmonize the requirements for admission to the other professions, thus bringing about reciprocal relations between the stronger States in the licensure in law, dentistry, pharmacy, veterinary medicine, etc.

The agreement between the States mentioned is undoubtedly the beginning of a movement in the direction of medical reciprocity which will spread from State to State until the State lines, so far as the legal right to enter into medical practice goes, shall be obliterated. It is fortunate that this movement has begun with the high standard of New York State as the index of requirements; and we are glad that our own regents have been instruments in inaugurating this important action.

SOME TRUTHS ABOUT SLEEP.

IN the popular as well as the professional mind there must be some mistakes on the subject of sleep, so many and so variant are the ideas. It used to be insisted that one should sleep a certain length of time, and if he did not sleep so long he should be made to. No less an authority than Benjamin Franklin laid down such rules. Now there is a growing belief that usually a person sleeps as long as he needs sleep—some more, some less. We are coming to the belief that soporific drugs have little place in medicine.

Norman Bridge has called attention to insomnia.* The horrors of insomnia are but slightly due to the want of sleep, and chiefly to the idea that to lie awake is a terribly nerve destroying thing. The victim of insomnia, he says, laments his infirmity and worries lest he may become a nervous wreck. This attitude of mind when he goes to bed, tends to keep him awake, for he is in a state of expectancy of insomnia; and what is worse, he is unhappy about

* *Jour. of the Amer. Med. Ass'n*, September 1, 1906.

it. If he would resolve that he does not wish to sleep, but would read, he would soon drop into normal unconsciousness.

Another error pointed out by this author is, that, rest for the body should be the main reason for retiring to bed. This is something over which one has control. Man should go to bed to give his body rest and relaxation; and the brain will put itself to sleep if it needs it. While the body is in relaxation it is not necessary that the brain should be unconscious in sleep. If the body is given its eight hours of regular rest, the brain may be left to take care of itself. If the insomniac is impressed with this fact, he will find that lying awake an hour or two while his body is at rest does not harm him. He will find his terror gone, he ceases to be an insomniac and becomes a philosopher. It is a common error for a man to put off his bedtime till late because he finds that he can not sleep till then, or to get up early in the morning for the very poor reason that he is awake. He has gone to bed on the wrong theory—thinking that sleep is all the bed is for. We are foolishly provoked or alarmed at lying awake in bed—as bad as children afraid of ghosts.

While Bridge has performed a service in pointing out and emphasizing these things, he also has called attention to certain causes of insomnia which may be mitigated. Insomnia may be aggravated by noises, poor beds, insufficient bed-clothing, so that the feet become cold, tea and coffee, overloaded stomach, overloaded colon, poorly ventilated bedroom—but soporific drugs, it is insisted, have little place in its treatment.

THE PURIN-FREE DIET.

THE purin bodies have attracted attention because of their relation to arterio-sclerosis and gout, and because of the demonstrable deleterious effect of the purins upon the general vitality. These compounds are closely associated with uric acid. They are derived principally from the nucleins ingested, although the endogenous formation of purins continues in a small and constant degree under a nuclein-free diet. The purin bases, or derivatives of purin, are xanthin, guanin, hypoxanthin, and adenin. These bodies are present in meats and in certain whole grains or seeds, such as oatmeal, whole wheat bread, peas, and in tea and coffee. The foods which are free from purins are milk, white

of egg, cheese, white bread, macaroni, potato, apple, banana, raisin, date, nuts.

A growing school of dietitians is developing, upon a sound scientific basis, the doctrine that a purin-free diet has great advantages both in health and in illness. It is shown that the mere freedom from purins in the diet, however, will not accomplish everything unless attention is paid to other important factors in digestion. It is insisted that with a purin-free diet the amount of food may be much smaller, the meals should be fewer, and the mastication should be slow and complete. Potts* advocates strongly simplicity in diet. He says that any attempt to graft the new method of feeding upon the old is fraught with disaster. This is the reason that many practitioners say that fruits must be avoided in febrile illness. If given with beef tea (which is simply a solution of salts and purin bases) and stimulants and medicines, it is true, fruit does more harm than good; but if the beef tea and alcoholics are discarded, and the medicines reduced to a minimum, and all nourishment taken in the form of milk or fruit juice the most surprising good results are obtained. The diet recommended in acute disease is simple. Uncooked milk, diluted with soda water, every two hours; milk with well-cooked, strained rice; and fresh juice of grapes or oranges, are the main reliance recommended. Pineapple juice, cooked apple, and banana from which the outer fibre has been scraped are of advantage. For general nourishment the white of egg may be added, beaten in milk or water with a little sugar. Egg lemonade, made by shaking together the white of an egg in a half pint of cold water, with the juice of half a lemon and sugar is a valuable combination. Such a dietary is purin-free and is wonderfully sustaining.

The foods of the highest nutritive value are nuts, macaroni, dates, raisins, cheese and unleavened bread. These are purin-free. It is shown that one can subsist and do much work on a small amount of such food if well masticated. Potts shows that the reason these things are not prized more highly is because they are commonly taken along with meats and other purin foods, and harm results. After a hearty meal it is a common thing for a person to eat enough nuts or raisins (the most highly concentrated nourishment) to make a good meal, and then discover that they do not agree with him. Chittenden

*Notes on Purin-Free Diet, *Lancet*, October 6, 1906.

has shown that a person can reduce the amount of his food by one-third or one-half, and do better work.

Potts calls attention to the fact that more than half the population of the world, including peoples in all climates, and the races of the finest physique, do not eat meat. He says that those men who are afraid of sacrificing their manhood by a departure from the beef and beer system may take comfort in the fact that the Romans when they conquered the world were vegetarians, as were also the majority of the Japanese at the period of their grandest achievements.

Not all fruits and vegetables are purin-free. Strawberries contain purin bodies. The vegetables are less valuable as articles of diet. Many vegetables contain but little nourishment; and others, such as peas, beans, spinach, asparagus and onions, contain purins. The purins, however, which are derived from vegetables, seem less harmful than those from meat, for the latter are always combined with a certain amount of leucomaines and products of decomposition, no matter how soon after the death of the animal the flesh is placed on ice.

It is doubtful if we soon become converted to a purin-free diet, but it is certain that there is a strong tendency towards minimizing the use of purin-rich foods.

Observations.

The universality of medicine is displayed in the development of bacteriology. Here is a department of human knowledge which belongs to botany, but who would think of turning to the botanist for information about the bacteria, the youngest of the known flora? It was a chemist, Pasteur, who suggested the science of bacteriology; and straightway from his hands it passed to the pathological anatomists of the science of medicine. Medicine has developed this most important and wonderful field of knowledge, which ramifies into nearly all of the other physical sciences. The best methods of studying the bacteria, their life history, their classification, the means of cultivating them artificially, of staining and differentiating them, of discovering their relations to animals in health and disease, have all been worked out in the medical laboratories. And finally, to medicine belongs the credit of studying and discovering their chemistry, the character of their excretions, and the measures for their destruction. Medicine evolved the science of bacteriology, and out of it developed the most important knowledge for the saving of

lives—the knowledge of immunity and anti-toxins.

Bacteriology has placed upon a scientific basis all that the old-fashioned common sense called cleanliness. It has explained the mysteries of polluted water. It has defined the dangers of dirt. It has elucidated the etiology of most of the human diseases. It has taken man one long step towards the solution of the problems of his life.



Medicine has not only enjoyed the education and pleasure of having brought this science to its perfection, but it has had the satisfaction of seeing it taken up by the chemist and the agriculturist, and turned to the most practical ends in their work. But we should never forget that the bacteriologists, the men who elaborated this subject into a science, have always been of the department of pathology of the science of medicine. Bacteriology grew up in the laboratories of the schools of medicine.

Botany lost a great opportunity. When it was revealed that the bacteria belonged to plant life along with the fungi, botany failed to step in and claim its own. If this ancient science had been half as industrious in studying the biology of plants as it has been in cataloging them, it might have advanced in importance to a point equal to that of zoology. The botanist has failed to interest himself sufficiently in the fundamentals of his science. He has been a catalogist; he has sacrificed the microscope for the herbarium; he has not been so much interested in the life of plants, in the origin and fate of plants, as in their family trees. The botanist has been too much of a genealogist and too little of a biologist. He has interested himself too much in the names of things, and too little in the things themselves.

In times long past the doctor of medicine, in the interest of his peculiar therapeutics, was a botanist. Little did botany dream, when she let him in at the back door to dabble in her classified herbs and witnessed his interest grow less and less, that after a few centuries when apparently he had become most neglectful, he should boldly open the front door of her ancient castle and walk away with her fairest flower, which now for a score of years has adorned the gardens of the sons of Sol.



Bacteriology in twenty-five years has had given to it a vast amount of patient research, claiming the sole attention of more devoted men than have worked at botany in a hundred years. Most of these men are unknown to the world, but several hundred of them have contributed equally to the development of this science. Botany had her great lights, some of the greatest men that any science has known. They have

been but few, but they were all great men—Aristotle, Pliny, John Ray, Linnaeus and Asa Gray.

It is interesting to observe that three of these five botanists were physicians, and two of these physicians were the greatest scientists of their respective centuries. But the greatness of these men was not manifested alone in botany, they were naturalists and pioneers in the field of zoology as well. Had they been living at the time of the birth of bacteriology, it is doubtful if it ever would have departed from botany.

But the parting came. Bacteriology has grown towards humanity, and has become of infinite, practical, every-day usefulness to mankind. Botany is still the aloof, genteel, aesthetic science. For the bacteriologist the suffering and dying beckon on. For the botanist the flowers in the meadows nod their heads, the pine trees sing softly their lullabies, and the breezes of summer bear upon their wings the odors of the wayside vines.

Items.

THE SUCCESSFUL DEFENSE OF MEMBERS OF THE NEW YORK STATE MEDICAL SOCIETY IN SUITS FOR ALLEGED MALPRACTICE has been well illustrated in a verdict for the defense in a suit brought against Dr. A. C. Loper, of Greenport, N. Y. This action was to recover \$25,000 for alleged malpractice in the treatment of a complicated fracture of the elbow. The defendant is a member of the State Society, and was represented by Mr. James Taylor Lewis, the counsel of the Society. The case was vigorously prosecuted, and has attracted much attention. Since it has become known that members of the State Society are defended, free of cost, in these cases, actions of this sort are becoming less frequent, and are usually dropped as soon as it is discovered that the defendant has the Medical Society of the State of New York behind him and is involved in no expense for his defense.

THE MEDICAL LIBRARY OF THE LATE WILLARD PARKER, containing over 4,000 volumes, has been donated by his son, Dr. Willard Parker, of New York, to the Library of the Medical Society of the County of Kings.

COLON BACILLUS IN BUFFALO WATER.—The Commissioner of Health of Buffalo has announced the finding of the colon bacillus in the city's drinking water. He urges that all water used for drinking purposes be boiled, and makes a plea for a filtration plant.

TRACHOMA IN THE NEW YORK PUBLIC SCHOOLS.—The number of cases of trachoma in the public schools of New York City is steadily increasing. It is stated that one-quarter of all the school children in Brooklyn are afflicted with the disease. The number of cases is so large that the hospitals are unable to meet the demands of the situation, and, although the Health Department is doing all that is possible, the situa-

tion will soon be a serious one unless new hospitals are promptly established for the proper treatment of these cases.

THE CITY OF ROCHESTER, NEW YORK, has shown what can be done to preserve children under five years of age. Dr. George W. Goler, the Health Officer whose labors in the interest of clean milk for that municipality have attracted wide attention, presents the following significant figures involving children of this age: Total deaths, 1888-1896, were 6,629; total deaths, 1897-1905, were 4,403; total deaths, July and August, during first period, 2,005; total deaths, July and August, during second period, 1,000.

THE SUPPRESSION OF ILLEGAL PRACTICE IN ORANGE COUNTY.—Through the efforts of Dr. L. R. Pierce, of the Orange County Medical Society, a medical pretender who has practiced unmolested for many years, and who has even signed a certificate of death, has been indicted and placed in jail in Newburgh for practicing medicine without license or qualifications. This offender belongs to the cult of charlatans who give medicine and electricity, but evade the law by not charging for the medicine.

NEW YORK SKIN AND CANCER HOSPITAL.—The governors of the New York Skin and Cancer Hospital, Second Avenue, corner 19th Street, announce that Dr. L. Duncan Bulkley will give an eighth series of "Clinical Lectures on Diseases of the Skin" in the out-patient hall of the hospital on Wednesday afternoons, commencing November 7, 1906, at 4.15 o'clock. The course will be free to the medical profession.

THE MANHATTAN EYE, EAR AND THROAT HOSPITAL opened its new hospital building at Sixty-fourth Street, between Second and Third Avenues, New York, and held an opening reception on October 13.

HARVEY SOCIETY LECTURES.—The second annual course of lectures under the auspices of the Harvey Society of New York City will be given in the lecture hall of the Academy of Medicine on Saturday evenings at 8.30. The first-lecture will be given on October 20. The lectures will be open to the public and all who may be interested are invited to attend.

The following program has been arranged: Oct. 20: Prof. A. E. Wright, London, "Therapeutic Inoculation with Bacterial Vaccines." Nov. 3: Prof. C. A. Herter, New York, "The Common Bacterial Infections of the Digestive Tract and the Intoxications Arising from Them." Nov. 17: Prof. W. T. Porter, Boston, "Vasomotor Reflexes." Dec. 1: Prof. T. G. Adami, Montreal, "The Myelins and Potential Fluid Crystals of the Body." Dec. 15: Dr. S. T. Meltzer, New York, "The Factors of Safety in Animal Structure and Animal Economy." Jan. 12: Prof. F. G. Benedict, Middletown, Conn., "Metabolism During Fasting." Jan. 26: Prof. E. B. Wilson, New York, "Recent Studies of Heredity." Feb. 9: Prof. G. S. Huntington,

New York, "The Genetic Interpretation of Variations in the Genitourinary Tract." Feb. 23: Prof. W. T. Councilman, Boston, "The Relation of Certain Leucocytes to Infectious Diseases." March 9: Prof. Friedrich Müller, Munich, "Neuroses of the Heart."

SIXTH ANNUAL CONFERENCE OF SANITARY OFFICERS OF THE STATE OF NEW YORK was held at Syracuse on October 24, 25 and 26. This meeting was addressed by a number of prominent men. Among the subjects discussed were meat inspection, adulteration of foods, the sanatorium treatment of tuberculosis, and water purification. Among the notable contributions were papers by J. L. Heffron on personal hygiene in the prevention of tuberculosis, by H. D. Pease on fumigation for the destruction of insects, by S. A. Knopf on the home treatment of tuberculosis, and by Herman M. Biggs on municipal hospitals for the tuberculous.

DR. HORATIO C. WOOD, on account of ill health, has resigned from the chair of materia medica, pharmacology and therapeutics in the University of Pennsylvania. He has held the chair for forty years. His resignation was accepted, and he was unanimously elected emeritus professor.

VACCINATION IN PENNSYLVANIA.—In Pennsylvania vaccination is not compulsory. The Attorney-General recently declared that parents cannot be compelled to have their children vaccinated. The teachers in the public school must not admit unvaccinated children, but when these children are refused admission to the school, their parents cannot be fined for keeping them out of school.

TYPHOID FEVER IN WASHINGTON, D. C.—In Washington, D. C., there is an epidemic of typhoid fever. The state of affairs is rather surprising inasmuch as this epidemic occurs immediately after the completion of a new \$3,000,000 filtration plant, the purpose of which is to supply the city with unpolluted water. It is believed by Dr. McGruder that the infection is due to a contaminated milk supply, but the district health officer, Dr. Woodward, states that this is most improbable, as the entire supply of milk shipped to the District of Columbia is regularly and systematically inspected by officers of the Health Department. It is important to learn the source of the present epidemic.

THE CANTEEN QUESTION.—Lieutenant-General H. C. Corbin, U. S. A., in his annual report, published on September 13, emphasizes the dangers, both physical and moral, to the soldier who is forced to seek his enjoyment and recreation in the evil resorts which always abound in the vicinity of an army post. This is alone due to the fact that he is deprived of opportunity for social relaxation within the barracks. It is another evidence of the poor judgment of those through whose mistaken efforts the army canteen was abolished.

BRIGADIER GENERAL ROBERT M. O'REILLY, Surgeon General of the U. S. Army for the

past four years, has been reappointed to the same office by order of President Roosevelt.

A NEW HOSPITAL IN WATERBURY, CONN.—A site has been purchased for a new hospital in Waterbury, Conn. The sum of \$31,000 has been raised for the erection of this institution, which will be under the management of the Roman Catholic Church.

TYPHUS FEVER ON A TRANSATLANTIC STEAMER.—A steerage passenger on the steamship "Cretic" died of typhus fever on a recent voyage toward America. The ship was held at quarantine; all passengers were thoroughly examined and those in the steerage were detained.

PRIZES FOR NURSING MOTHERS.—The City of Leipsic, Germany, has decided to give prizes in money to mothers who nurse their infants. These prizes are intended to compensate for any pecuniary loss which may be sustained because of the time spent in nursing their children, to encourage mothers in the moral obligation to the child, and to decrease the morbidity among infants.

FOR PUBLIC EMERGENCIES.—A number of cabinets containing dressing materials and other appliances which may be of use in emergency, have been placed in prominent places in the streets of Leicester, England. These cabinets are locked, but in case of emergency they can be opened by breaking the glass door in the same way that some fire alarm boxes are opened. The installation of such a system in all large cities would be for the public good.

THE BIRTH RATE IN PARIS steadily continues to decrease. There have been fewer children born this year than last in every district of the city save two, and this includes one district in which the population is increasing at the rate of three thousand every year.

KILLED BY ANIMALS IN INDIA.—Statistics, published in India, show that in the year 1904, there were killed in that country by snakes and wild beasts 24,034 persons; 21,880 by snake bites and 1,195 by tigers and leopards; the remainder by other wild animals.

THE NEW AMERICAN HOSPITAL IN CONSTANTINOPLE, recently established by Dr. Carrington of New York City, was burned to the ground on the evening of its opening. The loss was \$10,000, partly covered by insurance. It is proposed by the directors to rebuild at once.

Medical Society of the State of New York.

The Committee on Scientific Work announces that members, desiring to present papers at the next meeting of the State Society, which will be held the last week in January, 1907, are requested to communicate with the Chairman, Dr. L. H. Neuman, 194 State Street, Albany, N. Y.

Progress of Medicine.

PRACTICE OF MEDICINE.

EDITED BY

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DE LANCEY ROCHESTER, M.D.,

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University of Buffalo;

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THE SALT-FREE DIET IN EPILEPSY.

Italian physicians have made a study of the influence of the salt-free diet and the reduced salt diet in the treatment of epilepsy. Their conclusions, quoted in the *Practitioner*, are to the effect that the salt-free diet notably diminishes in all epileptics the number and violence of attacks; in some cases they were kept away for months. The reduced salt diet only diminishes the number of fits. To reduce their violence and number to any extent it was only necessary to give, at the same time, small doses of bromide. In the milder forms of epilepsy the salt-free diet is sufficient to diminish and even to suppress the disease for a long time, but in the more severe forms bromides must be given as well. A salt-free diet by itself or in combination with bromides, even when kept up for some years, does not produce on the patients any disturbance of the general condition, either of body or mind.—*Revue de Therapeutique Medico-Chirurgicale*, June 15, 1906.

THE IMMUNIZATION TREATMENT OF TUBERCULOSIS.

In Marburg on August 14, Prof. Von Behring delivered to a party of eminent French physicians an address on the immunizing treatment as applied to tuberculosis in which, though he does not describe his new treatment, he does, however, indicate the scientific theory upon which it is founded. He enumerates the three methods of immunization. First is that by vaccination, in which inoculation is made by organisms, the virulence of which is attenuated. The second method is not carried out by the living virus, but by the toxin produced by the virus. It is upon this method that the tuberculin treatment of Koch is founded. The third manner of immunizing is serum-therapeutic immunization, such as is applied in the antitoxin treatment of diphtheria. The second method, which Behring calls "mithridatization" he distinguishes as "active immunization," and the serum-therapeutic method as "passive immunization." The serum-therapeutic method is shorter and less dangerous than "active immunization," but in treating tuberculosis at present there is little indication of success in this direction. Active immunization, Behring believes, must therefore necessarily be the preferable method of treatment for tuberculosis.

Behring's treatment is based upon the same method of immunization as that of Koch. He

has, however, succeeded in obtaining from the tubercle bacilli a toxin differing from Koch's tuberculin, and this he calls "tulase." Its preparation, which is very complicated, consists in treatment of the bacilli with chloral. Intravenous and subcutaneous injections, as well as introduction into the stomach of the tulase, produce at once, as Behring asserts, anti-tuberculous immunity and hypersensibility to Koch's tuberculin. Behring calls attention to the fact that it was four years after antidiphtheritic serum was discovered before the remedy was placed at the disposal of practitioners. It cannot yet be stated exactly when the new "mithridatic" remedy against tuberculosis will have been sufficiently tested clinically to give to practitioners.—*British Medical Journal*, Sept. 8, 1906.

NON-SUPPURATIVE MYOSITIS IN TYPHOID.

A case of non-purulent myositis accompanying typhoid fever is reported by Michalke, of Breslau. Purulent myositis in typhoid has been frequently observed, but the non-purulent type is indeed rare. This patient in the third week of the disease was seized with chills, the temperature suddenly increasing. The muscles of the left leg swelled considerably, and became very tender to touch or to move. This condition gradually subsided, to recur in almost a similar manner a week later in the other leg. With convalescence the condition entirely disappeared.—*Medizinsche Klinik*, Aug. 20, 1906.

ON THE CAUSES OF ARTERIAL HYPERTENSION.

Theories as to the causes of arterial hypertension are numerous, and several are generally regarded as quite attractive and reasonable. Whatever other influences there may be which cause persistent hypertension there seems no doubt in any mind but that kidney disease is most active as a causative agent. A recent article in *La Semaine Medicale*, by an eminent French authority, Dr. L. Ambard, takes an extreme view, and permanent hypertension, according to him, results almost without exception from renal causes. The admitted exceptions are diabetes and Graves' disease, but in the latter the state of the blood pressure is not constant. Hypertension of renal origin, he says, may be divided into reducible and irreducible forms. The first occurs in subacute and acute attacks of nephritis, and runs parallel with the amount of œdema and albuminuria. The irreducible form is met with in atrophic nephritis, and is only temporarily reducible by such means as bleeding or the production of acute œdema. He recognizes also a mixed type corresponding to a mixed condition of the renal lesion. In the reducible form of hypertension the removal of the chlorides from the diet is only followed by a slow fall in the blood pressure proceeding proportionately to the disappearance of the œdema and albuminuria, while in the mixed form it never reduces the pressure to the normal level, and,

finally, in the atrophic form it is absolutely without influence. The high arterial tension in so far as it is caused by the contracted kidney, in the opinion of Dr. Ambard, results from the resistance which the circulation meets with in the kidneys. He attributes this resistance, not to destruction of capillary area, but to the loss of the glomerules which, according to recent researches, are so many little renal hearts playing an important part in carrying on the renal circulation.—*British Medical Journal*, Sept. 8, 1906.

ADDISON'S DISEASE.

A. Randall Short, writing concerning blood pressure and pigmentation in Addison's disease, draws the following conclusions:

1. The symptoms of Addison's disease are due to vasomotor paralysis. This is due to the absence from the blood of adrenalin, the normal excitant of the sympathetic nerve ending.

2. The pigmentation is due to vascular relaxation of the skin, causing exaggerated functional activity of the pigment cells.

3. The most promising line of treatment, on theoretical grounds, is the administration of vasoconstrictors of prolonged action. Digitalin has given good results in one case.—*Lancet*, Aug. 4, 1906.

THE CAUSES OF APPENDICITIS.

W. J. Tyson regards constipation as the most important feature to be considered in the prevention of appendicitis. Other etiological factors of importance from the preventative standpoint are septic processes in the mouth, overeating, too hasty eating, or improper food, alcoholism, weakened abdominal muscles, and improper posture during defecation.—*Lancet*, Dec. 23, 1905.

ECZEMA DUE TO TOOTH POWDER.

Galewsky, of Dresden, in treating eczema of the lips or cheeks caused by tooth powders or tooth washes, has often had good results by simply prescribing a tooth powder or wash without peppermint oil, which is the most frequent offender. Other irritating substances in individual cases have been found to be soap, formaldehyde, oil of turpentine, tincture of arnica, and even, perhaps, salol. Some patients are obliged to use only a simple powder, such as chalk. When the source of irritation is removed the eczema always heals rapidly.—*Muenchener medizinische Wochenschrift*, July 10, 1906.

THE TREATMENT OF HÆMOPTYSIS.

In the treatment of hæmoptysis, Lawrason Brown, resident physician at the Adirondack Cottage Sanitarium at Saranac Lake, suggests that the blood pressure be frequently observed, that morphine be used when necessary to quiet the patient and so equalize the blood pressure; that sodium nitrite be used when necessary to reduce the blood pressure, and that in a case of sudden hæmoptysis amyl nitrite be administered at once when possible to produce a sudden fall

of blood pressure and aid in at least a temporary cessation of the hemorrhage—*American Journal of the Medical Sciences*, August, 1906.

PHOSPHATIC URINE.

Phosphatic urine is discussed by Dr. Samuel Gee who says that nothing is more easy than to render the urine alkaline by the use of drugs, but to make neutral or alkaline urine acid, by drugs or diet, is difficult or even impossible. Urine of deficient acidity, and, therefore, turbid with earthy phosphates is, fortunately, a condition which is temporary, and does the patient no harm where there are no other signs of disease. It is a mistake that such a patient is passing an excess of phosphoric acid unless repeated volumetric analysis has proven that this is so. These persons tend to become hypochondriac when their attention has been drawn to the state of their urine.—*St. Bartholomew's Hospital Journal*, April, 1906.

THE DIAGNOSTIC VALUE OF OCCULT BLOOD IN THE FECES.

Friedenwald and Rosenthal, of Baltimore, have made some interesting observations on the significance of the so-called occult hemorrhages in the diagnosis of ulcer and carcinoma of the stomach, following out the work of Boas who first showed that by detecting minute quantities of blood in the gastric contents and feces, important diagnostic data may be gained. A very minute quantity of blood may be detected by the Weber guaiac test or the Klunge aloin test. Repeated investigation has shown that, with a diet free from meat for a short period, occult bleedings are never found in any functional disturbance of the stomach; atony, chronic gastritis, achylia gastrica, hyperacidity or hypersecretion. On the other hand, occult bleedings are irregularly found with ulcer of the stomach, benign pyloric stenosis and spasm of the pylorus, and are constantly found when cancer of the stomach is present. The constant absence of evidences of occult bleedings in the feces is therefore evidence against the existence of cancer.

The authors present a case where this fact proves of value. A male, 64 years of age, presented himself for examination after having had gastric disturbances for three months. During this period he had lost 24 pounds in weight; he had nausea, occasional vomiting; pressure, pain and distention of his stomach. On palpation no tumor could be detected. Examination of his gastric contents presented an absence of free hydrochloric acid and a low total acidity. Frequent examination of the stools showed an absence of occult blood. The possibility of the existence of a cancer of his stomach was held in mind, but the continued absence of occult blood pointed clearly to the fact that this view was not tenable. Subsequent history of the case proved this, for after a period of a few months the patient had entirely regained his health.—*New York Medical Journal*, August 11, 1906.

SURGERY.

EDITED BY

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AND

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ASPIRATION DRAINAGE IN EMPYEMA.

Joseph D. Bryant gives an interesting historical résumé of syphon drainage in empyema; and then proceeds to describe a method of continuous suction drainage of empyemic cavities after a plan of his own, using a collapsed rubber bag as the agent of aspiration. Bryant first described this method in the *Jacobi Festschrift*, p. 337. The accompanying illustration from the *Festschrift* describes the apparatus

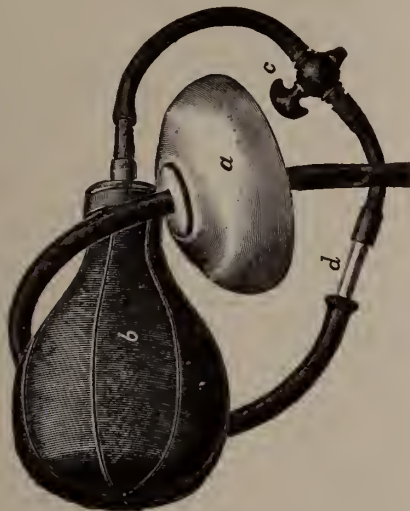


Fig. 1.—The aspiration apparatus: a, hollow rubber cushion; b, distended rubber bag; c, stop-cock; d, glass observation tube. (Cut by courtesy of D. Appleton & Co.)

clearly. The end of the drainage tube, projecting from beneath the hollow rubber cushion, is passed into the empyemic cavity a proper distance, and the cushion (a) is placed in contact with the wall of the thorax in such a manner as to command equally the area surrounding the opening into the pleural cavity. The nozzle of an ordinary six ounce syringe is then inserted into the distal end of the tube (fig. 2) and the fluid withdrawn, followed finally by sufficient exhaustion of the air to cause the rubber cushion to fit closely enough to the chest wall to prevent the passage of air beneath it into the pleural cavity. The stop-cock is then closed (fig. 3), the syringe removed, and the nozzle of the rubber bag while fully collapsed is inserted firmly into the open end of the tube, thus establishing aspiration so

long as the bag is expanding. When the bag is nearly distended, the stop-cock should be closed, the bag cleaned, again collapsed, reapplied and

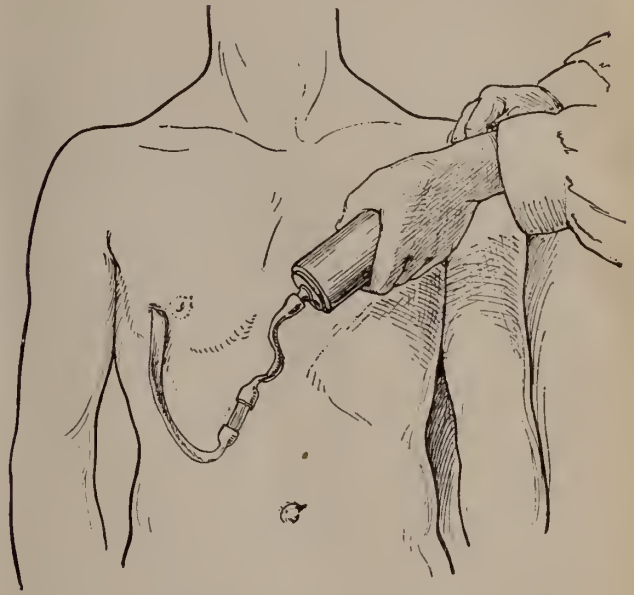


Fig. 2.—Using the syringe. Showing collapse of tube from too rapid effort at withdrawal of fluid. (Cut by courtesy of *Surgery, Gynecology and Obstetrics*.)

stop-cock opened. Too forcible aspiration by the syringe must not be made, otherwise the rubber tube will collapse, and the discharge will

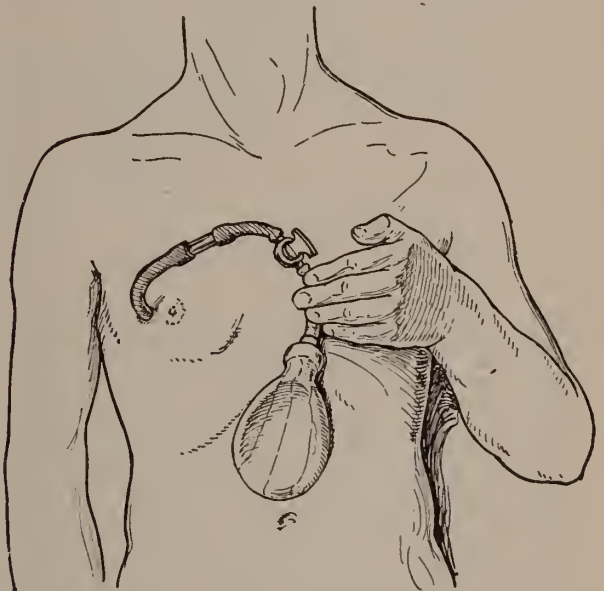


Fig. 3.—Collapsible rubber bag applied; thumb-screw turned; and bag in action. Glass segment shown. (Cut by courtesy of *Surgery, Gynecology and Obstetrics*.)

be tinged with blood. Fig. 4 shows the dressing complete.

It is not always easy to adjust the apparatus to the chest wall so as to maintain an active vacuum for a considerable length of time. The use of adhesive plaster, of rubber tissue applied with chloroform at the borders, of wet absorbent

cotton and of tenacious compounds like the oxide of zinc ointment, are in order, each one of which is serviceable in direct proportion to the care taken in its application. Bryant admonishes that especial care should be taken in the application or contiguous substances may be forced into the cavity as once happened in a case of his own with absorbent cotton. The average duration of time required for cure in cases treated by this apparatus is from four to eleven weeks, the latter instance being prolonged by tuberculous complications in the lung.

Bryant does not emphasize the plan as a substitute for rib resection, but commends it, because of its simplicity and effectiveness as a substitute for other measures of a similar character.

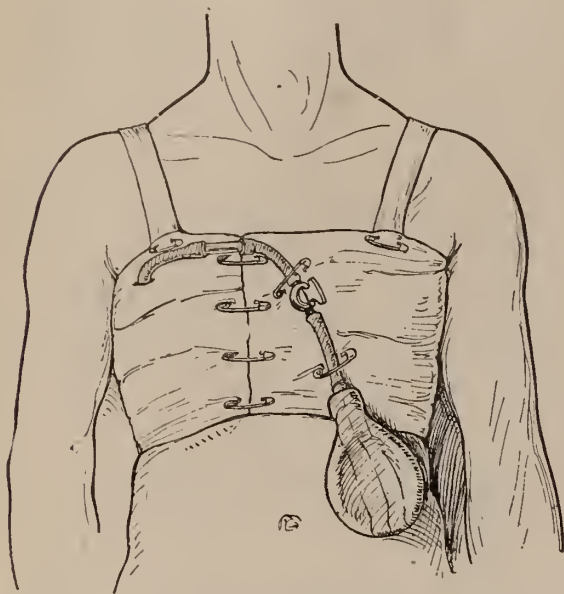


FIG. 4.

The apparatus is cheap, available, effective, easily managed, even by the patient, who need never be in bed or detained in the house because of its employment. The vigor of the suction can be regulated by the size and expanding power of the rubber, and the freedom of communication through the tube can be regulated by the stop-cock. The aspiratory influence then exercised on an empyemic cavity is prompt and decided, and the negative pressure, supplemented by the normal respiratory expansions, rapidly diminishes an empyemic cavity especially when it is of considerable size.

APPENDICITIS, CONSECUTIVE TO INFLAMMATIONS OF THE INTESTINES IN CHILDREN.

Broca states that all cases of acute microbic enteritis can be and often are accompanied by similar appendicular lesions; also that in certain

acute cases of appendicitis there is also a concomitant diarrhea, indicating the participation of the rest of the intestinal tract in the inflammation. Very often cases of muco-membranous enteritis are complicated with appendicitis. Broca was unable to state in what proportion from his own experience, but Guinon gives the percentage as 20.7 per 100. Broca has seen 33 cases in which he has been obliged to remove the appendix.—*Revue de Chirurgie*, September, 1906.

APPENDICITIS AND ICTERUS.

Reichel recalls a communication presented by von Eiselsberg to the German Surgical Congress in 1899 in which attention is directed to the occurrence of gastric and duodenal hemorrhage after laparotomy.

Jaundice, he states, is not a constant manifestation of pyelophlebitic abscesses following appendicitis. It was present in but eleven of twenty cases observed by Koerte, and when it occurred it was usually of moderate intensity and appeared weeks or months after the attack of appendicitis.

The writer discusses quite another class of cases, namely, those in which icterus appears within a few days after an operation for appendicitis.

During the past three years Reichel has treated 165 cases of appendicitis, 22 of which died: a mortality of 13.3 per cent. Of these 165 cases, 18 were jaundiced; and of these 18, 10 died: a mortality of 55.5 per cent.

This high mortality in cases associated with jaundice is significant. The pathogenesis of this condition is of prime importance. The icterus is not dependent upon a swelling of the papilla duodenalis in consequence of gastrointestinal catarrh, but is the expression of a general infection, whose starting point is to be found in the inflamed appendix and particularly in the blood and lymph channels of its mesentery.

In the 43 cases operated during the quiescent period, jaundice occurred but once and this case suppurated during the period of wound repair.

The following was the usual clinical picture: Immediately after the operation the acute and threatening symptoms would begin to moderate and everything would seem favorable for 36 to 60 hours, when jaundice of moderate degree would appear. In the majority of cases it would be associated with restlessness, sleeplessness, and increased pulse rate, while the temperature would remain about normal. As the jaundice deepened the nervous symptoms would be intensified, and the patient restrained with difficulty.

The manifestations suggest iodoform intoxication. In the author's case no free iodoform was used. Iodoform gauze had been introduced in some for drainage, but the symptoms appeared also after the use of sterile gauze.

In a few cases the symptoms abated in a few days and no liver abscess developed. In the majority, however, the delirium deepened into coma and death followed in twenty-four hours. In most of them there was no evidence of any peritoneal implication. Four cases are reported in detail. The author concludes, 1st, that the appearance of jaundice after an operation for appendicitis is always a serious manifestation; 2d, that it usually indicates beginning general septic infection; 3d, that the condition can terminate fatally without accompanying peritonitis; 4th, that the performance of an operation during the first 24 hours of an attack, particularly in severe cases, will not always avert a fatal issue.—*Deutsche Zeitschrift f. Chirurgie*, Band 83, Heft 1, June, 1906.

PRACTICAL BACTERIOLOGICAL STUDIES IN THE SURGICAL CLINIC.

Macdonald (Willis) insists that surgical asepsis cannot be taught by didactic lectures. Routine employment of bacteriological studies is indispensable if a high degree of technical efficiency is to be maintained. In every hospital occasional and unexpected sepsis occurs. The trouble can usually be traced to inefficient skin preparation by the nurse in charge or a negligent resident surgeon. An unannounced visit for the purpose of taking cultures from all wounds, dressings and accessories, from the hands of nurses and the resident, acting as dresser, will go far to remedy the difficulty. If, after a few days all the cultures taken are demonstrated in the ward, and present a single bacterium as the common source of all the infections, and the organism is on the hands both of resident and nurse, much will be accomplished. Macdonald gives an instance of a recent experience in which a series of superficial suppurations occurred in one division of a large hospital, the other divisions remaining immune. The nurse in charge and the resident blamed the catgut, but cultures without notice were taken from wounds, prepared hands, dressings and utensils. The dressings were shown to be sterile; nearly all the wounds and hands were contaminated. A micrococcus, identified as the golden staphylococcus, was constant. Its original source was traced to a patient, suffering from a chronic inflammatory process, treated by hot fomentations and frequent dressings. The ultimate result was the total absence of preventable sepsis. Macdonald emphasizes the fact that the fine spray of saliva, expelled from the mouth during conversation, is a frequent source of infection, and he gives details of an experiment in his own clinic as follows: A Petri dish, fifteen centimeters in diameter, containing glycerine agar, is placed the ordinary working distance from the surgeon's lips. The words ordinarily required during a typical operation are spoken toward the plate, which is afterward placed in the thermostat with the following results: Group I. 16 cultures. The

results among four persons without masks were as follows: Dr. M. (the writer), 5 trials; most, 431 colonies; least, 286 colonies; average, 348 colonies. Dr. G., 5 trials; most, 458 colonies; least, 241 colonies; average, 327 colonies. Nurse J. (who spoke very low with closed lips and was rebellious to the experiment because she disliked wearing a mask during operations), 3 trials; most, 157 colonies; least, 95; average, 117 colonies. Nurse S., who acted fairly; 3 trials; most, 386 colonies; least, 295; average, 331.

Group II. Masks used, covered with four thicknesses of aseptic gauze. Dr. M.'s average was reduced to 54; Dr. G's to 43; Nurse J. 22; Nurse S. 31.

Group III. Washing mouth with solution of boric acid did not show material improvement.

Group IV. Same as Group II, except eight thicknesses of gauze were used, whereupon the total average number of colonies was reduced to seven, one-fourth of the plates remaining sterile.

Macdonald also shows by air cultures that the number of spectators influenced the number of colonies, the ratio of colonies to visitors being reasonably consistent.

Sprinkling the floor with plain water reduced the colonies about one third.—*Surgery, Gynecology and Obstetrics*, August, 1906.

BACTERIOLOGY.

EDITED BY

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THE DIAGNOSIS AND EPIDEMIOLOGY OF DIPHTHERIA.

Before the discovery of the Klebs-Löffler bacilli, clinical data were necessarily the sole reliance of the physician in recognizing the various forms of sore throat. When a membrane was present the case was considered diphtheria, and, except in epidemics, all cases not showing the membrane were diagnosed as tonsillitis or simple sore throat. The widespread use of throat cultures by individual physicians and by boards of health has simplified the diagnosis of diphtheria and has brought about the adoption of new methods for regulating quarantine. The result of the culture is made the final court of appeal in all doubtful cases. At first thought this seems a delightfully simple and easy arrangement, but those who have been engaged in laboratory work, or have been studying diphtheria from a clinical standpoint, appreciate the fact that perplexing

questions are constantly arising, as regards both diagnosis and the regulation of quarantine.

A number of these problems have been discussed recently in a most interesting way by Robert Scheller, a worker in the Hygienic Institute at Königsberg, where the conditions are similar to those in most of our American cities. He gives the results of investigations made in connection with the examination of over 5,000 cultures. The culture outfit supplied to the physicians consisted of sterilized swabs with directions for their use. The inoculation of blood serum was made at the laboratory. Preparations directly from the swab gave information of little value, as sometimes numerous diphtheria bacilli were found in the culture, although none had been seen in the preparation made directly from the swab; and, on other hand, the direct preparations at times showed granular bacilli very much like diphtheria bacilli, but which were probably harmless mouth organisms, as they did not subsequently appear in the culture. Occasionally successful preparations were obtained from four-hour cultures, but it was often impossible in this time to obtain the typical granule staining which is considered one of the most important staining characteristics of the diphtheria bacilli. The chances of obtaining good results are better with older cultures. In one case the investigator noted that, while after ten hours' growth only diplococci and streptococci were found, the next morning diphtheria bacilli were seen in larger numbers than any other organism. Various factors were found to affect the rapidity of the growth of the diphtheria bacilli. If the growth was slow and scanty, it was considered quite probable that disinfectants had been used in the throat just previous to the taking of the culture. Exposure of inoculated swabs or cultures to unfavorable influences, such as light or heat, also modified the growth.

A comparison was made between the clinical and the bacteriological diagnosis in 2,982 cases. In 70 per cent. they were the same. As in certain cases the presence of a membrane and of other clinical symptoms of diphtheria was found to be due to organisms other than the diphtheria bacillus; physicians were advised to isolate at once cases clinically diphtheria, but not to put them with other diphtheria patients until the diagnosis was confirmed by culture.

In cultures from certain cases of true diphtheria no bacilli were found, even on careful and repeated examinations. This was believed to result either from the way the swab was applied to the throat, the unusual situation of the diphtheritic process, or from the previous use of disinfectants. Other factors affecting the growth of the bacteria unfavorably were found to be long exposure of the tubes, after inoculation, to the action of light, or keeping of them for a long time in a very warm place.

Of the cases diagnosed clinically as diphtheria in the absence of membrane, 37 per cent. gave

positive cultures. The principal reason for the diagnosis in these cases was the presence of an epidemic. Such mild cases were found to be capable of spreading the disease, and cases derived from them were frequently severe and showed all the typical symptoms of the disease.

There were 339 persons from whom cultures were taken during convalescence. Diphtheria bacilli had disappeared within ten days from the cultures of 22 per cent. They were still found after ten days in 77 per cent., after forty-one days in 10 per cent., and after ninety days in 2 per cent. The actual conditions are not fully represented even by these figures. Certain of the cultures were the first ones made during convalescence, and, although they were positive, no other cultures were made, so that it is impossible to say how long these persons continued to harbor diphtheria bacilli.

Sometimes, in spite of one or two negative cultures, a third culture again showed the organism. This was explained by the fact that the pharynx may be rendered completely free of diphtheria bacilli by the frequent use of disinfectants, and yet they may keep on growing in the accessory sinuses and in the posterior nares, ready to develop again in the pharynx and anterior nares when the opportunity offers.

Nasal diphtheria was found to be more common than is generally supposed. Diphtheria was frequently followed by a nasal catarrh lasting for some time, and due to the continued presence of the diphtheria bacilli in the nose. On the other hand, many cases began with a mild coryza and were first recognized as diphtheria upon the occurrence of typical throat symptoms.

The cultures were found to be of great help as an aid to diagnosis in cases seen for the first time during convalescence, when all acute symptoms had disappeared. It is, of course, very important from a public health standpoint that such cases should be recognized and isolated.

The use of local disinfectants, especially hydrogen peroxide, was recommended as of some value in shortening the time during which diphtheria bacilli persist in the throat and nose. Well persons and physicians who come in contact with diphtheria patients should thoroughly disinfect their throats and nasal passages by similar means, both to lessen the danger of spreading the disease and to protect themselves.

It was found that 37 per cent. of the cultures taken from healthy individuals belonging to infected families showed the presence of diphtheria bacilli. Certain families were studied very carefully and the conclusion was reached that sooner or later diphtheria bacilli may be found in cultures from every member of a family in which a case of diphtheria occurs. They are especially likely to be found during the convalescence of the patient, when the rigid precautions taken earlier are neglected.

A number of cultures were made from healthy persons who had not been exposed to diphtheria,

but in none of these cultures could diphtheria bacilli be demonstrated.

Pseudodiphtheria bacilli were only occasionally found in the cultures, and as a rule could be readily distinguished from the genuine diphtheria bacilli.—Robert Scheller: *Centralblatt für Bacteriology*, etc., I, Abt. Orig., 1905, XI, I.

Scheller's conclusions are in harmony with those of most other laboratory and clinical workers who have recently been engaged in the study of diphtheria, whether abroad or in this country. The morphology of the diphtheria bacillus and the significance of various types have been carefully investigated by Wesbrook, Wilson, McDaniel, Hill and other workers. Gorham, Williams, Park, Denny, Laird and others have studied various aspects of the question of diagnosis and quarantine. The Massachusetts Association of Boards of Health (*Journal of the Massachusetts Association of Boards of Health*, July, 1902) has published a report on diphtheria bacilli in well persons. Their investigators found typical diphtheria bacilli in cultures from one and two per cent. of healthy people who had not recently been exposed to diphtheria.

These various factors in the diagnosis of diphtheria and its regulation from a public health standpoint should be duly recognized by physicians generally. The bacteriological diagnosis of diphtheria is not by itself infallible. The laboratory worker cannot say that the patient has or has not diphtheria. He can simply report whether diphtheria bacilli are found in the culture, and whether they are virulent. The physician should recognize both the value and the limitations of laboratory tests, and give the report its due weight in connection with other clinical data. If this is done, it will be found that the bacteriological test is of much value to the physician in making correct diagnoses of diphtheria, and that its help is at least as great as that furnished by any single clinical symptom.

A. T. L.

INFLUENZA AND THE INFLUENZA BACILLUS.

Since the epidemic of influenza swept Europe in the years 1889-90 the different features of the disease have been studied, not only from the clinical side but also, thanks to Pfeiffer's discovery of the influenza bacillus, from the pathological and bacteriological points of view. Our knowledge of the epidemic form of the disease is fairly complete; this, however, cannot be said of the sporadic and endemic influenza which appears every year in many places and runs a more or less virulent course. Moreover our knowledge of the clinical significance of the presence of the Pfeiffer bacillus under various circumstances is neither definite nor satisfactory.

G. Jochman had the opportunity of observing a large number of cases of influenza which occurred in Breslau during the winter of 1904-05. For several years he has also made a special study of the influenza bacillus. His present communi-

cation is a discussion of the clinical significance of the influenza bacillus, its occurrence in various diseases other than influenza, and its role in endemic influenza.

In regard to the morphology and the biology of the influenza bacillus there is not much to add to the original observations of Pfeiffer. The bacillus is a minute rod which does not stain by Gram's method, and which requires, for artificial cultivation, media containing hemoglobin. Its growth is favored by symbiosis with other bacteria such as staphylococci, the gonococcus and the xerosis bacillus. The writer has frequently observed colonies of influenza bacilli in culture of the pneumococcus.

In regard to the presence of the bacilli in the blood, Jochman was unable to obtain positive results during life although in the epidemic which he studied he made blood cultures in every case in which the bacilli were demonstrable in the sputum. They were frequently found, however, in the cultures taken from the blood at autopsy. He explains this finding by a post-mortem or agonal invasion of the blood.

In fifty cases of diphtheria the influenza bacilli were found four times in the throat cultures, evidently not having affected the primary clinical picture in any way. In eighteen cases of measles influenza bacilli were five times isolated at autopsy from the areas of broncho-pneumonia. In scarlet fever the author found the bacillus only in very few cases. In whooping-cough, however, an organism was found almost constantly which could not be distinguished morphologically or biologically from the Pfeiffer bacillus. In a series of forty-two children with whooping-cough this bacillus was found in the sputum in each instance and was isolated from the patches of broncho-pneumonia in twenty-three out of twenty-five cases coming to autopsy. He also found the bacillus present in a variety of diseases in adults, among them pulmonary tuberculosis, bronchiectasis, chronic bronchitis, and emphysema. It is frequently present in other diseases, sometimes as a saprophyte without pathogenic significance, sometimes as the cause of more or less severe respiratory lesions which differ in no respect from those caused by the pneumococcus or the streptococcus. In whooping-cough a bacillus having the characteristics of the Pfeiffer bacillus is so constantly present in large numbers in the sputum and in the patches of broncho-pneumonia as to suggest an etiologic relation to the disease.

One of the most interesting portions of the paper is that in which sporadic or endemic influenza is discussed. In the last two years thirty-six cases were studied in which the diagnosis of influenza was made on clinical grounds. Before going into the etiology of these cases he discusses their clinical features. The attack began usually with chilliness, great prostration, pains in the limbs, heaviness of the eyes, severe headache, and pain in the back. The temperature in the mild

cases was irregular, but in two or three days returned to normal. In some cases the fever rose quickly to 40 C., persisted for a day or two and then went back to normal, but after one or two days rose again for a short time. Cases presenting symptoms of pneumonia were characterized by longer continued fever that fell by lysis. There was an unmistakable tendency to relapses. Convalescence was usually prolonged. Weakness, loss of appetite, and tendency to perspire continued for a long time. Often the signs of bronchitis were present, sometimes localized; occasionally there was broncho-pneumonia. Functional disturbances of the heart were noted and one case of endocarditis. Hemorrhagic nephritis was observed in one case. Of symptoms referable to the alimentary tract vomiting was frequently present in the beginning. Loss of appetite was constantly noted; the stools were usually normal and influenza bacilli could not be demonstrated in them. The leucocytes in a majority of the cases remained normal. Of symptoms referable to the nervous system, the commonest was severe supraorbital headache.

The writer next discusses the etiology of endemic influenza. In only thirteen out of thirty-six cases was the influenza bacillus found to be present. This despite the fact that throat cultures were made, the sputum examined, and in many instances the blood. When broncho-pneumonia was present the bacilli were usually found in large numbers in the sputum. In the other cases only a few were present and these were accompanied by pneumococci and streptococci.

In conclusion the author states that the relationship of the influenza bacillus to the human organism is somewhat different from what has been supposed. There is no doubt about its being the etiological factor of epidemic influenza, but even for this disease it is not specific in the sense that the tubercle bacillus is for tuberculosis. It may be found in the tonsils of healthy people as well as in the course of other infectious diseases, without influencing in the least the clinical course of the disease. A bacillus morphologically and biologically identical with the Pfeiffer bacillus as far as can be judged by present methods of study, seems to bear an etiological relationship to whooping-cough. As it is by no means always found in cases of endemic or sporadic influenza it is probable that it is not only the exciting cause of this condition, but that other micro-organisms may be considered as causal factors.—*Deutsches Archiv. für klinische Med.*, 1905, LXXXIV, 470.
A. T. L.

FURTHER STUDIES ON STREPTOCOCCUS INFECTIONS BY RUEDIGER.

About two years ago the writer and Weaver showed that the blood serum of scarlet fever patients has no streptococcidal power, *in vitro*, in any stage of the disease. Streptococci have been found circulating in the blood of these patients, and despite this fact such patients often

make an uneventful recovery. In erysipelas, many wound and puerperal infections, and in tonsillitis, as well, the tissues are invaded by virulent streptococci, but we know that in the great majority of cases the organisms disappear sooner or later, and the patients make a complete recovery. It has been demonstrated that normal human blood serum has no streptococcidal power; it is evident, therefore, that we must look for some other agent than the serum alone to account for the disappearance of the cocci from the blood and tissues during convalescence. According to Metchnikoff and others, this agent is found in the phagocytes. In a previous paper the writer has shown that the leucocytes are the most important factor concerned in the destruction of the streptococci in the bodies of infected rabbits and guinea pigs. In this paper he sets forth the results of further studies of streptococcus infections in human subjects.

By laboratory experiments it was shown that although human blood serum, *in vitro*, is a good culture medium for streptococci, normal defibrinated blood has a slight streptococcidal power; Further it was observed that the defibrinated blood of patients suffering from an acute infection has a much greater destructive effect upon these organisms than has normal blood. In these infections the leucocyte count is usually somewhat increased, and it seems a general rule that the higher the leucocyte count, the greater the streptococcidal power of the blood. This opinion is based on tests made with blood from cases of scarlatina, erysipelas, tonsillitis and pneumonia.

The importance of a high leucocyte count in the destruction of streptococci by blood is clearly shown in the following case: Ten cubic centimetres of blood were drawn from the vein of a patient with erysipelas and carefully defibrinated. One cubic centimetre of the defibrinated blood, which contained 9,800 white corpuscles per cubic millimetre, was put in small test tubes, inoculated with one loopful of a virulent streptococcus culture and two loopfuls of the inoculated blood plated at intervals. The remaining eight cubic centimetres were centrifugated and most of the serum drawn off. We know that the uppermost stratum of centrifugated corpuscles contains a high percentage of leucocytes, because they are thrown down less easily than the red corpuscles. This stratum was therefore drawn off with a sterile pipette and mixed with a small quantity of serum. The resultant mixture contained 17,200 leucocytes per cubic millimetre. One cubic centimetre of this "suspension of leucocytes" was introduced in a small test tube, inoculated, and plates were made as before. To complete the experiment one cubic centimetre of the clear serum was put into a small tube which was likewise inoculated, and plates were made at intervals. This experiment was also performed with normal blood and a non-virulent streptococcus. The plates were incubated for twenty-four hours, and the colonies that developed on each counted.

It was found that both strains of the streptococcus used multiplied in the cell-free serum; that the defibrinated blood destroyed many of the non-virulent and some of the virulent cocci; and that the "suspension of leucocytes" destroyed more cocci of either strain than did the defibrinated blood. The only difference between the defibrinated blood and the suspension of the leucocytes lay in the fact that the latter contained nearly twice as many leucocytes as the former.

Wright and Douglas have shown that phagocytosis takes place only after the bacteria have been sensitized, that is, have been acted upon by the opsonin of the serum. There is no phagocytosis of a suspension of washed leucocytes in NaCl solution, or in heated serum, regardless of the number of untreated bacteria that are added. This work has been confirmed and extended by Hektoen and Ruediger, and by Bulloch and Atkin.

Whether or not the opsonin is increased during the acute infection is an interesting question. Normal leucocytes in normal serum take up large numbers of cocci; hence it is difficult to determine if leucocytes in erysipelas serum, for instance, take up more cocci than those in normal serum.

Some of Ruediger's investigations indicate that there is a slight increase of opsonin in the erysipelas serum as compared with normal serum. A similar increase of opsonin has been noted by Wright and Douglas after treating a person afflicted with furunculosis with their staphylococcus vaccine. A diminution of opsonin in persons subject to attacks of furunculosis, sycosis, etc., had also been observed by these investigators.

The writer's conclusions may be briefly summarized as follows:

Human serum does not acquire streptococidal properties during the course of a streptococcus infection.

The blister fluid from erysipelas patients has no streptococidal powers.

Defibrinated human blood has no streptococidal power which, with few exceptions, is roughly proportional to the leucocytes.

The opsonin is increased during the course of an attack of erysipelas.

The destruction of cocci in the defibrinated blood is brought about by the leucocytes, but, before this can be accomplished, the cocci must be acted upon by the opsonin of the serum. There is no phagocytosis, and hence no destruction of unsensitized cocci, by washed leucocytes.

In acute post-scarlatinal nephritis the opsonin is diminished, but the leucocytes also undergo a change which renders them less effective in the destruction of streptococci. This fact may serve to throw light on the cause of many terminal infections.—*Journal of Infectious Diseases*, 1906, III, 156.

A. T. L.

OPHTHALMOLOGY.

EDITED BY

ALVIN A. HUBBELL, M.D., Ph.D.,

Clinical Professor of Ophthalmology, University of Buffalo.

COMBINED IRIDECTOMY AND SCLEROTOMY IN THE TREATMENT OF CHRONIC GLAUCOMA.

Dr. Felix La Grange, of Bordeaux, France, recently read a paper before the French Society of Ophthalmology in which he described a new operation, which he considers a new procedure for the establishment of a filtrating cicatrix for the relief of chronic glaucoma. He describes his operation as follows:

First make an incision placed in the sclera and opening up the filtration angle as exactly as possible. In the last step of the sclerotic section the knife undergoes a movement of rotation in such a way as to turn the edge a little backward and the sclera is cut obliquely in the form of the mouthpiece of a flute. When the knife reaches the conjunctiva it is turned further backward so as to detach a large flap of the mucous membrane. Afterward, resection is made of the thin part of the bevel of the sclera which is adhering to the cornea. To do this it is necessary to lift the conjunctival flap with a small, toothed forceps. The anterior lip of the wound is thus brought forward, and with delicate sharp-pointed scissors a thin flap of the sclera is easily detached. In order to make this sclerotic resection easily, it is necessary to use fine scissors, *much curved*, like those which Luer recently constructed. The iridectomy is made afterward in the usual way, large, in two stages, and in such a way as to completely resect the iris angles.

The operation consists, therefore, in a sclerectomy combined with an iridectomy. The cicatrization of the wound takes place normally but more slowly, and it is several days before the anterior chamber is reformed. When the patient is cured there can be seen under the raised and transparent conjunctival flap a straight line which represents the weakened part of the sclera.

La Grange has operated on twenty patients by this method without encountering any serious difficulties or without encountering the slightest immediate or consecutive accident, and with the result of suppressing the hypertension in each case.

THE NEW SALTS OF SILVER IN OCULAR THERAPEUTICS.

A. Darier, of Paris, France, writes a monograph in which he pleads for a more universal recognition of the advantages of the organic silver salts. He is so convinced of their superiority that he has discontinued the use of nitrate of silver for more than eight years. Nitrate of silver has a powerful bactericidal action which it owes to its base, silver, but it has at the same time a violent caustic action from the presence of

nitric acid. The irritation and pain which result are not necessary for the therapeutic action of the silver salts. Of the numerous organic silver preparations introduced into therapeutics in recent years, two have been unanimously recognized as superior to all others, viz., protargol and argyrol. Both these salts penetrate deeply into the mucous membrane. Protargol is less caustic and less painful than nitrate of silver and may be applied more freely and more often. It contains only 8.3 per cent. of silver, while the nitrate contains 63.5 per cent. The solutions of the former require, therefore, to be made much stronger. Darier believes that in almost all cases nitrate of silver may be replaced, with advantage, by protargol. In purulent ophthalmia a 25 per cent. solution is applied to the everted lids, the eyelashes and the edges of the lids are rubbed energetically and rapidly with a brush soaked in protargol—this latter is especially useful for cases of conjunctivitis accompanied by blepharitis—and a 5 per cent. solution should be used every half hour. As a prophylactic, protargol compares well with nitrate of silver. For trachoma especially, insufflations of powder of protargol are recommended.

Argyrol is the ideal silver salt. It contains 30 per cent. of metallic silver. It is painless when applied to the conjunctiva; even a 50 per cent. solution may be used to the eyes without any inconvenience. In simple catarrhal conjunctivitis, Darier uses a 5 per cent. solution in distilled water, four to six times daily. For purulent ophthalmia, the strength of the solution is increased two or four times, and it is used every hour or even every half hour. In addition the author himself applies a 25 per cent. solution once daily by separating the lids and placing several drops in the conjunctival sac to form a kind of eye bath; he then rubs the edges of the lids and the eyelashes with argyrol in the manner already indicated. As a prophylactic against purulent ophthalmia, 20 per cent. argyrol is employed. Argyrosis is liable to be produced both by protargol and argyrol. Darier relates also his experience with collargol, argentimine and other new silver salts. Notwithstanding the eulogistic terms used in favor of the advantages of the new silver salts, it should be noted that Darier does not counsel the abandonment of nitrate of silver which, he believes, has still its uses. In this work, the manner in which the different forms of conjunctivitis are treated is fully described and reference is made to results obtained by other observers with the new silver salts.—*Ophthalmic Review*, September, 1906.

TABETIC OPTIC ATROPHY AND CENTRAL SCOTOMA.

N. Bishop Harmon has epitomized an interesting article on this subject by Jean Galezowski and A. Lobel, of Paris, in which he says that the classical alteration of the visual field found in

tabes dorsalis is a gradual and increasing circumscription of the periphery of the field. A diminution of vision in the central region, producing central scotoma, is less common. Von Grosz, in 101 cases, found no central defect. Panas quotes 4 cases, one only of which came under his personal observation. Schmidt-Rimpler believed that when such a scotoma was found it was due to the complication of tobacco or alcoholic poisoning, or to a syphilitic retro-bulbar neuritis. Uthhoff believes central defect to occur in two per cent. of tabetic atrophies. Galezowski found five cases amongst 114 patients, a proportion of 4.3 per cent.

The writers discuss the bearing of the anatomy of the optic nerve on the selection displayed by certain disease processes in producing peripheral and central changes in the nerve; and the ophthalmoscopic changes in the nerve head coincident with them.

The loss of peripheral vision, so characteristic of tabes, is in agreement with the whitening of the upper, inner, and lower quadrants of the nerve head during life, and the peripheral sclerosis of the nerve as seen in sections post-mortem.

Two rival theories have been put forward to account for the pathological process producing these changes. That of Vulpian, Charcot, Virchow, etc., is that the tabetic atrophy commences in the nerve itself. The other of Papoff, Moxter, and particularly of V. Grosz, is that the lesion commences in the ganglion cells of the retina and spreads along the nerve by degrees.

Recently, Pierre Marie and André Leri have made most elaborate observation on 11 cases of tabes, and also demonstrated that ganglion cells were always present at the peripheral parts of the retina, though the fibres at the periphery of the nerve were greatly diminished or even completely lost. They found two stages of the change in the nerve, an earlier irritation marked by the presence of an extensive new growth of vascular connective tissue, followed by later degenerative changes in the vessels, causing their gradual obliteration, and a fibrosis and disappearance of the nerve fibres. They showed that the original growth of granulation tissue came from the rich vascular network about the nerve which is an extension of the pia mater. The original seat of the process is in the vascular network. All these symptoms and pathological changes are in direct contrast to the condition known as retro-bulbar neuritis of toxic origin in which the central region is peculiarly affected and the periphery rarely if ever.

The writers then detail six cases, in most of which the classical features of tabes were present, and in each case central scotomata. They are unable to believe that in these cases, all undoubtedly tabetic, the scotoma was the result of a mixed affection, a toxic amblyopia upon a tabetic amblyopia. They point out that it is quite consistent with the work of Marie and Leri that the papillary macular bundle should be affected

by the tabetic change, for it is at one point of its course situated in the periphery of the trunk, immediately on entering the papilla. In these six cases of theirs the development of the blindness was very rapid, in contrast to the slowly developing amblyopia of retro-bulbar neuritis. They believe that true tabetic central scotoma may be found in from two to four per cent. of cases.—*Ophthalmic Review*, September, 1906.

Correspondence.

THE PROUT-CLARK PATHOLOGY OF EPILEPSY.

October 16, 1906.

Editor of the New York State Journal of Medicine.

SIR: I was disappointed in reading Dr. Spratling's excellent article on Epilepsy in the October issue of the JOURNAL that he did not make clear the Prout-Clark pathology of epilepsy. Perhaps Dr. Prout and I should have been more precise and labeled our work as *Pathological Anatomy* or *Cyto-histological Pathology*. So frequently do I hear our work misinterpreted by neurologists, in discussing it, that both Dr. Prout and I have learned to preface our remarks with the statement that the Prout-Clark pathology of epilepsy has nothing to do with the etiology, etiopathology or pathogenesis, but deals solely with the terminal cell changes in the brain cortex in epilepsy. Naturally we can only indefinitely point out what we conceive to be its probable heterogenous toxic cause. Indeed, an entire section of our pathology in Dr. Spratling's admirable book is given over to a critical résumé of the pathogenic agents which may cause the lesion we have described in the brain cortex.

I may say in conclusion that neither Dr. Prout nor I have seen or heard any convincing arguments which would cause us to essentially modify the results of our work, laid down in our original thesis, "Status Epilepticus: A clinical and Pathological Study in Epilepsy," *American Journal of Insanity*, October 1, 1903.

Very respectfully,

L. PIERCE CLARK.

County Societies.

MEDICAL SOCIETY OF THE COUNTY OF ALBANY.

The semi-annual meeting of the Society was held in Alumni Hall, Medical College, on October 10, 1906. About sixty members were present.

The following physicians were elected to membership: Drs. W. P. Brierley, J. N. B. Garlick, M. J. Keough, W. D. B. Lester, Henry F. C. Muller, Harry Rulison, and Luman B. Rulison.

The Vice-President, Dr. J. D. Montmarquet, gave an address entitled, "Hysteropexy Followed by Repeated Pregnancies."

Drs. W. G. MacDonald and J. D. Graig were elected delegates to the State Society to serve for two years; Dr. A. H. Traver to serve for one year.

Dr. J. N. Mitchell was elected delegate to the Third District Branch.

The committee appointed at the last annual meeting to consider the question of bacteriological tests which might be made by the City of Albany, was unable to arrive at an unanimous conclusion, and therefore submitted Majority and Minority reports. The Minority report adopted by the Society is as follows:

It is the opinion of the undersigned that the present method of making bacteriological examinations of all cases of diphtheria and tuberculosis, both for purposes of diagnosis and to ascertain the clinical progress of these diseases, at public expense should be continued. It is further the opinion of the undersigned that bac-

teriological tests should be made at public expense for the indigent poor, and in such other cases of contagious diseases as may from time to time seem necessary in the public interest, and as may be determined upon by the Commissioner of Public Safety or his qualified representative. It is therefore recommended that an appropriation be made by the city for such purpose.

An interesting feature of the meeting was the signing of the new By-Laws of the State Society, the District Branch and the County Society, by the members present.

MEDICAL SOCIETY OF THE COUNTY OF CATTARAUGUS.

REGULAR MEETING AT OLEAN, October 2, 1906.

The following papers were read and discussed by the members present:

"The Treatment of Uterine Fibroids," by Dr. J. E. K. Morris, of Olean.

"Enlargement of the Prostate," by Dr. O. A. Tompkins, of Randolph.

The next meeting will be held in Salamanca, January 8, 1907.

CORTLAND COUNTY MEDICAL SOCIETY.

QUARTERLY MEETING, September 28, 1906.

Program.

"Typhoid Fever—Report of Case," by Dr. F. S. Jennings.

"The Importance of Correct Diagnosis in Acute Abdominal Disease," by Dr. S. J. Sornberger.

"Duodenal Ulcer—Operation, Gastro-Enterostomy," by Dr. M. M. Lucid.

Case Reports.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, October 16, 1906.

Program.

Presentation of the Medical Library (4,000 vols.) of the Late Dr. Willard Parker, a Gift to the Library of the Medical Society of the County of Kings from his son, Dr. Willard Parker, of New York City. By James Peter Warbasse, M.D.

Paper—"The Treatment of Certain Chronic Infectious Processes," by Lowellys F. Barker, M.D., Professor of Medicine, Johns Hopkins University.

After the meeting a reception was held in the reading room, and an opportunity given the members of the Society to meet the guests of the evening.

The following resolutions have been passed by this Society upon the death of Dr. Alexander Hutchins, an ex-president of the Medical Society of the State of New York:

WHEREAS, In the ordering of events we are called upon to mourn the death of our brother, Alexander Hutchins, M.D., a bright and shining light in the profession, and an honored member of this Society, for whom we all had the greatest respect and affection;

WHEREAS, We recognize in his going the loss of one who was not only an ornament to his profession, but an active and efficient member of his Society, who contributed much to its advancement, and was ever active in the furtherance of its aims during a long and eventful career;

WHEREAS, In this bereavement the profession loses a man of rare intellectual attainment, whose marked ability with his pen was only equalled by his keen diagnostic power in the sick room, where his mental endowment pre-eminently fitted him for the finest service; therefore,

Resolved, That in the death of such a man, so honored by his fellow men, so finely equipped, so fully furnished for his divine business of healing and comforting, we, the profession, share with the world at large the sense of an irreparable loss, while we rejoice in the record of good accomplished and the wealth of service rendered.

Resolved, That the sympathy of the Society be extended, and that a copy of these resolutions be presented to his family in their bereavement.

SECTION ON PEDIATRICS, October 24, 1906.

"Treatment of Chronic Valvular Disease in Children," by E. E. Cornwall, M.D.

Report of a Case of Vesical Calculus (with specimen), by Archibald D. Smith, M.D.

SECTION ON GENERAL MEDICINE, October 8, 1906.

Symposium on the Cardio-Vascular Apparatus.

"Physiology," by Dr. J. C. Cardwell.

"Pathology," by Dr. Archibald Murray.

"Semiology," by Dr. W. S. Hubbard.

"Therapeutics," by Dr. Peter Scott.

MEDICAL SOCIETY OF THE COUNTY OF
MONROE.

REGULAR MEETING, AT ROCHESTER, October 16, 1906.

Program.

"Version or High Forceps?" by Wm. M. Brown, Rochester.

"Recent Matters in Psychiatry," by E. H. Howard, Rochester.

MEDICAL SOCIETY OF THE COUNTY OF
NEW YORK.

ONE HUNDRED AND FIRST ANNUAL MEETING,
October 22, 1906.

Paper—"Acute Pancreatitis, with the Report of Five Cases," by John F. Erdmann, M.D.

General Discussion.

Meetings of this Society for 1906: November 26 and December 28.

ONEIDA COUNTY MEDICAL SOCIETY.

REGULAR QUARTERLY MEETING, AT ROME, N. Y.,
October 9, 1906.

Papers.

"Renal Irritation and Insufficiency," by Dr. A. A. Gillette, Rome.

"Tetanus," by Dr. M. C. Montgomery, Rome.

"Double Mastoiditis—With Infection of Jugular Bulb on One Side," by Dr. J. E. Gage, Utica.

"Librarian's Report," by Dr. Smith Baker, Utica.

MEDICAL SOCIETY OF THE COUNTY OF
RENSELAER.

REGULAR MEETING, October 9, 1906.

Program.

1. "An Investigation of the Milk Retailed in Troy," by H. W. Carey, M.D.

2. "A Contribution to the Localization of the Motor Areas of the Human Cortex, with Report of Three Cases, with Autopsies," by H. C. Gordinier, M.D.

The following Committees were appointed:

On Legislation—Dr. E. R. Stillman, Dr. C. E. Nichols, Dr. Wm. FINDER.

On Public Health—Dr. H. C. Gordinier, Dr. G. A. Bradbury, Dr. J. B. Harvie, Dr. M. D. Dickinson, Dr. Zotique Rousseau.

MEDICAL SOCIETY OF THE COUNTY OF
SENECA.

The Annual Meeting was held at Willard State Hospital, October 11, 1906.

The President, Dr. George A. Bellows, in the chair.

Officers elected for term commencing January 1, 1906: President, Thos. J. Currie, Willard; Vice-President, Lester W. Bellows, Waterloo; Secretary, Robert E. Doran, Willard; Treasurer, F. W. Lester, Seneca Falls; Censors, C. S. Barnes, Ovid; John F. Crosby, Seneca Falls; and Robert Knight, Seneca Falls; Representative to the House of Delegates of the Medical Society of the State of New York, George A. Bellows, Waterloo; Alternate, A. Letellier, Seneca Falls.

Drs. James H. Sternburg, Waterloo; Richard Dey, Romulus; and Andrew J. Alleman, MacDougals, being

the only living members of the reorganization of the Society in 1865, were elected honorary members.

The scientific program consisted of a clinic given by Dr. John W. Russel. Two interesting cases were presented, the first being a case of hereditary muscular atrophy; the second was a case of multiple sclerosis.

The next meeting will be held May 9, 1907.

SUFFOLK COUNTY MEDICAL SOCIETY.

ANNUAL MEETING, RIVERHEAD, N. Y., October 25, 1906.

Scientific Program.

1. Address by the President, "What the County Society can do for its Members," by Dr. W. H. Ross.

2. "Hypnotism," by Dr. F. C. Eastman, Brooklyn.

3. "Psychic Epilepsy," by Dr. George A. Smith, Central Islip.

4. "Trachoma, and its Relation to General Practice," by Dr. S. B. Allen, Riverhead.

SUFFOLK COUNTY MEDICAL SOCIETY

AND THE

QUEENS-NASSAU MEDICAL SOCIETY.

A Joint Centennial Meeting of these two Societies was held at Greenport, N. Y., October 13, 1906.

Program.

"History of Suffolk County Medical Society," by Frank Overton, M.D.

"History of the Queens-Nassau Medical Society," by James J. Cooley, M.D.

"Therapeutics: the Old and the New," by James P. Warbasse, M.D.

Deaths.

H. E. BABCOCK, M.D., died in New London, N. Y., on September 19; aged 79 years.

JOHN C. BEEKMAN, M.D., of New York, died in Atlantic City on September 28; aged 48 years. He was one of the staff of the Harlem Hospital.

JOSEPH C. DUDLEY, M.D., died in Bath, N. Y., September 30; aged 70 years.

LEWIS EATON, M.D., died at his home in Lancaster, N. Y., October 6; aged 77 years.

EDWARD BLISS FORT, M.D., died at his country home at Larchmont, N. Y., October 5; aged 87 years.

VICTOR HAISCHER, M.D., an interne in Good Shepherd Hospital, Syracuse, died September 24; aged 25 years.

EMIL WILHELM HOEBER, M.D., of New York, died October 5; aged 73 years. He was a coroner during Mayor Strong's administration.

CHAUNCEY B. HOWE, M.D., of Seneca Falls, N. Y., died August 27; aged 80 years.

GUIDO KATZENMAYER, M.D., of New York City, died October 13; aged 74 years.

HENRY A. LAURENT, M.D., of New York City, died October 12; aged 43 years.

MICHAEL J. MADIGAN, M.D., died at his home in Staten Island, September 7; aged 56 years.

JAMES F. MUNN, M.D., died in Syracuse on September 16; aged 55 years.

JOHN S. McNAUGHT, M.D., of Hobart, N. Y., died September 8; aged 87 years.

FELIX L. OSWALD, M.D., of Syracuse, N. Y., died September 27; aged 60 years.

WILLIAM K. OTIS, M.D., died in New York City September 22; aged 46 years.

WILLIAM J. PACKERWOOD, M.D., of Buffalo, N. Y., died September 24; aged 54 years.

S. G. COURTNEY PINCKNEY, M.D., died in Grandview, N. Y., September 20; aged 37 years.

GEORGE W. PRATT, M.D., died in Corning, N. Y., October 2; aged 85 years.

ROBERT SCHMELTZER, M.D., an oculist of Brooklyn, N. Y., died October 11; aged 55 years.

GEORGE ATHERTON SPALDING, M.D., died suddenly at his home in New York, October 2; aged 57 years. For ten years he was attending physician to St. Luke's Hospital.

E. A. WHEELER, M.D., of Brooklyn, died suddenly September 18; aged 56 years.

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Original Articles.

THE SURGICAL TREATMENT OF INDIGESTION.*

By E. S. McSWEENEY, M.D.,
NEW YORK.

THE whole trend in medicine for the past forty years has been to place our conceptions of disease on a rational pathologico-anatomical basis, with a consequent revision of medical and surgical nomenclature, and the elimination of meaningless and indefinite terms, so that to-day, except of those conditions of which we lack any exact knowledge, a name pictures a definite morbid state with a symptom expression modified in detail by circumstances.

The term "indigestion", however, survives, and its survival, anachronistic, distinctly of a by-gone day, implying as it does merely a symptom complex, is significant. It comprehends functional and organic derangement of so many and such different organs that, unqualified, it carries no explanation with it, yet though every one of the separate processes grouped under it has been isolated as it were and given a name and position, it shows no evidence, despite our present day inclination, of being retired for age. This does not imply that this branch of research has tarried behind others, rather the contrary; nor is the explanation to be found in a lack of knowledge of the various digestive organs or processes, but because these are so closely allied, interwoven, and dovetailed one into the other, that derangement of one almost necessarily implies disturbance of all or many; and because deranged digestive function is so frequently met with, convenience demands some general term to cover at least the commoner combinations.

There was a time not so long ago in practical medicine that the stomach was *the* digestive organ, and quite recently, say, five years ago, the stomach seemed to have been mislaid or forgotten, and we heard of nothing but intestinal disturbance; and the pendulum has swung to many other points. So in the laboratory, the physiologist or physiological chemist of to-day seems to be wholly concerned with the seemingly endlessly modified chemical changes which the food undergoes, and to have lost sight of the grosser, but none the less important, mechanical factors

demonstrated by his predecessors of the last generation. But the views of even a few years ago are behind us; the work of the investigator concerns details, and to-day, though convenience may dictate the retention of the term, indigestion must mean to him who uses it far more or less as one looks at the matter than it did. Not only because various causative factors, as carcinoma or colitis, whose importance overshadows the digestive disturbance, have been clearly defined and are no longer placed under this head, but also because the present state of knowledge demands behind every convenient generalization a definite idea, based on pathological data, precise as to the part concerned and lesion present. To this end the laboratory man and post-mortem observer stimulated by the very general interest in the subject have given us a deal of valuable information. From this and from the practical experience of the past few years, we have learned the frequency of occurrence, varieties, nature and sites of the diseases met with. We know that indigestion may be due to primary disease of the digestive organs, or, secondary, to systemic or local conditions elsewhere, in which case it must be regarded as a symptom; that whether primary or secondary it is due to definite lesions located most commonly in the stomach, or duodenum, or the gland ducts opening into it; that the factors to be dealt with, secretion and motility, while distinct, usually follow one in the train of the other; and that these parts are so closely related and interdependent that disease of one almost necessarily implies disturbed function of the others. Conversely removal of the primary cause at a given point means relief for all. This eliminates the functional or idiopathic indigestion where the individual affected is told that he has indigestion, but no one knows where, or what, or why. The only type of indigestion that offers any excuse for this attitude is the nervous, which, however, is none the less distinct and positive than the others and can be as clearly demonstrated with a definite cause. Thus the first essential point has been positively fixed.

Disease cure, implying cause removal, promises proper diagnosis, and for some years past the internist, in advance of the surgeon, the absurdly named stomach specialist, has tediously and laboriously worked out and brought to considerable perfection diagnostic methods and tests that make possible in the greater number of cases an exact determination of the site and nature of

* Read before the Queens-Nassau Medical Society, May 29 1906.

the lesion which the pathologist has told us to look for. I do not propose to review these matters here: they can be found by those unfamiliar with the subject, covered well and thoroughly, in many standard works.

The ground being so well prepared and medicine having found itself, despite many refinements, unable to aid a large percentage of cases the time was propitious for surgical effort. Coincidentally surgeons having exhaustively studied the pelvic organs and appendix, and having come to a fixed and standard position in regard to them, and having perfected abdominal technique, were ready to concentrate their attention on the upper quadrants of the abdomen. I wish to say, however, that while distinct digestive surgery has been a growth of the past five, and much of it of the past two or three years, yet the progress to this point has been gradual and consistent. This explains perhaps why the present surgical attitude on this subject lacks the radicalism, if not hysteria, that has marked the early stages of so many medical and surgical movements, and even thus early assumes a conservative middle ground.

The previous epochs of digestive surgery have been three. The first dates back to the time when surgery was first recognized as such, beginning with attacks on the exposed ends of the canal, and gradually developing in detail, but not expanding in its scope up to a few years ago, lagging behind the so-called dissecting operations, because of the lack of the knowledge of asepsis. The second is that in which with the knowledge of asepsis and frequency of laparotomies, operations began to be commonly done on the various abdominal digestive organs, but the fact of a viscus being a digestive organ had no especial bearing, as in perforation of the gut, or stomach, or acute appendix cases. This class of cases taught a great deal, however, by its incidental results, which we are applying to-day, and constituted the surgical contribution to the study of indigestion, invaluable in its way, being observations on the living subject and presenting none of the elements of error of the internist. Thirdly came the class of operations which designed primarily to relieve other conditions, yet had as a secondary object the relief of digestive symptoms. Such operations as fixation of the kidney and the involution appendix cases. So by an orderly progression we have reached the present stage, and surgery now lays claim to its share of the cases of "pure indigestion", if I may so call them for lack of a better name.

Before going on to a resumé of what has already been accomplished by surgery in this field, even in a short time, with its lessons and promises, it might be well to state the position of the surgeon with regard to these cases. In the first place the surgeon is not trying to displace the medical man; what is best for the patient is what every man wants to do for his patient, and the surgeon simply says that in the light of what

has been proven no one has now the right to assume that surgical treatment of indigestion is chimerical, nor on the other hand should he be carried away by extravagance or vehemence in urging surgical claims. The surgeon does not want every case of indigestion; in fact, the best authorities are agreed that only selected cases should be subjected to operation. In general, operation should supplement medical measures, which implies that acute indigestion cases as a rule are medical not surgical. This is a departure from the insistent teaching of years with regard to abdominal conditions. Under this head, appendicitis or gall-stones or perforated ulcer, of course, do not come, but non-perforating ulcer does. There are conditions, however, which should be turned over to the surgeon at once; conditions in which medical measures are wholly empiric, and there is no reasonable ground for believing that they will give relief, whereas surgery is rational, plainly indicated and promises positive results. Examples of this class are pyloric stricture, chronic gastric ulcer, gall-bladder empyæma, chronic appendicitis and floating kidney.

Because of the close association of secretion and motility the work of the surgeon may show as brilliant results in one field as the other, but because surgery is essentially mechanical, the latter class are the more clearly within its province.

In general chronic gastric ulcer, gastric tetany, gastric neoplasm, benign or malignant, pyloric obstruction from any cause, perigastric and periduodenal adhesions, especially with distortion, duodenal ulcer and all chronic gall-bladder and duct diseases supply clear indication for surgical interference: whereas the consensus of opinion is that in gastropnoia, nervous cases, gastrectasis due to motor insufficiency, pancreatic gland disease and almost all simple catarrhal conditions the results thus far are negative. Such a classification necessarily implies that every case should, as far as possible, be exactly diagnosed; the whole range of modern means exhausted before it is placed in the uncertain class. Finally the surgeon asks that, when a case has resisted medical treatment for a reasonable length of time, he be consulted then, and not be called upon after years of advancing disease to perform miracles.

As to what surgery has accomplished already in these cases. I purpose confining my remarks to the abdominal organs. The role played by eye strain, by the mouth, esophagus and allied parts, while important, is a field offering nothing new for discussion. Firstly, if we glance briefly at the cases of intra-abdominal disease, not of the secreting digestive organs, but associated with disturbed function of them, we have a considerable list to recite. The literature on this subject is truly voluminous, but the facts are now so generally admitted as to need no argument. These conditions may produce indigestion either by direct mechanical action or reflexly

through nervous association. Concerned are the female pelvic organs, kidney, lower small bowel, appendix and colon. Displaced uteri and diseased ovaries have long been recognized as causes of disturbed digestion. The process is a nervous reflex—one of many affecting different organs and systems. When tumors exist, however, or a retrodisplaced uterus lies upon the rectum, the disturbance is purely mechanical, either by occlusion, impeding of the circulation, or interference with the proper movement of the gut, and does not differ from that found with other abdominal tumors. In such conditions, as well as in hernia, local adhesions and other obstructions, the indigestion is usually a consideration of minor importance, and the conditions are attacked for other reasons. Floating kidney, especially the right kidney, gives rise almost invariably to marked digestive disturbance. Its upper pole is normally in close relation with the most important part of the digestive tract, and displacement means not only a constant traction on all the structures in its neighborhood, but probably traumatism from the kidney itself with respiration. Those who have written most of kidney fixation accentuate strongly the digestive aspect of such cases, and there can be no doubt that when the kidney alone is involved, and not all the abdominal organs, fixation gives immediate and permanent relief.

Chronic appendicitis is now so commonly recognized as the cause, rather than a sequel, of repeated attacks of indigestion, that mention of it is sufficient. No one who has been familiar with this type of chronic dyspeptic, waiting for and dreading the frequent exacerbations, which always come at most inopportune time and place, and has seen the brilliant results accomplished by removal of the appendix, can ever belittle this factor. Whether the appendix be of the involution type, accompanied by more chronic and less definite symptoms, or the chronic catarrhal with or without obstructions, the results are uniformly good. Chronic disease of the colon now so easily defined belong, like the "pure indigestion" cases, to the class that should first be handled medically. Failing of relief, a temporary fistula, direct or indirect through the appendix, to permit of access to the diseased area is rational, intelligent treatment, giving the most satisfactory results. The clear inference of these citations is that the examination of every case of continued indigestion should, as a matter of routine, include the determination of the presence or absence of each of these factors, which are gross and unmistakable, even before proceeding to the finer diagnostic tests with the stomach and bowels. It is well to bear in mind also that one or more of these conditions can exist and give rise to severe digestive, and no, or few, local symptoms, or vice versa; and that there is a distinction to be made between demonstrable and practical disease or abnormality; and that, given one of these conditions in a case of indigestion, it may

not tell the whole story, and assumption that it does may mean subjecting the patient to medical or surgical treatment, successful in itself, perhaps, but leaving the indigestion not only unimproved, but advancing.

With regard to the digestive organs proper, the stomach, duodenum, liver and pancreas. This is the most recent field of surgical endeavor. Five years is about its span of life, three marks its larger development. Its statistics are meagre and mean very little; we have what is better, however, the opinion of men who have done a large amount of this work, that the results are good. Nor are they enthusiastic, but men of sound judgment; the list includes Kocher, Israel, Moynahan and Hartmann abroad, the Mayos and Deaver at home and many others.

We have learned lately that chronic gastric ulcer is a common affection, that it is found more frequently than all other gastric lesions put together, and occurs probably in from five to thirteen per cent. of all persons. So many indefinite cases of indigestion, in which exploratory incision has been made, have shown ulcer as the cause of the trouble that there is every reason to suppose, the cases which come to operation being such a small percentage of the total, that the great majority go unrecognized, and, as they must have symptoms, are treated just as "indigestion", with or without a more exact, in any event, false diagnosis. The disparity in hospital and autopsy totals also bears this out; the balance unaccounted for doubtless makes up a considerable proportion of the chronic dyspeptics for whom medical treatment affords temporary or no relief. Chronic duodenal ulcer is probably only slightly less frequent of occurrence than gastric.

That the results of medical treatment, even in the cases recognized as ulcer, are distinctly bad is shown by the only figures we have, those from Philadelphia and Boston hospitals, quoted by Mumford, showing 60 to 80 per cent. accounted cured when discharged from hospital, but an astounding number died after five years (24 per cent.), and another 36 per cent. with recurrence. In other words, so far as medicine goes, 60 per cent. were in the incurable class. When we add to this the great number unrecognized the inference is that the ultimate results are about as poor as can be. Yet it is in these cases of chronic ulcer that the most astonishing and gratifying results can be accomplished. Simple drainage of the stomach by a gastro-jejunostomy, with proper technique, shows practically no mortality, is far less dangerous than allowing the patient to go on with his disease, is a rational procedure and has already been proven curative. Mayo says on the subject of ultimate results in these cases, "I can conscientiously say that we are doing no kind of surgery to-day that gives more pleasing results than in the field of chronic gastric and duodenal ulcer." Mayo is a man who is doing an enormous amount of work—with his brother, perhaps, more than any other two men in this

country—and his words should carry convictions. The relief afforded by surgery is due to setting aside all interference with stomach drainage, whether from direct obstruction or muscular spasm, and the relief of the reflex secretory disturbance.

The opinion that ulcer is the frequent, if not essential, antecedent of malignancy, has also been strengthened by recent investigation.

Gastric cancer itself is a separate entity, can hardly be classed with the diseases we are discussing and does not come under our subject, except in regard to diagnosis, of which I will speak presently.

What has been said of ulcer applies equally well to pyloric obstruction of any nature, to tumors, to cicatrices, to adhesions, distortions, and gastric spasm. No one can maintain that medical measures are going to relieve mechanical obstruction. The matter admits of no argument, and, given the accurate means of diagnosis now at hand, we can determine at once that medicine can offer such patients nothing, surgery everything. The conditions met with in the individual case may indicate a more or less elaborate operation, but, lacking malignancy, the results are uniformly good.

Gastroptosis, except when due to some simple direct mechanical cause, such as an adhesion or tumor, is not favorable for operation. Beye's method of shortening the gastro-hepatic omentum seeks to relieve the condition and has found many supporters, but the relaxation of the stomach ligaments is usually but part of a general process involving all the abdominal organs. Such patients are frequently, if not always, neurotic, and the usual history of the case is a long succession of operations, each perhaps successful in itself, but the sum total of gain for the patient practically nothing. Such cases and the nervous cases without gastroptosis should not be operated. Not only because they hold out no reasonable hope of cure, but because such failures tend to bring into disrepute all digestive surgery.

Pancreatic gland surgery, it must be confessed, is rather primitive as yet. Chiefly because of anatomical difficulties drainage is about the only procedure that can be undertaken with prospect of success.

Disease of the pancreatic ducts, however, comes under the same heading as bile duct trouble. Obstructions from without or within, chronic catarrhal and suppurating states are all amenable to treatment. Many of the duct troubles, and eventually the gall-bladder disease, can be traced to duodenal affections, relief of which likewise relieves the secondary conditions. Our views in regard to gall-stones have undergone but little change of late, except that we recognize with greater frequency the important role they play in the causation of digestive disturbance. But our view of the gall-bladder and its diseases has been expanded tremendously. For the past few years it has been possible to diagnose these con-

ditions with accuracy, and every hospital offers statistics of successful work in cholecystitis and duct affections.

Next to chronic gastric and duodenal ulcer, adhesions in this region, involving duodenum, pylorus and gall-bladder or ducts, or all, are perhaps the most frequent cause of chronic indigestion. The mere statement of this fact indicates the treatment.

The attempts to relieve portal congestion by liver vessel anastomosis aim to meet the digestive as well as more pressing indications, and belong in a sense in this class of operation.

This is merely a catalogue, gentlemen, of the conditions amenable to surgery. The subject is so large that an exhaustive study of even any one feature of it would necessitate a paper much longer than this, and I have thought that this bird's-eye view of the whole matter, in all of its aspects, would be of more general interest. The writings of Ochsner, Mayo, Hartmann, Mikulicz, Deaver, Mumford, Robson, Moynahan, Kocher, and a host of others, and articles appearing every month from authoritative sources, all bear the same message, the possibility, the desirability, and the success of surgical effort in chronic indigestion. The lesson which every man may take to heart is that accurate diagnosis is no longer advisable, but obligatory, and as in the several fields which have been conquered in the past few years, so in the digestive we must realize that every case must be treated not by routine, but for what it is, and medically or surgically as the state of knowledge of the day directs. The teaching and statistics of the past are no more applicable to the present, and offer no more excuse for delaying operation when indicated than do the mortality tables of fifty years ago contraindicate laparotomy to-day.

The promise for the future is bright. I cannot subscribe to the sentiment expressed by a recent text-book that medical measures probably reached their perfection some years ago. With the knowledge of what has been done in the past we can assuredly say that medicine and surgery both have large fields of usefulness before them. Surgery, the younger sister, will develop more rapidly; medicine still will accomplish much.

In closing, I wish to say a word concerning exploratory incision, which includes all, I believe, germane about cancer. Such operations are a confession of ignorance. They were done frequently in the past for the purpose of inspecting other abdominal viscera, but larger knowledge, better training, and improved methods of diagnosis have made them unnecessary. The digestive organs are passing through a similar transition period, and, for the present, we will have to depend somewhat on this means of diagnosis. To the conscientious attendant, however, subjecting his patient to an operation, no matter how trivial it may seem, is not a matter to be passed upon lightly. To the patient the operation

is likely to be an operation, and its particular scope and purpose more or less disregarded. Investigation, however, having shown the frequency of serious lesions, and with the knowledge that surgery can cure such conditions, whereas, without it there can at least be no improvement, and perhaps the inviting of grave sequelæ, we are not only justified, but should feel obliged to urge and insist on exploration in all severe doubtful cases. Under this heading come all cases in which, despite the use of every aid, we can not make a diagnosis, very chronic cases especially, when marked by periodicity of symptoms, which medical measures fail to cure, and cases in which there is a suspicion of malignancy.

REPORT ON THE CLINICAL CHEMISTRY OF THE BLOOD IN VARIOUS DISEASES.

BASED UPON ORIGINAL WORK DONE IN THE PATHOLOGICAL LABORATORY OF THE PRESBYTERIAN HOSPITAL, NEW YORK.

By **HERBERT SWIFT CARTER, MD.,**
NEW YORK.

SINCE the birth and subsequent growth of modern bacteriology and pathology it has become the custom to view disease almost exclusively from the standpoint of one or other of these subjects, and to neglect the greater side of physical economy under conditions of disease, namely, the chemistry of the body.

Physiology and physiological chemistry are almost inseparable, at least so far as their application to medicine is concerned, and it is inconceivable how little routine clinical chemistry is done, or how little importance is attached to it outside of more or less elaborate analyses of urine and gastric contents.

From bacteriology we know much of the direct inciting cause of many of the diseases, and in pathology much of the results; but the gap between the two is wide, and although we can cause disease experimentally in many instances, and know what post-mortem changes we must expect, we know comparatively little as to the intervening chemical processes; and while the problems are being gradually solved in the laboratory, their clinical application is too little used.

It has been with the hope of adding to our knowledge, if only a very little, that these series of examinations have been made and the results recorded; not so much, perhaps, because they are of great individual worth, but because, when taken in conjunction with other series of cases examined along these lines, information of considerable value may be obtained.

The 117 cases which form the basis of these investigations have been selected and divided according to disease, and the routine chemical examination has consisted in the estimation of the percentage of total chlorides and urea in the blood, with such other chemical examination of the urine

as is usual in hospital cases, in addition to the determination of chlorides and urea in many, and any chemical data of importance relating to them; for it is only by combining laboratory results with clinical experience that we can hope to add to our knowledge of disease as a factor in human experience.

NOTE.—In discussing these cases, the normal urea percentage in the blood is taken to be between .01 per cent. and .04 per cent. For the chlorides .6 per cent. has been considered normal; however, .9 per cent. chloride solution is found to be isotonic with the blood, so that the normal chloride range may be considered to be between .6 per cent. and .9 per cent.

CHRONIC INTERSTITIAL NEPHRITIS.

The work of presenting some phases of chronic nephritis has been done largely with the hope of throwing some light on the general problem of uræmia—a subject of the greatest importance to clinicians—and of determining the condition of the blood in patients suffering from either the acute or chronic form of this toxæmia. Pathologically it is a matter of comparative ease to classify these cases of nephritis, but when one comes down to the ultimate analysis of the cases, and the practical applications of one's findings to a particular case, it is often impossible to explain certain contradictions, and we can offer no explanation for paradoxical facts of daily occurrence, as, for example, when we see two cases which, so far as we can tell, show exactly similar urinary findings on ordinary examination, yet one patient may be in uræmic convulsions and the other walking the street in apparently good health. Just what is responsible for this enormous discrepancy one cannot say. By some it is ascribed to a possible internal secretion of the kidney, or the lack of it; by others the blame is thrown on other organs for failure of elimination. Certain it is, however, that there is a factor in the production of severe nephritic symptoms which so far has eluded us; as to what its nature, source, or final distribution may be we are quite in the dark.

There were 39 cases in which routine examinations were made of the urea and chlorides in the blood, and in many of each a fairly complete analysis, too, was made of the urine.

The series is divided arbitrarily into non-fatal and fatal cases; also, it was noted whether the cases were suffering from uræmia with convulsions, or without, when the specimens were obtained.

When one refers to the accompanying tabulation of fatal cases one is struck by two features concerning the urine, namely, the low percentage of chlorides, and the low total chloride output for the twenty-four hours. These are actually low, and decidedly low by comparison with the figures given for the non-fatal cases. Barring the fact that the fatal cases passed a daily average of 230 c. c. urine less than the non-fatal cases,

and that the percentage of albumin was a little higher, there is no essential or marked difference between the urines of the two classes, so far as these analyses go; and, contrary to the usually accepted idea, the urea, both in percentage and total output for the twenty-four hours, was found to be nearly the same; the percentage for the fatal cases being actually in excess of that for the non-fatal series, and the twenty-four-hour output only a trifle over one gram less than in the milder cases.

TABLE.
URINE.

Averages.	Total amount, 24 hours, C. c.	Specific gravity.	Amount albumin.		Urea, 24 hours, Grams.	Per cent. chlorides.	Chlorides, 24 hours, Grams.
			Per cent.	Per cent. urea.			
Fatal cases	950	1015	7.9	1.63	14.02	.21	2.1
Non-fatal cases.	1280	1013	4.3	1.36	15.4	.66	10.2

BLOOD.		Average per cent. urea.	Average per cent. chlorides.
Fatal Cases:			
For all . . . . .		.207	.67
With convulsions . . . . .		.25	.6
Without convulsions . . . . .		.2	.63
Non-fatal Cases:			
For all . . . . .		.076	.65
With convulsions . . . . .		.078	.6
Without convulsions . . . . .		.077	.76

Now, when we turn to the blood examination of these cases, comparing one with the other, the average urea content of the blood of the fatal cases is greatly in excess of the other—.207 per cent. for the fatal cases, as over against .077 per cent. On the other hand, the percentages of total chlorides in the two classes do not show much difference, the more severe showing .67 per cent., and the others .65 per cent., so that, although we see a well-marked both relative and actual diminution of the total chlorides in the urine of the fatal cases, there is not, as one might expect, a corresponding increase of the chlorides in the blood.

Turning from the classification based solely on the termination, let us examine the percentages of urea and chlorides in the two classes of cases, fatal and non-fatal, with regard to whether the patients were suffering from uræmia with convulsions or without. We find that the *non-fatal* cases with convulsions showed an average urea of .078 per cent., chlorides .6 per cent.; while those suffering simply from uræmia without convulsions gave urea .077 per cent., chlorides .76 per cent. Among the *fatal* cases with convulsions the urea averaged .25 per cent., and chlorides .6 per cent. (the latter identical with the chlorides of the convulsive, non-fatal series); those without convulsions were almost identically the same, *i. e.*, .2 per cent. urea, .63 per cent. chlorides; so that the averages of the entire series of 21 fatal cases were practically the same, without regard as to whether they suffered from convulsions or not, showing that it was something besides the

urea content which was responsible for the convulsive seizures.

It is of interest, at this point, to see what influence these two substances had upon the freezing-point of the blood; and, although a cryoscopic examination was not made in every case, it was in a number of them, and the results taken from the hospital records are interesting, so far as they go.

In the fatal cases the range of the freezing-point of the blood was from -54° C. to -9° C., with an average of -66° C., or very much below the normal, which is considered about -58° C. This is quite as one would expect.

Among the non-fatal cases the freezing-point ranged from normal -58° C. to -63° C., with an average of -61° C., also decidedly below the normal, though not so low as in the fatal cases, which had a higher urea percentage. From all this it is seen that the freezing-point varies more or less directly with the percentage of urea in the blood, and does not depend on the chloride content in these cases, as this was not far from the normal, and was low where the freezing-point was higher, namely, in the fatal cases. This seeming interdependence of the urea percentage and the freezing-point is not invariable, as in one fatal case the urea was .04 per cent., and the chlorides .8 per cent., while the freezing-point was -62° C.; showing that there are substances in the blood of fatal nephritic cases which may lower the freezing-point other than these two substances with which we are at present concerned. All this goes further to prove that it is not the urea—certainly not the chloride—percentages in the blood which are responsible entirely for the fatal result, but that there is an element of which we are still ignorant, and for the presence of which we have no index.

To sum up the points of interest in these 39 cases:

1. The total amount of urine excreted in twenty-four hours, the specific gravity, percentage of albumin, percentage of urea, and total urea in the fatal and non-fatal cases, vary within very narrow limits, much narrower than we are led to believe from the text books.
2. The percentage of chlorides and total chlorides in the urine of immediately fatal cases is markedly lower than in those cases in which at least a temporary improvement takes place (for the time being non-fatal).
3. In the blood, the average percentage of urea in the fatal cases is nearly three times as great as in the non-fatal.
4. The average percentages of chlorides in the two classes show an insignificant difference, the fatal cases being a little less rich in chlorides.
5. The presence or absence of convulsions in the fatal or non-fatal series seemed in no way associated with the differences in the percentages of urea and chlorides.

ILLUMINATING-GAS POISONING.

The next series of cases to be investigated

with respect to chlorides and urea in the blood, in connection with certain other clinical findings, were those of acute illuminating-gas poisoning, 20 in all.

Unfortunately in 7 the symptoms were so mild that after a primary bleeding of a few hours' rest they were transferred to other hospitals, so that data other than the estimation of the urea and chlorides were not obtained.

The first few cases observed showed a decided increase in the total chlorides in the blood, but this was found not to be true of all cases, or even of all severe cases; and, in fact, the cases which were exposed to the gas eight hours or over showed, on primary phlebotomy, an average chloride percentage of .81 per cent. Some of these took the gas with suicidal intent, others by accident, so that, naturally, the amount inspired in the same length of time varied, and they were not all profoundly poisoned on arrival at the hospital.

Of the 11 cases which were in coma at the time phlebotomy was done, the average chloride percentage was 1.02 per cent., showing a noticeable increase. Another factor which had some influence on the percentage of chlorides found was the age of the patients; for, without exception, all the patients showing high chlorides were under thirty years of age, while all the cases over forty—and most of them were much older (sixty to eighty, average fifty-nine), irrespective of time of exposure or coma—showed an average chloride percentage of .6 per cent., varying from .44 per cent. to .9 per cent. The cases with low temperature had a low chloride content, simply going with a mild toxæmia, while those with a high temperature were accompanied by an increase in the chlorides, as, e. g., cases with a temperature of 102° F., or over, showed 1.31 per cent. chlorides.

When we come to examine the leucocyte count, we find that with one exception they all have a moderate hyperleucocytosis, irrespective of termination, age, temperature, mental condition (coma), or chloride percentage, averaging 18,000 per cubic millimetre. Secondary counts showed decreasing leucocytosis, and, according to the hospital records, the 3 cases in which a differential count was made the leucocytosis was of the polymorphonuclear variety.

So far as the percentage of urea is concerned in this condition, it varied within very narrow limits, and showed an average for the series of .05 per cent., or only .01 per cent. above the normal limits, so that it may be omitted from the discussion as of no importance. There were only three fatal cases, and only one in which death was due to the gas poisoning, the other 2 dying, 1 on the sixteenth day from bronchopneumonia, the other on the thirteenth day from abscess of the lung. The 1 case which died from the effects of the gas showed a softening of the lenticular nucleus, with a chloride percentage of

1.47 per cent. on the twelfth day after exposure, the case never having regained consciousness.

Deductions and points of interest concerning these cases:

1. That while many of the cases show a hyperchlorinization of the blood, it is by no means invariable, and that those in which it is most regularly present are young adults, in coma, with a temperature of 102° F., or over, when bled.

2. There is a regular hyperleucocytosis in these cases, averaging for this series 18,000 per cubic millimetre without regard to age, mental condition, height of temperature, or termination; for in all these separate conditions the average was about 18,000 per cubic millimetre.

3. There is no notable increase in the urea under any of the foregoing conditions.

TABLE OF AVERAGES OF BLOOD EXAMINATIONS.

1. Cases exposed eight hours or more show .81 per cent. total chlorides.
2. Cases in coma show 1.02 per cent. total chlorides.
3. Cases with temperature 102° F., or over, show 1.31 per cent. total chlorides.
4. Cases under 30 years of age show 1.26 per cent. total chlorides.
5. Cases over forty years of age (most of them were about sixty) show .64 per cent. total chlorides.
6. Leucocytosis, irrespective of other conditions than the gas poisoning, shows 18,000 per cubic millimetre.

LOBAR PNEUMONIA.

So much interest and investigation are now being centred in the study of lobar pneumonia that any additional data in respect to it, even though meagre, seem worth tabulating, always with the understanding that a series of cases, either large or small, can never stand alone as pointing the way to definite or positive conclusions, but must be taken in connection with results obtained from many sources.

To this end the percentage of urea and chlorides in the blood have been determined in 16 cases of lobar pneumonia, the whole being tabulated and such conclusions as possible drawn. Of these 16 cases 4 recovered and 12 died—rather an unusually high percentage of fatal cases; but on this account possibly the findings are of more value as showing certain conditions or sets of conditions which may be found under such circumstances.

Irrespective of the termination of the case in death or recovery, the day upon which the phlebotomy was done had comparatively little influence upon the percentages found, with the exception that the later the day, we find the percentage of urea gradually increasing; not always constantly, as there are exceptions, as shown by Case III, although here the high percentage was probably due to an accompanying chronic nephritis. The occasional and irregular fluctuations of the chlorides, so far as the day of disease was concerned, is without explanation; the mere fact of its irregularity militates against its acceptance as an important factor.

TABLE I.

Case	Day of diseases.	Chlorides, per cent.	Urea, per cent.
1	2d	.50	.043
"	2	.67	....
"	3	1.18	.120
"	4	.69	.047
"	5	.66	.032
"	6	.67	.074
"	7	1.40	.050
"	8	.88	.120
"	9	.61	.043
"	10	1.27	.070
"	11	1.39	.084
"	12	.95	....
"	13	.60	.077

There were 2 cases in which the day of disease was not determined, and 2 in which the specimens were taken post-mortem; including these, and dividing the cases as to termination, of the *four who lived*, the percentage of chlorides averaged .78 per cent. (limits, .67 to 1.27 per cent.); the urea averaged .053 per cent. (limits, .043 to .07 per cent.). (NOTE.—The normal percentage of urea in the blood is considered to be anywhere from .01 to .04 per cent.). So it may be seen in these cases that the chlorides were about normal, while the urea showed only slight increase.

Taking up the 12 fatal cases, we find that the total chlorides averaged .96 per cent. (limits, .6 to 1.83 per cent.); the urea averaged .08 per cent. (limits, .032 to .14 per cent.); hence, in this series we find the percentage of chlorides somewhat higher than in the non-fatal cases. On the other hand, by contrast, the urea is decidedly increased, and shows an average almost twice the highest normal limits.

In considering, again, the percentages of these two elements in connection with the extent of lung tissue involved, it is found that those cases, irrespective of termination, which had only one lobe involved showed an average urea of .066 per cent.; with two lobes, .083 per cent.; and with three or more, .11 per cent.; this increase being a constant and marked feature of the cases. That this was not dependent on high temperature is shown by the fact that of all the cases which had a temperature of 104° F., or over (10 in all), the chlorides were practically normal, .82 per cent., and the urea average showed only moderate increase, .062 per cent.

Turning to another clinical feature of interest in this connection, when we examine the leucocytes we find that the average count for the non-fatal cases, taken at time of bleeding, is 20,940 per cubic millimetre, while the range for the disease was 18,400 to 24,400. The average for the fatal cases was only 10,000 per cubic millimetre, range 5,800 to 14,000. This, of course, follows the usual rule as already generally known, the only interesting feature here being the association of a low leucocyte count with the high percentage of urea found in the blood of the fatal cases.

The only other point of interest, so far as

the blood examination goes, is the apparent fact that when the cyanosis is marked the urea percentage is higher, averaging, for these cases, .087 per cent.; this, too, irrespective of area of lung involved, although they were all fatal cases. No systematic examination of the urine was made in the cases with respect to the chlorides and urea, but as a rule, when examined, the percentage of chlorides was low, increasing as convalescence was established, and in several cases the estimation of the chlorides practically made the differential diagnosis before the physical signs developed. There were, however, exceptions, so that this aid to diagnosis, while often important and frequently lost sight of, is not universally present.

Example: Patient admitted to hospital; stiff neck, and practically all signs of meningitis. Pneumonia was not suspected until estimation of urinary chlorides showed only .07 per cent. In forty-eight hours physical signs of lobar pneumonia developed.

TABLE OF CASES AND AVERAGES.

CASES.	Chlorides, per cent.	Urea, per cent.	Leucocytes, per c.mm.
Non-fatal. ....	.78	.053	20,900
Fatal .....	.96	.080	10,000

Conclusions regarding these cases of lobar pneumonia:

1. Although an almost uniform reduction of the urinary chlorides takes place, there is not a corresponding regular increase of the chlorides in the blood, although in some severe cases the chlorides may be high. The variations are apparently unimportant.

2. The percentage of urea in fatal cases is much greater than in non-fatal cases, averaging in this series, twice the amount of the highest normal limit.

3. Irrespective of termination and complications, the greater the amount of lung tissue involved, the higher the percentage of urea in the blood; showing the great importance of excretion in this disease, particularly among those cases with large lung involvement.

4. The association, in the fatal cases, of the high urea percentage and a low leucocyte count.

5. High temperature, *per se*, does not seem to have any marked influence on increasing either the percentage of the chlorides or urea in the blood in pneumonia.

MISCELLANEOUS DISEASES.

There were 26 cases of various other diseases in which the chlorides and urea were estimated in the blood or urine, or both, and of these there were 6 with chronic endocarditis, who were bled to relieve symptoms of acute pulmonary or general congestion. In these the chlorides in the blood averaged .59 per cent. and the urea .048

per cent., a trifle low for the former, but not enough to be worthy of note.

Of the other cases, there were only a few which deserve notice as presenting any interest:

1. Two cases of alcoholic dementia: 1 showed chloride percentage of the spinal fluid to be, on two examinations after lumbar puncture, 1.45 per cent. and 1.40 per cent. The other three examinations made of the blood showed chloride percentage of .64 per cent., 2.2 per cent., 3.2 per cent.—the last being the highest percentage recorded in any of these series.

2. A case of chyluria, in which the urinary chlorides were always high, e. g., 1.96 per cent., 1.69 per cent., 1.12 per cent., on three analyses.

3. Gastric carcinoma with pyloric stenosis gave total chlorides in the blood of .65 per cent., urea .053 per cent., showing that the ability to assimilate only small amounts of water does not necessarily lead to a concentration of the blood enough to raise the percentages of these constituents.

The other cases examined included hysteria, tubercular pleurisy, cerebral hemorrhage, chronic plumbism, malignant endocarditis, and diabetes mellitus, none of which showed any particular change from the normal in the percentage of chlorides of the blood.

One case of epidemic cerebro-spinal meningitis showed .1 per cent. of urea in the blood, and chronic plumbism showed the same, probably from an accompanying chronic nephritis.

I wish, in conclusion, to express my hearty thanks to Drs. J. S. Thacher and George A. Tuttle for their courtesy in allowing this work to be done in the laboratory of the Presbyterian Hospital, and for their interest and advice in its carrying out; also to the attending and resident medical staff for their aid in securing material. In addition, I am indebted to Dr. Alfred T. Os-good for the use of the cryoscopic estimations, and to Miss Granat, the hospital chemist, for several estimations made in my absence.

SOME OBSERVATIONS ON THE FITTING OF GLASSES.

By S. W. S. TOMS, M.D.,

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THE article of Dr. A. Edward Davis which was read at the centennial meeting of the New York State Medical Society, January, 1906,* was addressed to the general practitioner, and for this reason—rather than from the viewpoint of the oculist, I wish to offer a few observations.

In the discussions at the time a colleague of Dr. Davis' took exception to the title because of the suggestiveness of association to the "refracting optician." This cult persistently has endeavored to secure legislative enactment for a number of years to become a recognized "profession," but the united opposition of the med-

ical societies of the State fortunately has prevented this infringement of the medical act.

It is not my wish to be hypercritical or quibble over abstract terminology, as Dr. Davis' *locus standi* so well represents the methods and position of the best of American ophthalmologists—to which I subscribe in a large measure. Nevertheless, there appears to me much that is somewhat dogmatic that may be accepted by the general practitioner as absolute, but which the experiences of myself and others tend to modify, in statement at least, as to the reliability of certain methods of examination that may mislead the unwary if a too great dependence is placed upon them, if making use of confirmatory tests is not also carefully employed.

First, as to the value of the ophthalmometer—and it is to be assumed the Javal model, made with the original Wollaston bi-refringent quartz prism, not the glass prisms of the cheap instruments, is referred to; as there are a number on the market, expensive and cheap, no two of which will give the same readings. Dr. Davis has by his writings and teachings directed much attention to the merit of this instrument as reliable in measuring *the amount* ("within .50 diopter") and the *axis astigmatism*. I quote the author referred to: "The use of this instrument has practically revolutionized our methods of fitting glasses, at least it has for a great many American ophthalmologists. Instead of using cyclopegics in almost every patient under forty years of age, as was necessary before the ophthalmometer came into use, we are now able to dispense with the cyclopegics almost altogether."

I certainly cannot confirm this statement with my own ten years of experience with many hundreds of cases, of which I have careful records of the corneal curvatures and the astigmatic measurements, and from the overlapping of the mires. I find these two frequently do not correspond, and who shall say which should be the guide of a true reading? I also find discrepancies in the determination of astigmatic axes. I do not wish to deprecate the value of the Javal ophthalmometer. I use it constantly and with every case of refraction, but I do not dogmatically rely on it for exactness—and exactness is the only scientific resource we should be satisfied with, to the exclusion of employing mydriatics.

The ophthalmometer generally simply spells astigmatism. It does not determine the *kind*, excepting it be corneal. Javal has assumed there may exist a posterior corneal astigmatism which may neutralize the anterior, as shown by the overlapping of the mires when the selected cylinder is not accepted by the patient which the instrument indicates should be prescribed. I formerly relied much more upon the readings than I now do, and prescribed cylinders accordingly, urging my patients to persevere and "get used" to their correction, believing I was fitting their eyes

* *Medical Record*, June 30, 1906.

properly. I know now why many of my patients were not comfortable with their glasses. I gave them too strong cylinders in some instances, and in others I should not have given any at all. I will cite some examples:

M. E. B., Aet. 38, vision O. D. $\frac{20}{30}$; O. S. $\frac{20}{20}$. Corneal curvature in right eye, $\frac{28.50 \text{ M. M., Primary axis at } 30^\circ}{29.00 \text{ M. M., Secondary at } 120^\circ} = .50 \text{ D.}$

Astig. She accepted + 1.12 Cy. ax. $180^\circ = \frac{20}{15}$. Under mydriatic she took + 1.50 Cy. ax. 180° ; the left eye was approximately, as ophthalmometer showed, $\frac{27.25}{28.00} @ \frac{60}{150} = +.50 \text{ ax. } 60^\circ$. This girl recently had an attack of amnesic aphasia suddenly supervening a two weeks' severe neuralgic hemicrania. Her life was despaired of for two weeks. She had no motor paralysis whatever. She is now apparently in perfect health since wearing her glasses.

F. H., another woman, Aet. 45, right eye $\frac{25.50}{27.00} @ \frac{100^\circ}{10^\circ} = 1.50 \text{ D. of Astig.}$ She accepted + .75 axis, $135^\circ \odot + 1.25 \text{ Ds}$, bringing her vision from $\frac{20}{70}$ to $\frac{20}{20}$. Left eye $\frac{25.25}{27.25} @ \frac{90}{130} = 2.00 \text{ D. of astigmatism.}$ In this eye she accepted + .50 ax. $60^\circ \odot + 1.25 \text{ Ds} = \frac{20}{20} + \text{from } \frac{20}{70}$.

In both these cases the overlapping of the mires corresponded with the arc readings for corneal measurements. These two cases demonstrated that absolute dependence cannot be placed upon the ophthalmometer for exactness. My instrument is Javal's model, made by Meyrowitz, and was tested with an emmetropic artificial cornea from the standard imported French model, by Prof. Francis Valk in 1900.

I could cite many other cases in which discrepancies occur both in the amount and in the axis of astigmatism, which retinoscopy and subjective tests showed were misleading and incorrect.

In his claims for the ophthalmoscope, Dr. Davis speaks of appreciating the "gross refractive errors" with it, but claims more for its other use in diagnosis of systemic diseases. This is as it should be, for scarcely will two oculists agree in estimating the refraction of the human eye with this instrument; although previous to 1885 it was the chief reliance in eye clinics and private practice.

In comparing hospital refraction records, previous to the time alluded to, with our present ones, we are all struck with the preponderance of astigmatic eyes, whereas formerly hypermetropia comprised over 65 per cent. of all refractive errors. The individual control over one's accommodation is a lost art; if, in fact, it ever was found!

Now, as to the necessity of employing mydriatics: retinoscopy is impossible without it for accurate estimations.

In *low degrees of astigmatism* where ciliary spasm practically always is present at all ages, a minus cylinder will invariably be preferred to a plus, especially by those under thirty-five years of age. Ciliary spasm often is sufficient to mislead in the use of the retinoscope in these cases. It is a fact that many cases are wearing minus cylinders in which simple or compound hyperopic or mixed astigmatism is the refractive error present. I will give an illustrative case:

J. S., aet. 40, a sufferer since childhood with migrainous attacks, was fitted in 1903 with O. D.—.75 ax. 30° , O. S.—1.00 ax. 180° , improving his vision to $\frac{20}{15}$ in both eyes. I went carefully over his refraction and he would not accept any other glass. He wore these with much relief, seemingly, until the summer of 1904, about one year, when after an intense attack of migraine and "biliousness" lasting about a week, he found he afterwards could not use his glasses any more. He was then re-examined under a strong mydriatic with this result:

V. in O. D. $\frac{20}{20} \text{ w} + 1.00 \odot + .75 \text{ ax. } 100^\circ = \frac{20}{15}$
V. in O. S. $\frac{20}{20} \text{ w} + 1.00 \odot + .75 \text{ ax. } 70^\circ = \frac{20}{15}$

Retinoscopy confirmed this, and the ophthalmometer showed right eye $\frac{24.00}{25.00} @ \frac{100}{10}$, left eye $\frac{24.00}{25.00} @ \frac{75}{165}$. Post-mydriatic acceptance of the full cylinder correction only.

The subsequent relief justified the use of the more scientific investigation of this case, *i.e.*, the employment of a cyclopegic, as he has scarcely any more trouble, although he is constantly using his eyes, and often excessively, but he has not required any further change.

Our objective tests can never supplant our subjective. There is the individual to be reckoned with, not simply an optical instrument, as some seem to conceive the human eye to be.

The objective tests are supplementary and confirmatory, but after all, the comfortable acceptance of the trial lens is the *final* verdict with all ophthalmologists. This is conceded.

It is undeniable there may be some risk in the indiscriminate use of cyclopegics in patients in the presbyopic age. There is also risk in administering anesthetics, but the general use of them goes on; and no more glaucomas should result than deaths from narcosis. Proper judgment is essential in either case.

Hematropin and cocaine in combination are reasonably safe and rapid; and a drop of 1 per cent. eserine solution, instilled immediately afterward, not only returns the ciliary function, but is a safeguard against glaucoma. No one need be deprived of using his eyes longer than one to three hours, so this bugbear should not be advanced as a valid reason against the practice of employing a mydriatic.

"In functional insufficiencies of the ocular muscles," Dr. Davis says he "reies *wholly* on correcting refractive errors properly, general tonics, and rest, *for a cure*" (italics mine).

He says also, "If not relieved in this way and the insufficiency progresses into a strabismus, I perform a complete tenotomy of the opposing muscle," etc. Dr. Davis omits to inform us how he differentiates between a so-called "functional insufficiency" and a permanent one that is not a strabismus, which has existed from birth—not due to disease or paralysis; and does he wish the general practitioner to accept his teaching that it is better to do a tenotomy on an opposing muscle when its fellow is unable to functionate (because of a strabismus-paralysis?) rather than investigate the relative strengths of the long muscles and their ability to rotate the eyeball in the orbit? I have seen a superior rectus so tense as to cause 12° of

hyperphoria that showed *not a vertical* strabismus but a *lateral*, which, when cut, dissipated the convergent squint and made binocular single vision possible.

I am a little surprised that this author is not as enthusiastic over the instruments of precision in objectively estimating muscular anomalies as those he advocates for visual defects. How does he treat the cases of muscular imbalance *that have no refractive errors?*

I fully agree with him about prisms and prism exercises. The muscles that are over-trained as those of a pugilist speedily relax when not in training. And would he call "functional" a condition of an externus that was so film-like in structure as not to hold a stitch in an advancement for an esophorial correction? Such a case was operated on for me by Dr. Alex. Duane recently. There are many men who do not believe in operations on the eye muscles; also plenty of medical men who similarly oppose operations for appendicitis. Both should study the pathology *in the living subject*. Eye muscles are like other anatomical organs, they are not all the same in size, length or attachments.

The innervation theory of Hansen Grut* is accepted by Gould and others, who themselves never or rarely operate and fail to appreciate the anatomical factors that underly the pathological etiology of muscular imbalance, and doubtless are equally obscured by the apparent successes they have—their failures they have not been able to recognize. The fact remains that many cases do not receive ultimate relief until a muscle is shortened, or a tenotomy done; and for very good and manifest reasons, as glasses fail to relieve in these cases. In cases in which the trouble is wholly muscular and not refractive, Dr. Davis should inform us how he manages, as he does not employ prisms.

The references he has so generously employed in his interesting article of the opinions of the New York neurologists on eye-strain are not accepted by the general practitioners fully, as all of us have seen mistaken diagnoses of many of these eminent men disproven after painstaking eye examinations have been made and the necessary corrections prescribed.

THE PRACTICE OF MEDICINE DEFINED.

The practice of medicine is the exercise or performance of any act, by or through the use of anything or matter, or by things done, given or applied, whether with or without the use of drugs or medicine, and whether with or without fee therefor, by a person holding himself or herself out as able to cure disease, with a view to relieve, heal, or cure, and having for its object the prevention, healing, cure, or alleviation of disease.—JUDGE JOSEPH I. GREEN, New York City Court.

AN INQUIRY CONCERNING REMOTE HEREDITY AND ASYMMETRICAL DEVELOPMENT.*

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WHILE this paper more properly belongs to anthropology than to medicine there is a strong temptation to present it before you for the reason that it may serve as a possible explanation of cases of abnormal physiology and because physical abnormalities are sometimes the precursors of conditions that will eventually become pathological.

From a time so remote that even the most prominent historical facts are finally lost in an impenetrable haze or have been fashioned into myths and legends the whole area of the eastern continent has been traversed by hostile armies. It has been an ocean of human passions, quiet at times in one place and turbulent in another. Mountains interposed have made enemies of adjacent people. Intervening rivers have prohibited cordial relations between dwellers on opposite banks. Royalty has always been in search of the foot of the rainbow over-arching another realm; and has gathered its energies and gone forth to extend its domain or to meet its overthrow in the test of conflict. So over and over again the waves of invasion and conquest have swept backwards and forwards and effaced tribal lines and national boundaries.

The victors have always seized the spoils; and they have always impressed their own traits upon the descendants of the surviving vanquished. Stature, feature and mental qualities have been introduced and transmitted, and in this way have modified the character of the people that have succeeded them. These human tempests have not been confined within continental shores but have reached the outlying islands that became the ledges upon which the spray of warfare finally dissolved. Thus it is that Britain has received successive races that have overlain their predecessors. The Norsemen came, the Danes came, the Saxons, the Angles, the Celts, the Normans, the Romans, all came and have passed away, but each has left its impress upon the forms, faces and speech of the islanders, each has left traces of its myths, its legends and its religious observances; each has left outlines of its fortifications, its public structures and its domiciles; so that the descendants of the English-speaking people to-day as well as the descendants of those who have emigrated from the mainland may regard themselves as the sum total of intermingling lines of European and primarily of Asiatic ancestry.

The primary step in the development of a fertile embryo is segmentation. Granting that the parentage of the embryo is equal, that is, that both are of the same race in its purity, that

*Knapp's Archives, Vol. xxiv, Trans. British Med. Assoc.

*Read before the Broome County Medical Society, July 3, 1906.

the female is the hereditary equivalent of the male in stature and mental development, though not necessarily of close tribal consanguinity, then it may be expected that the segmentation of the ovum will be equal and that the individual developed from the embryo will be symmetrical. The halves of which the body is composed will be duplicate and uniform with each other, the cerebral hemispheres will balance. The lateral cranial and facial contours will be alike. The shoulders will be horizontal. The strides will be of the same length. The eyes and ears will occupy a plane horizontal to the long axis of the body. They will be of equal size. There will be mental equipoise and a physical vigor which fits them especially to be master of themselves as well as master of men. This, of course, presupposes that the individual is of a dominating race, but probably true in a degree of any race.

When, however, the parentage is composed of a larger and a smaller race the segmentation of the ovum may be unequal. I say may be—for sometimes the line of descent follows exclusively one parent in its makeup and observes this for several generations. You have all seen one or two instances, where four generations, exclusively male succession or exclusively female succession, were really but the same individual at different ages; but compared with the general result these are rare exceptions.

The unequal segmentation of the ovum defines the physical asymmetry of the individual throughout its life. The inequality is noticeable in the stature, there is a decided asymmetry of the skull and face. One side is distinctly smaller than the other, one eye and one ear are smaller and both are below the horizontal plane of the face. There is also a lateral retrocession of the facial plane. The arm is smaller and shorter. The shoulders tilt towards the lesser side. One leg is shorter and smaller than the other. This discrepancy is more frequent on the left than on the right side although examples of right disparity are not infrequent. We cannot carelessly refer this unequal segmentation or the consequent unequal development of the individual to accident. But we can with good reason imagine that the asymmetry of the two individuals, combined to make one body, may result from unequal physical features of the ancestral mixture. This asymmetry is often seen in the cross-breeding of domestic animals and fowls. At the New York Botanical Gardens, recent experiments in the cross-breeding of large and small leaved primroses have developed a plant with alternate large and small leaves.

Thus far we have considered rational and easily explained conditions. What follows must of necessity be conjecture and may or may not be true. I certainly do not know although some experiments indicate that there may be truth within it.

You may select ten individuals, place them upon an unobstructed plain, blindfold them completely, instruct them to walk rapidly forward; one and possibly two of the ten will walk directly forward, the others will take courses with varying degrees of curvature. The variation will depend upon the embryotic disparity and the extent of ancestral inequality. Some will describe a comparatively short curve, while others will approach a comparatively straight line. The curve coincides with the unequal length of the strides.

Select ten young men at fifteen years of age. One and possibly two will be successful men, the others will show a progress varying from failure to something better than mediocre. If, however, among these there may be some whose motor power, by that I mean the heart, is an inheritance from the larger of the mixed parentage, then these individuals will display a great mental and physical endurance. If the vital inheritance is from the smaller of the ancestral factors the available physical energy varies with decreasing size of the vital organs down to absolute laziness. The individual is, in fact, "constitutionally tired." The motor is too small for the machine to which it is attached.

Select again ten young men at fifteen years of age; one and possibly two of these will certainly develop upright lives. They will do no social injury, but will be indifferent to active participation in religious observances. The others will vary from religious extremists to conservatives in devotional matters. That is, the majority will commit varying degrees of delinquency which will appear to them to be a sufficient reason for an appeal for forgiveness with more or less supplication and genuflexion. Consciousness of delinquency suggests a subterfuge to circumvent consequences. One, possibly two, doing no injury, committing no violation, are equally unconscious of any necessity for special expiations and dispensatory attentions, and therefore seek none.

From the premises we may advance this theory. Assuming that we have under observation a normal individual, one in whom there is no physical disparity, whose cerebral hemispheres are duplicates, and whose eyes, ears and members are equal to their mates. In this subject we have a perfectly normal, mental and physical machine. When it walks, it walks with equal strides. When it talks, it talks with smooth articulation. When it looks, there is no lateral scowl or head tilting. When it thinks, there is a synchronous cerebration. That is, the hemispheres act together and in harmony, each half of the mental machine producing the same amount as its mate and together with it; hence we have an ideal brain for consecutive, prolonged and arduous work. This brain finds a quick insight into business and acts quickly on this insight. It will accomplish enormous tasks. It is the brain that furnishes the expert, the

master, in whatever occupation its owner may be. It matters not whether it is legitimate or illegitimate occupation. As a rule its capacity is in a certain relation to stature inches.

Assuming that we have, on the contrary, the unequal personality. The cerebral hemispheres are not duplicates and upon the greater one devolves the weightier duties. It may be that a strain from an old intellectual race may have been the parent of one hemisphere. It may have been a descendant from some of the ancient Mediterranean civilizations that in their vigorous days left the impress of their legions upon the outlying races. Obviously, this hemisphere must accept the supremacy of the mental machine. It is virtually compelled to drag its mate along with it, but exhaustion must ultimately follow, and then occurs a theoretical alternate cerebration, in which the lesser hemisphere assumes the task abandoned by the greater through weariness. The lesser hemisphere may have come down through the conquests that the people of Central Asia obtained throughout Europe and whose descendants extinguished the civilization from which the greater hemisphere came. They were the Hyperboreans of the ancients, the unknown and indefinite multitude that always hung like a threatening cloud above the nations of southern Europe. They were predatory. They were the wild beasts of the human family; and their predatory instincts are not entirely effaced by generations of intermixture. This cerebral hemisphere follows to some extent its primal instinct as well as its other features. It may be less in size, it is less developed, less amenable to moral and social restrictions, and, given its way, will do disreputable acts. Herein lies the dual personalities claimed by malefactors. Herein lies the true Dr. Jekyll and Mr. Hyde without resorting to the narcotics introduced by the novelist to explain the dual nature of his fictitious character.

It is indeed in the criminal classes that this disparity is more frequent. The primitive impulses have not yet been fully checked by centuries of dilution with other blood. The dual personality, while undoubtedly existing, does not furnish an excuse for escape from the consequences of violation of laws that undertake the protection of the lives and property of all citizens. Wild beasts must be caged, killed or tamed. While some of the criminal class may be degenerate, more of them are the opposite. They are the unequally and incompletely developed. When this condition is supplemented by artificial stimuli the intemperate fierceness of primal ancestry does not weigh possible eventualities. These dual personalities must continue among a people so long as accession to the population continues from the tangled lineage of eastern continental people. Probably when centuries and generations enough have passed without these accessions, a nation of homogeneous men may develop. This might occur could the same restric-

tions that for centuries enclosed the Japanese be built about ourselves. A similar purity of physical structure and mental uniformity might result as has developed in these remarkable people. Aside from the certain relation that this hereditary disparity of the human has to criminology and to insanity it also has a bearing upon some matters which really belong to the practice of medicine. You know how frequently you encounter a tortuous spine. Not all lateral curvatures are the result of disease, neither do they always result from neglected physical culture of the affected side. If you will make careful measurements in these cases, of the head, thorax, pelvis, arms and legs, you will sometimes find the crooked spine coexisting uniformly with general lateral inequality.

During infancy the disparity may escape notice. At ten years of age the facial asymmetry and slight lateral curvature will be observed. At twenty-five years the shoulder and head tilting will be pronounced, as also the cranial inequality. At forty to forty-five years, in addition to the foregoing, the unequal strides will be established and will continue. From this age until sixty or seventy the shoulder tilting gradually becomes more and more pronounced, as well as an apparent contraction of the minor thoracic wall which will amount to positive restriction of lung expansion, a condition which easily accepts successive acute pulmonary lesions until final exhaustion supervenes.

Again errors of refraction may be referable to the diminished size of the orbit as well as the contents of the orbit. Not only to the diminished diameter of the eye itself, but the diminished size of the muscles also. A smaller globe implies a smaller lens and a shorter depth. The effort of the small muscles of one eye to compete with the larger muscles of the other eye may produce not only divergence or convergence or any muscular deviation, but also corneal inequality from continuous muscular tension. The train of symptoms of muscular exhaustion here follow just as a train of symptoms attend muscular exhaustion in any part of the body which may vary from long and continuous pain to involuntary muscular spasms.

It may also be true that periodic alcoholism attends the exhaustion of the greater and more developed hemisphere in men of undoubted genius; the alcoholism occurring while the baser and less controllable hemisphere is on duty, and in an attempt to accomplish what its more capable mate may have done without the necessity of artificial stimulant.

The foregoing is a speculation only. I do not know that it is true. Neither do I know its falsity. I do not know that conditions of synchronous or alternate cerebration exist. Yet it is by a guess at what may be ahead that we are tempted to advance. It is for this that we have indulged in what has been termed the scientific use of the imagination, trusting that you will be equally indulgent.

HISTORY OF THE MEDICAL SOCIETY OF THE STATE OF NEW YORK.

By JAMES J. WALSH, M.D., Ph.D.,
NEW YORK.

PART II.

CHAPTER VII.

(Continued.)

Dr. Romaine was not present at the annual meeting of the Society, held at the end of the third year of his presidency. It is not surprising, perhaps, that he should have been absent once in three years when we consider the great difficulties of travel in those days, and especially at the stormy period of the year that is likely to greet the traveler in early February. If there are those who consider, now with all our traveling facilities, that, because of the inclement weather likely to be encountered so frequently at this season and which exposes the traveler to all sorts of risks, the time of holding the annual meeting should be changed to spring or autumn, it will be easy to appreciate in how much worse case were these old-time medical delegates.

Dr. Romaine had forwarded his presidential address to the Secretary, and it was read at the meeting. According to the by-laws of the time the President was bound under a fine of twenty-five dollars to send his address to the Secretary if he was prevented from coming to the meeting. After the reading of the address it was unanimously voted to have it printed in the Transactions, and it actually appears in the original pamphlet form of the transactions of these early meetings.

For some reason not easy to determine now Dr. Romaine's third anniversary address as President was not included in the reprint of the Transactions of the early years of the Society, made in 1868. Perhaps it was simply missed, though it is possible that it was deliberately omitted. It contains a certain amount of medical polemics, in which Dr. Romaine's own opinion, always likely to be expressed with vigor, has been stated very explicitly and without much respect of persons. This is unfortunate and yet apparently not sufficient to make the suppression of the address advisable since it is a plain statement of the other side of certain medical interests in the early history of New York City and of New York medical education, and, as is well known, there are always two sides to such questions, and the main duty of history is to bring out the other side.

Dr. Romaine's address is undoubtedly one of the best sketches of the history of medicine in New York City given in brief that have come down to us from so early and authoritative a source. If for no other reason than this it should be reprinted as a document to which those writing on the history of medicine in New York may thus more easily have access. The reprint of the Transactions gives no hint of the omission, and

it is only the fact that Dr. Samuel Purple, in his copy of the reprinted Transactions, now in the library of the New York Academy of Medicine, calls attention to the fact at the place where the address should be, and refers the historical student to his original edition of the early Transactions for Dr. Romaine's address that has called attention to it.

Besides New York medicine, however, Dr. Romaine's third presidential address has an excellent summary of the progress of medical education in modern times, which, while it is not correct in all its details, is eminently suggestive, and the errors in it are not mistakes, but are due to the lack of information with regard to the history of medical education at the time. On the whole, perhaps, the best notion of the entire subject of medical education can be obtained more easily from it than from many more lengthy descriptions. There is a striking tribute to Philadelphia and to Benjamin Franklin in the history of medicine and of medical education which may seem surprising in the mouth of a New Yorker until it is remembered that Dr. Romaine made some of his medical studies at the University of Pennsylvania and naturally looked back with kindly feeling to his Alma Mater.

ANNIVERSARY ADDRESS TO THE MEDICAL SOCIETY OF THE STATE.

(By Nicholas Romaine, read by the Secretary at the Annual Meeting of 1812.)

GENTLEMEN :

The constitutional period having arrived, which terminates my appointment as one of the Members of the Medical Society of the State, I proceed to execute my last duties by delivering the Anniversary Address.

On this occasion I am impressed with those feelings, which must naturally arise in being separated from enlightened Brethren, whose zeal to improve the healing art, to favour the progress of Medical Education, and to protect the people from professional impositions, I have so amply witnessed. If the office you have assigned me in this Institution, has afforded me more opportunities than other individuals to observe your disinterested patriotism and zeal to serve the community in some of its essential concerns; it inspires me with the fullest confidence, that you will not cease from your labours to improve your profession, and protect the general interests of Medical Literature in the State.

Your faithful exertions for the public benefit, and the honour of the Medical Character have gained you much public confidence. You are viewed as the guardians of a profession highly important to the community: which is directed to relieve the sick, and to distribute health, and becomes of advantage or detriment to society according as it is judiciously or improperly exercised.

As the patrons, therefore, of the healing art; as my fellow members of this Medical Society, ardent to fulfil the duties confided to you by law; I entreat your indulgence, while I lay before you some reflections connected with the former and present condition of the Medical Profession in this State; that where errors prevail, your exertions may be employed to eradicate or correct them; and that not unmindful of your obligations to the public, and the confidence reposed in you, you may cherish what is just, and patronize what contributes to public benefit.

From whatever causes our ancestors were influenced to embark from Europe to settle and possess the present territories of these United States, they left the

shores of their native land with the strongest prejudices in favor of their own received opinions, and transported with themselves the habits, customs and manners of the countries they had abandoned. These have been retained by their descendants with wonderful constancy.*

The condition, then, of the Medical Profession in the early settlement of this, and other American States, must have corresponded in some measure with what existed in the countries the emigrants had left, and may be best elucidated by a review of the State of Medicine at that period in the countries of Europe which had been the place of their residence.

The generous efforts of the Clergy to restore learning after the dark ages, were not confined to what related to Divinity, but were extended both to Medicine and to Law. In their Colleges and Seminaries, some of their order attended more particularly to Medicine, and the study of the Roman Law. Hence arose the divisions of the different faculties in their Literary Institutions. But an order of men who then possessed all the learning, and soon after, almost all the wealth and power of Europe, would not condescend to what they supposed derogatory, and in comparison to their high consideration, somewhat menial employments. Hence became necessary the attorneys, procurators, and notaries in the law, and the apothecaries and surgeons in medicine.

In these Monkish Colleges, the medical writings of the Greeks, Romans and Arabians were studied, and viewed with so much solemnity that no prescription for the sick could be maintained, unless supported by ancient authority. Such of the students as were competent to explain the ancient authorities in medicine were, under certain circumstances, denominated Doctors, or Teachers, and were allowed to practice Physic and to direct the surgeons in their operations, and the apothecaries in the administration of medicines, in conformity with the opinions of Hippocrates, Galen, and other ancient writers.

Such was the condition of the Medical Profession throughout Europe for several ages. So late as the reign of Henry VIII, the Bishops of England, by virtue of their clerical office, but without the authority of law, granted licences to practice physic. The colleges in every part of Europe, which were clerical establishments, did the same by ancient usage. Such, however, were the impositions on the public from the great abuse of medical degrees, from the European colleges, as to invite Legislative interposition; and by Acts of Parliament of the fourteenth and fifteenth of Henry VIII, the medical graduates of the Universities of Oxford and Cambridge were prohibited practicing physic, unless their degrees had been granted without favour, and in consequence of twelve years regular study; and all other graduates and licentiates were prohibited practicing physic, unless permitted after examination by the College of Physicians, which was then established in London. And Chief Justice Mansfield, in the case of Dr. Middleton, lately decided such to be now the law in England.

The establishment of the College of Physicians in London, consisting solely of medical men exercising authority over their profession in the kingdom of England, to guard the public from deception, was attended with the happiest effects, and gave in a short time respectability to the physicians, apothecaries and surgeons of that part of Europe. Hence the condition of the Medical Profession in the English establishments in the United States was at no time viewed with much disrespect.

No material changes in the condition of the Medical Profession took place on the Continent of Europe, until the period of the late French Revolution. The Reformation in the United Netherlands did not alter the privileges of Colleges, or the ancient arrangements relative to the Medical Profession.

The University of Leyden has long been viewed with

*In some parts of the Eastern States, the people still retain the manners and habits of the age of Cromwell. The attachment to ancient manners applies to many of the Dutch inhabitants of New York, and New Jersey, and to the French in Canada.

reverence by medical men. It was the school of Boerhaave and other distinguished medical teachers. In a period of near two hundred and fifty years from its establishment it never dishonored itself or the medical profession. The Latin language and not the vernacular tongue was then, and has continued to be, the language of the Dutch universities. No education, therefore, could be afforded to young surgeons and apothecaries, who were commonly uninformed in the learned language; nor was it supposed necessary, as they were directed in their professional duties by the supposed superior skill and knowledge of those who were doctors of the universities.

The Surgeons in Holland, with a few exceptions, were at that time and still are, barber-surgeons. The apothecaries were by law compounders of drugs only, and had slender pretensions to any knowledge of diseases; yet these barber-surgeons and apothecaries were without doubt the medical attendants on the original settlers of this State. Nor is it probable that any doctors of the European universities accompanied the settlers to the New Netherlands.

It would be painful to intrude on your notice the humble condition of medicine which seems to have existed for more than a century after the first settlement of this State. It could only consist of a statement of the arts and intrigues by which the practitioners of physic succeeded in advancing their private and professional emoluments.

The state of humiliation in which the profession of medicine existed in the City of New York so late as the middle of the last century has not escaped notice in the periodical publications of that time. In the 12th number of the *Independent Reflector*, published in the City of New York on the 15th of February, 1753, "on the importance of the practice of physic and the dismal havoc made by quacks and pretenders," it is observed "that there is no city in the world not larger than New York (containing more than 10,000 inhabitants) that abounds with so many doctors; they could boast of more than forty gentlemen of the faculty, the greatest part of whom were mere pretenders to a profession of which they were entirely ignorant, and convincing proofs of their incapacity were exemplified in their iniquitous practices." The advertisements they published proved them ignorant of the very names of their drugs. Ignorant as boys in the lowest class in a reading school of even the little art of spelling. The writer states his proofs of their being low-lived empirics and then says: "How few of the profession can even support a conversation upon the most common subjects of physics, without betraying their natural stupidity and ignorance, yet so strangely absurd is our conduct that the meanest quack among them insinuates himself into a subsistence. How many of the lives of the good people of this city must annually fall a sacrifice to those pests of society! While we are tenacious of our property, and justly glory in laws wisely calculated for the preservation of our professions, how preposterous is our conduct in trusting our persons to quacks and licenced assassins. By the law of the land, a person is guilty of murder for killing a man by throwing a stone from a house into the street where people usually pass, though there be no evidence of malice prepense. And shall an illiterate mountebank, who deals out destruction, escape with impunity, and be permitted to fall on the bereaved widow and orphan with an exorbitant bill of fees, to deprive them of the only solace they have left them?"

These were the sentiments of a man of the first consideration in this State. In the first and second editions of the *American Gazetteer*, the Condition of the Medical Profession in the City of New York is stated in a more humiliating manner. To patronize imposters is always disreputable to individuals and degrading to communities.

Such a state of society as favours a degrading condition of any of the learned professions can only be changed by the slow operation of time, and may not be effected, but by the succession of ages. In medicine especially, when people become attached to professional

imposters, their pride and self love are excited to give support to such persons with more zeal than is ever experienced by regular physicians and surgeons. Those who contemplate to cherish the progress of medical science in this State must not imagine that the difficulties which long opposed the advancement of knowledge are even now entirely dissipated.

Though the medical history of our State, for a long period after the first settlement, can only be viewed by professional men with painful reflections; yet soon after the middle of the last century various causes began, and others have continued since, to operate in meliorating the condition of the practitioners of medicine. The war which effected the conquest of Canada was, perhaps, the first circumstance which materially improved the condition of medicine in this State. The English army employed for that purpose left Europe accompanied by a highly respectable medical staff, most of whom landed in the City of New York, and continued some years in the neighbouring territories, affording opportunities to many young Americans of attending the military hospitals, and receiving such professional instruction as gave them afterwards consideration with the public. The physicians and surgeons of the Anglo-American army gained the confidence of the public by their superior deportment and professional information. The military establishments in this State, after the Canadian war, required medical and surgical attendants, so that the people had the benefit of their professional advice. In this manner a new order of medical men was introduced into the community.

About the middle of the last century also King's College was established in the City of New York, and some years later able Professors were invited from Europe to fill the Literary Departments of that Institution. This had a happy effect on the sentiments of the community respecting general Literature, and favoured the progress of scientific improvements.

The regulating of the Medical Profession has always been an object of attention in all wise governments; if it were only to designate the distinctions arising from examinations, and to confer legal protection, without penalties or forfeiture.

Before the American Revolution, laws were enacted to regulate the practice of physic in the City of New York.

These improvements were followed by the establishment of a Medical School in King's College, about the year 1766. In the year 1774, when I commenced the study of Medicine, about 25 persons attended the Anatomical Lectures, some of whom were students from the West-Indies. This school, however, did not flourish in a manner corresponding with the respectability and learning of some of the Professors. The conduct of the governors of the College it was said was injurious to the Medical establishment. Much opposition also existed among some inhabitants, and even many of the Profession, to a Medical Seminary. I cannot but gratefully remember the early lessons in the healing art which I received from the Professors of this establishment, and from other distinguished Physicians in the City of New York.*

Perhaps a more rapid change has seldom taken place in favour of Literature and the Medical Profession in any community than was experienced in the City and State of New-York from about the middle of the last last century to the beginning of the American war, comprehending a period of about twenty years.

The fear of the American Revolutionary war being much confined to this State afforded opportunities for medical information in the Military hospitals. In this manner, Professional improvements may be said to have become more generally diffused through the State than at any former period.

After the conclusion of the war which established the independence of the State, attempts were made to

arrange a medical school in Columbia College*; but these failed of success, and were connected with circumstances of so much mismanagement as greatly to affect the feelings of the citizens and produced what has been called the Doctors' Mob, which laid for three days all authority prostrate in the city, and subjected several medical gentlemen to insult. This unfortunate event tended to degrade the Medical Character in the public mind, and not only to retard the progress of the science, but to excite unpleasant sentiments in the people with respect to the profession. While medicine was about reverting to a humble state in the City of New-York, it was in some measure upheld by some young Physicians and Surgeons who were induced to form a private Society for the improvement of Medical Science and for favouring instruction in those branches of knowledge connected therewith, and the Almshouse and public gaols were made subservient to the purposes of affording practical information to Students.

The Medical Department of the public establishments in the City of New-York had usually been farmed out to the lowest bidder, and had always been granted to persons of little Professional Information.

Upon a presentation to the Magistrates of the City, about the year 1787, they established at the public expense an apothecary's shop and accepted the professional services for the sick poor of Dr. William Moore, Dr. Nicholas Romayne, Dr. Benjamin Kissam, Dr. Wright Post, and Dr. Valentine Seaman. These gentlemen afforded their gratuitous attendance for some years, and formed the first practical establishment as a Hospital and Dispensary under the Corporation of the city, which existed in the State. The Students had not only an opportunity of visiting the sick and attending to the Reports and Prescriptions, but also of hearing Lectures on most branches of Medicine, and with such success that in the year 1790 upwards of fifty Students attended the instruction thus afforded.

This private association induced the Legislature to pass an act in 1791 to establish a College of Physicians and Surgeons for the sole purpose of promoting medical Science. The Regents of the University, however, at that time declined executing the Charter, and by an arrangement made with the Trustees of Columbia College a third opportunity was afforded that establishment to become a seat of medical learning. The private teachers introduced 60 Medical Students to that College, which being reported to the Legislature, a grant of about 30,000 dollars was made to its Trustees for the purpose of enlarging the College buildings and furthering the objects of education.

The Trustees of Columbia College having obtained a number of Students, paying fees, and a grant of money from the public, proceeded to make such appointments as in the opinion of the Students were highly unsatisfactory, and which caused the greatest part of them to abandon the College and erase their names from its register. This circumstance contributed greatly to augment the number of students at the medical school in Philadelphia. The sick poor of the metropolis had for a century or more been attended by practitioners of physic in the manner already stated. The senior practitioners of the city had long viewed this subject with cold indifference, but as soon as the magistrates had employed men of fair pretensions to medical reputation to attend the sick under the public charge their sensibility became wonderfully affected.

The passions of envy and jealousy which sometimes excite men to actions worthy of a purer origin induced these practitioners to exert themselves to establish a Dispensary and to carry into effect the establishment of the New-York Hospital, both of which institutions now do honour to the City of New-York as well as to those gentlemen under whose superintendence they are placed.

Among the causes which had contributed to improve the condition of Medicine in the State towards the close of the last century it becomes me to mention a periodical publication, the *Medical Repository*. This

* Dr. Samuel Clossy, Dr. Peter Middleton, Dr. John Jones, Professors; Dr. William Farquhar and Dr. William Bruce, Physicians.

* Formerly King's College.

work was commenced in the year 1797; a quarterly pamphlet has regularly made its appearance from the time of its first publication, so as to bring the fourteenth volume almost to a close. This publication is a compendium of domestic information respecting Medical, Physical and Scientific researches, deserving a place in every public and private library.

The example of Pennsylvania and the eastern states has favoured scientific improvement among us. Several Students from this State have resorted to the College of Philadelphia, Connecticut, Massachusetts and New-Hampshire for instructions. Others educated in these seminaries have established themselves in this State and diffused a love of knowledge and zeal for the improvement of the human mind.

Philadelphia is certainly the first seat of science in the American empire. It was the residence of the immortal Franklin; his genius lives in her literary establishments, in her public library, in her Hospital for the relief of the sick poor. How respectable are a people who cherish their philosophers; who clothe them with civil power to exalt their own dignity.

The first seminary for medical education in the new world was founded in that City by the late Dr. Shippen, and his professional labours were assisted by Dr. Morgan and Dr. Kuhn, all native citizens. Dr. Ruth, the present distinguished Professor in that establishment afterwards aided them by his genius and talents in favouring the progress of Medical Education, and now this celebrated teacher enjoys the satisfaction to preside at a medical school not excelled by many in Europe.

The medical profession in this State is also indebted to the exertions of Dr. Warren and other Professors of Medicine in Boston, and to Dr. Smith of Dartmouth College for their labours in disseminating Medical knowledge.

The most important event to improve the condition of Medicine in this State is connected with the establishment of this Society by virtue of an act passed on the 4th day of April, 1806. This law was enacted at the solicitation of our professional brethren in the counties of Washington, Saratoga and Montgomery, who will always merit the respect and attention of this Society. May the establishment of this Institution form an era in the history of the State from which we may hereafter trace the successful progress of Medical Science.

Among the occurrences which I consider it my duty to lay before the Society is an act of the Legislature making the medical degrees of the Regents of the University licences to practice physic in this State. New-York affords the first instance in the modern history of Physic, of professional regulation being placed under the direction of men in power, after being vested in the members of that profession. It may be doubted whether any advantages to the community are likely to arise from this regulation. It is among the important duties of this Society to protect the profession from the intrusion of improper characters and to secure the public from impositions.

The Society was intended to unite in the memorials to the Honourable the Legislature for the purchase of a garden on the Island of New-York, belonging to Dr. Hosack. But it was surely presumed that the public expenditure of money would be proportionate to the advantages obtained in favouring the promotion of Medical Science. From general information upwards of 70,000 dollars are to be granted to Dr. Hosack for this garden. In a country where every farm or forest affords a variety of plants sufficient to illustrate the principles of Botany, public animosity may be excited on account of this transaction, especially as no advantages can result to Medical Literature commensurate to this purchase. The society ought not therefore to be implicated in the consequences which may probably arise hereafter in the opinion of the public on this subject, nor silently permit the sacred cause of science to be used as a pretence for favouring the views of individuals.

The researches of Professor Davy into the chemical constitution of Bodies have been continued during the

past year and the result has been laid before the Royal Society of London; the abstract of the developments of this enterprising gentleman is laid before you, together with such scientific improvements as have been presented to the public since the last anniversary of the Society.

It would be my duty at this time to lay before the Society every occurrence in the State during the last year connected with the interesting subject of our Profession; but many of them may reach the members of the Society in another form.

I cannot close this address without expressing to you my obligations for the unmerited attentions you have permitted me to experience, and while I respectfully offer the sentiments of esteem which I shall continue to entertain for my fellow members, I fondly cherish the pleasing expectation that the Society will continue to exist as an Institution creditable to the State and highly honourable to the medical profession.

(To be continued.)

The all-important problem in medical education is to give a man the knowledge he can use.

THE HEALING ART.

Taken in a broad sense medicine not merely denotes a kind of knowledge but it comprehends the various applications of that knowledge to the alleviations of the sufferings, the repair of the injuries, and the conservation of the health of living beings. In fact the practical aspect of medicine so far dominates every other that the "healing art" is one of its most widely received synonyms.—HUXLEY.

THE PHILOSOPHY OF STAYING IN HARNESS.

First, to live, not to exist. Second, to be a man among men. Third, to do that which will endure.

All this talk of "stepping out and giving the young man a chance," is supremest folly. The young men never have "a chance" equal to the opportunity of working side by side with those in experience, in that wisdom which comes from practical trials.

Counsel and action, wisdom and energy, age and youth, mixed in proper proportions, secure the finest results.—DR. JAMES HULME CANFIELD.

THE GROWTH OF THE TEMPERANCE SENTIMENT.

During the past winter a gathering of eminent and scientific men was marked by the absence of wine. The literary part was exceedingly choice and nothing was said about the absence of alcohol. On another occasion a noted English physician suggested to a gentlemen who invited him to attend a dinner in his honor, that, if there were no wines or spirits he should be very happy to accept, but he had long since given up accepting invitations to public dinners at which wines and spirits were considered necessary.—*The Quarterly Journal of Inebriety*, No. 2, 1906.

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No. 12

Editorials.

A SINGLE MEDICAL EXAMINING BOARD FOR THE STATE OF NEW YORK.

THE present medical laws of the State of New York are the best that could be secured at the time of their enactment. They have served an excellent purpose in protecting the people from the worst types of incompetence. Their value has been well appreciated; and they have been in operation long enough for their weaknesses to have been made manifest. The one weakness to which we call attention is, that, the State of New York is keeping alive the so-called "schools of medicine," which are not entitled to be regarded as separate schools and which in reality do not exist. The homeopath and the eclectic are not peculiar in the essentials of medicine, and, so far as therapeutics is concerned, they differ no more in their actual practice from the regular practitioner than do the regular practitioners among themselves. Homeopathic and eclectic medicine have practically disappeared; still the laws of New York keep alive the delusion that they exist.

Now we are confronted by the harm of the law which created three separate medical examining boards. Other "schools" of peculiar therapeutics are demanding the same special privileges which already have been accorded to the two "schools" now recognized by the State. The same laws, it is insisted, which apply to homeopathy, should apply to osteopathy, provided each

complies with the same requirements; and the State can not much longer be made to see it in any other light. When the State recognized one peculiar sect it opened the way to recognize all.

Before this absurdity has gone any further it should be stopped. There should be a single examining board, whose business it should be to examine into the qualifications to practice the healing art of candidates applying for a license in this State. This board should determine particularly the candidate's knowledge of the human body and its diseases, their causes, their effects upon the body, their prevention and their treatment. Of treatment, the most that we can demand is that it shall be either reasonable or authoritatively sanctioned; and the advances of medical science will constantly make this a variable subject. What was authoritatively sanctioned treatment twenty years ago would not satisfy the demands of a present-day examining board; and we may draw the same odious comparison between some of our modern therapeutics and that of twenty years hence. This board should determine that a candidate has complied with certain educational requirements, at least as high as are now insisted upon; and, having a satisfactory knowledge of the science of medicine, he should be licensed and allowed much latitude in his choice of treatment. A doctor whom the State recognizes should be simply a doctor. The State should know no eclectics, osteopaths or hydropaths. Therapeutics is but a small part of the science of medicine. It should be the privilege of the licensed doctor to use small doses or large doses, massage or hydrotherapy or whatever he please, provided he be well grounded in the fundamentals of medicine.

One of two things is going to happen: Other sects are going to demand and secure the same special privileges of an examining board which are already accorded to two sects, until the system of licensure becomes so complicated that it will be unwieldy and absurd to the degree that it will destroy itself or the people will destroy it; or now, and before it is too late, the medical profession must earnestly take hold of the matter, and of its own initiative demand the abolition of the present three-examining-boards system and its replacement by a single board of impartial judges of the qualifications to practice the healing art.

THE RELATION OF ALCOHOL TO TUBERCULOSIS.

THE chief reliance in the fight of the individual against tuberculosis is his vital resistance. It is this that prevents him from contracting the disease, and it is this that is his best hope of cure when once tuberculosis has fastened on him. Medication, fresh air, inhalations, all have little to offer if the vital resistance is not adequate for the overcoming of the tubercle bacillus.

In a contribution of much value on this subject, Dr. J. W. Grosvener, of Buffalo, presents some remarkably strong evidence against alcohol.* He shows the important role played by alcohol in the production of tuberculosis. Alcohol, he says, is not assimilated to any structure of the body, neither is it a nutriment which affords growth to any of its tissues. It retards metabolism and encourages the accumulation of waste material by its paralyzing power on the nervous system. It weakens vital resistance. It interferes with digestion. He shows that it interferes with the activity of the cells in their fight to overcome invading micro-organisms, and that persons who habitually use alcohol are most prone to microbic diseases. We are satisfied with the proof that has been presented that men subjected to severe muscular work possess the greatest physical endurance when entirely free from alcoholic influence: both science and experience have disproven the notion that alcohol adds anything permanently to muscular power. Alcohol also impairs oxidation, by forming a compound with hemoglobin which causes the blood to take up oxygen less readily and to retard the elimination of carbon dioxide.

Alcohol, it is shown, not only diminishes the resisting capacity of the individual but also of the offspring, which may not be alcoholic. The children of alcoholic parents are particularly susceptible to tuberculosis. Dr. Grosvener takes the ground that, in the light of our present knowledge, alcohol in tuberculosis is a physiological absurdity. To conquer alcoholism is the first step necessary in the conquest of tuberculosis; and it is the duty of the medical profession to the public to put itself squarely on record in the crusade against alcoholism.

*The *Quarterly Journal of Inebriety*, Vol. 28, No. 2, 1906.

THE TREATMENT OF CHRONIC CONSTIPATION.

THE condition, or symptom-complex, known as chronic constipation, has been among the most mistreated of human ills. Dietetics has gone a long way towards relieving the reproach which medicine was developing for itself in the treatment of this disorder; but not until it was studied by the internists, not so much as a disease entity but as a result of a combination of causes, did its treatment arrive at a scientific basis. The best treatment is now based largely upon physico-dietetics and prophylaxis. The latter should begin in childhood in establishing correct dietetic principles and in inculcating a teaching of the importance of regulating the intestinal functions. Among the better class of people a little knowledge of the nutritive values of foods has done positive harm, for it has prompted them to seek out the meats and other concentrated foods, having a high nutritive value, whereas the intestinal canals of their ancestors had been accustomed to food of meager nutritive value and much unabsorbable residue, and heredity has transmitted a demand for it. While the highly nutritive diet has failed to produce the results which it theoretically should, it has been a potent contributing cause of habitual constipation. Dietetics, therefore, occupies an important place in its treatment, although the dietitian in his denouncing the use of drugs can not show the dividing line between the two. Certain foods, like certain drugs, stimulate, and others inhibit peristalsis. Certain "laxative foods," vaunted in the treatment of constipation, are made up of a combination of vegetable products among which are recognized the delectable May-apple and the leaves of the senna plant. However, honest dietetics has done the most for this malady. Certain common and most nourishing foodstuffs lend themselves to the treatment of constipation, probably because they contain the substances under the influence of which the ancestral intestine formed its habits. Among these may be mentioned foods containing sugar; foods containing organic acids; foods containing salty substances; foods which form carbonic acid; foods which contain fat; and foods containing indigestible residue. These substances all properly come within the category of foods. Boas* has shown that all of these may be combined, and that such a combination is equal

*"Die Deutsche Klinik," 1906.

in effect to a powerful purgative. He also calls attention to the fact that it is easy to bring to naught the treatment by allowing the patient at the same time to indulge in foods which inhibit peristalsis, such as cocoa, tea, red wine, and white bread.

Further aids to the treatment are found in abdominal massage, exercise, and electricity. Occasions arise upon which purgatives or laxative drugs are indicated, but Boas, who is our greatest authority upon this subject, makes the strong statement that preparations of aloes, podophyllin, colocynth, bitter waters and bitter salts, castor oil, and many others should be relegated to oblivion in the treatment of habitual constipation: they do more harm than most physicians believe. This of course does not apply to the meeting of acute conditions. But the treatment of chronic constipation by purgatives, now so popular, except for a few rare exceptions, he regards as the survival of a medieval, humoral pathology which we should forever abandon. The old-fashioned method of treating this condition by the prescribing of drugs, is so simple and consumes so little time and energy that for a long time to come it is destined to remain a popular expedient; but the admirable and valuable work which the internists are doing along this line will soon be appreciated by every progressive physician and those unfortunate patients will then receive the measure of rational attention which their malady deserves.

DYSPEPSIA.

THERE are many terms in medicine which have been used to designate a disease and which better knowledge has shown are at the most simply groups of symptoms depending upon several different conditions or diseases. The development of medical knowledge upon a pathological basis is eliminating these terms from the catalog of disease entities. Dyspepsia is one of the terms belonging to this confused nomenclature, and in text-books which can not be called old we find it described and treated as a disease. However, it is destined to go the way of jaundice and rheumatism and linger in medicine as an old word applying to a large number of symptoms arising from many different conditions of disease.

Recent authors have described it as, "any disturbance in the digestive functions." This definition is certainly broad enough to comprehend

all that the word might imply. When we think of digestion as being made up of two processes, one a chemical process going on in the cardiac end of the stomach, and the other a mechanical process going on in the pyloric end, it seems very convenient to designate as dyspepsia the symptoms arising from disturbance of either of these processes. But the conditions which may give rise to such disturbances are so variant that to include their manifestations under a single head is dangerous to the interests of therapeutics. If the treatment of a disease varies from the administration of bicarbonate of soda to gastrectomy, it is probable that it is not a disease entity.

Another modern author describes dyspepsia as applying to "all cases in which pain or distress occurs during the digestive process." Finally Leo excludes the organic changes from the category with dyspepsia. This being the case, under this nomenclature, as the organic diseases of the stomach become better known dyspepsia will become less. The ordinary conception of dyspepsia is more extensive than this for it is customary to speak of dyspeptic difficulties when referring to abnormal sensations in the stomach without any discoverable defect in the digestive functions. This is the case in the so-called "nervous dyspepsia" the peculiarity of which is that digestion is quite normal.

Gastrologists still find it convenient to use this term, and, so long as it serves them, the general practitioner has good reason for continuing it. It should be thought of only as a symptom-complex with disturbances of digestion, and should apply only to acute conditions, for chronic conditions mean organic change. This reduces dyspepsia to acute digestive disturbances due to the introduction into the stomach of irritating material, usually fermentative, before gastritis has developed.

Food, fingers and flies is the alliterary tripod upon which the propagation of typhoid fever stands.

Every case of typhoid fever is a crime of the State against the individual.

Draughts play so important a role in the production of colds that they should be especially provided against, not as is usually done, by avoiding them, but by trained exposure to them.
—F. Forschheimer.

Observations.

ON THE ALCOHOL QUESTION.

The alcohol question has been approached and discussed on nearly all of its sides. Ancient and ignorant people used alcohol because they liked the effect of it—and did not bother to discuss it. Later it was used in religious rites, and for some two thousand years it has always had defenders who took the ground that the Creator would not have made it and given His children an appetite for it unless it were good. Then came the great awakening. It was observed that no agent was contributing so much to the increase of poverty, crime and destitution as alcohol. It was the agent that was filling the almshouses and prisons. Statistics were compiled, and the evidence against alcohol was incontrovertible. In the meantime the great temperance movement sprang up. No crusade ever had greater righteousness behind it, or more earnest men and women enlisted in its cause. The facts which they had at hand, together with the earnestness of the advocates, were sufficient to overwhelm every opposition. Still the results which this great movement has secured, compared with what it has merited, have been but paltry. Two reasons have contributed to this failure: The first is that the temperance advocates have quite invariably "slopped over." They have not been satisfied with the simple truth alone. It was all they needed, and it was more than sufficient to prove their cause. But still they have ever indulged in exaggerations and misstatements. I have never yet heard an honest man advocate the cause of temperance from the rostrum. His argument has invariably presented the great fundamental truths of his cause, and then interspersed them with so much that was false, that, to the eyes of the discerning, the whole was but a pretty piece of dramatic acting. Thus the great cause of temperance has been sacrificed to oratory, and to the unfortunate ecclesiastical habit of not treating one's auditors honestly and regarding them as intelligent beings to whom the truth and that alone may be told. This dishonesty has been carried farther than the rostrum. The innocent and undiscerning child, the charge of the public, who above all should have its credulity met with honesty and truth, has been made the dupe of these immoral practices. The Women's Christian Temperance Union has been responsible for having written into the text books on physiology, which were introduced into the public schools, a chapter on the effects of alcohol, so grossly absurd as to be a travesty, and so deliberately false as to brand the author as a liar. The cause of temperance is damaged by such methods. The truth is sufficient. It is that that has made us free; and it is through that that our children shall secure their freedom.

The second reason why the cause of temperance has not prospered better is because of the innate liking, on the part of a large portion of the population, for the drinking of alcoholic beverages. The debauchee who has been reformed by hysterical demonstrations is not prone to stay reformed. He has the constitutional craving, and I doubt if our statistics on the subject of reformations are worth very much.

But alcoholism is not altogether an unmitigated evil. It is an evidence of a somatic weakness or degeneracy. The normal individual destroys himself neither with alcohol, tobacco, hot pie, or sexual excesses. The confirmed drunkard serves humanity by destroying his virility to such a degree that he does not propagate his kind; and if alcohol is the agent to shunt off the degenerate's line of genealogical progression into the cul-de-sac of oblivion, I am not sure but that it has served the human race a good turn. On the other hand, it is always possible that the touch of instability which leads to drunkenness, may, through the agency of a normal mating, propagate offspring through whom the paternal weakness may be made to disappear. Happily, this is often the case; and it is, indeed, better that a man should be in a line of progressive improvement than in the line of a decadent family. It is a bad sign when a man, given to alcoholic excesses, boasts that his father was a moderate drinker, and that his grandfather drank not at all. It augurs better for the family when a man can say that his grandfather often drank too much, that his father was a moderate drinker, that he drinks but rarely, and hopes his sons will not drink at all.



It may with some justice be said that no nation becomes thoroughly sober until it has been thoroughly drunk, that alcohol alone insures an immunity against alcoholism; and the ravages of alcohol among nations which have never before had it, as our American Indians, and the absence of drunkenness among the South European countries, which long ago have passed through the stage of intoxication, may be pointed to as proofs of this proposition. Our knowledge of the principles of evolution and of immunity teach us that there is much truth in this; but is it best to secure immunity through this channel? The answer is decidedly, no. This may be further illustrated. Let syphilis strike a people whose ancestry is free from syphilis, and its ravages are most horrible. The nations which suffer the least from syphilis are the nations which have been most thoroughly syphilized. Yet, what people would invite syphilis to bestow upon them such immunity? No longer do we go on the assumption that children must have the exanthematous diseases; we try to protect them from them. It is an immunity bought at too dear a price.



This question of alcohol and alcoholism has passed through all of these phases of discussion, and finally it has come to the last stage: science and common sense have taken hold of it, and here the curse of rum is to meet its defeat. During the last ten years patient and honest men, seeking after the truth, have investigated with scientific accuracy the effects of alcohol upon the human organism. A vast amount of data has been compiled. Many old theories have been disproven; some have been confirmed. But we now have the effects of alcohol upon a scientific basis. Its effects upon the vital resistance, upon the phagocytic power of leucocytes, upon heat production, digestion, the heart's action, blood pressure, and upon the nerve centres, have all been carefully studied by many observers, who all have arrived at practically the same conclusions.

Alcohol is a poison and an irritant, although capable of combustion to a limited degree. Its usefulness in the internal treatment of diseases is very limited. As an antiseptic, its value is inconsiderable. When taken into the normal human body, its effect is harmful, causing a decrease of both muscular and mental efficiency in direct ratio to the amount ingested. It has its uses. To say that alcohol gives a man courage to face dangers, however, is as inconsistent as to say that morphine gives him courage to face pain.



Let us now begin with this subject anew. Let us put away the mistakes of the past, and try to place ourselves in the attitude towards alcohol which we should have were it a newly discovered chemical compound and had not been used by man since history began. Under these circumstances, what should we do? Having learned its effect upon the body, we should label it "poison," and instead of being the most commonly sold commodity, it would be secured only upon a physician's prescription.

The people look to the medical profession for instruction and guidance in matters of health. The time has come when we should take a positive stand in this question. We know the vast harm that alcoholic beverages are inflicting upon the people. Its ravages are known as well as those of typhoid and tuberculosis. We know them so well that we scarcely need discuss them among ourselves. And it devolves upon us to instruct the public as to the dangers of alcohol just as it does to instruct them concerning the dangers of polluted water or bad milk.

We should have in this country societies* under medical influence to promote the study of alcohol and alcoholism, to disseminate information on the subject, and to use their influence in furthering the cause of temperance. This is dis-

tinctly the province of medicine. The medical profession, more than any other class, could have the greatest influence for good in social and professional life; and no other class can be looked to for information so reliable. The time is ripe for a great and sane temperance movement, conducted by this profession, telling the public simply the truth about alcohol as we have about tuberculosis, disseminating knowledge and the incontrovertible facts. The value of such a movement to this country is beyond the power of the most hopeful to presage or of the most sanguine to foresee.

Items.

TO COMPEL PAYMENT FOR MEDICAL SERVICES.—There is a law in New York State to compel the payment of bills incurred by persons earning twelve dollars per week or more. (Sec. 1391, Code of Civil Proc., 1905). This law applies also to services rendered. The Appellate Division of the Supreme Court has recently sustained the ruling of the lower court that physicians' bills for professional service do not come within the meaning of this statute. (Taylor vs. Barker, 108, p. 21.) It had been presumed that bills for medical attendance were to be regarded in the same light as other obligations incurred, but according to this decision it would seem that they represent a special service outside of the scope of the law. A clause specifically compelling payment of physicians' bills for services rendered, in view of this decision, should be inserted in this law.

MEMORIAL TO DR. WALTER REED.—At the annual meeting of the Society of Ex-Internes of the Kings County Hospital, held on November 21st at the hospital, a bronze tablet was presented by the Alumni to the hospital and to the city in memory of Dr. Reed and his great service rendered to humanity. Dr. Reed was an interne at this institution in 1871. The presentation speech was made by Dr. A. T. Bristow and the tablet was accepted on behalf of the city by the Hon. Robert W. Hibbard, Commissioner of Public Charities. Dr. Howard A. Kelly, of Baltimore, made the principal address of the occasion, and told of many interesting incidents in connection with Dr. Reed's life and service to the country. Dr. Joseph D. Bryant, of New York, and Col. P. F. Harvey, Assistant Surgeon-General, U. S. A., made interesting addresses on the life and example of Walter Reed.

\$500 PRIZE FOR THE BEST ESSAY ON THE ETIOLOGY OF EPILEPSY.—Dr. W. P. Spratling announces a prize of \$500, offered by the Association for the Study of Epilepsy, for the best essay on the etiology of epilepsy. The conditions governing the award are as follows: All essays submitted must be in English, written in a clear, legible hand or on the typewriter, on one side of the paper only and they must not contain more than 15,000 words. Essays must be in the posses-

*Germany has become sufficiently aroused in this matter to have a Society of Physicians for the Promotion of Total Abstinence, which is doing a splendid work. It issues a *Korresponding-Blatt*, and its influence is making a very positive impression upon the medical profession and the public.

sion of Dr. W. P. Spratling, Sonyea, N. Y., not later than September 1, 1907.

The name of the person submitting the essay *must not appear on the same*, but be put in a sealed envelope on which is written a motto, and which motto should also appear at the top of the first page of the essay.

All essays received will be placed in the hands of three physicians to determine their merit. Two of these physicians will be members of the Association; the third a member of the American Neurological Association.

Announcement of the award will be made at the November, 1907, meeting of the Association. The Association will not feel bound to award the prize should no essay submitted be deemed of sufficient value to merit it. Original research work into the etiology of epilepsy will be a leading factor in fixing the award.

Medical Society of the State of New York.

The next meeting of this Society will be held at Albany, January 29 and 30, 1907. The House of Delegates will meet on the evening of January 28.

The Committee on Scientific Work announces that members desiring to present papers at this meeting are requested to communicate with the Chairman, Dr. L. H. Neuman, 194 State Street, Albany, N. Y.

The Medical Society of the State of New York is composed of members of the County Medical Societies of this State.

Membership in the County Medical Society carries with it membership in the District Branch and State Society.

Among the advantages of membership are:

First: receipt of the *NEW YORK STATE JOURNAL OF MEDICINE*, a monthly publication.

Second: receipt of the "Medical Directory of New York, New Jersey and Connecticut," issued annually.

Third: legal defense in suits for alleged malpractice; which means that the Counsel of the State Society goes to the defense of its members without their incurring expense for legal services, and defends the case if necessary up to the highest court.

Fourth: privilege of taking books from the library of the Kings County Medical Society.

Fifth: privilege of membership in the American Medical Association.

Applicants for membership in the State Society should apply to the Secretary of the County Medical Society of the county in which they reside.

PROGRAM.

The following is a part of the program which has been arranged for the annual meeting in January, 1907:

Symposium on "Non-Tuberculous Joint Infections," Tuesday, January 29, 1907, at 2.30 P. M.

1. "Laboratory Aids to Diagnosis" by E. H. Nichols, Boston, Mass.
2. "Pneumococcus and Typhoid Infections" by Roswell Park, Buffalo, N. Y.
3. "Syphilitic and Gonorrhoeal Infections" by R. H. Sayre, New York, N. Y.
4. "Staphylococcus and Streptococcus Infections" by Nathan Jacobson, Syracuse, N. Y.
5. "Rheumatoid Infections" by R. R. Fitch, Rochester, N. Y.
6. "Mechanical Treatment" by H. L. Taylor, New York, N. Y.
7. "Operative Treatment" by Walter Wood, Brooklyn, N. Y.

General discussion.

The following papers also are promised:

"Clinical Features and Operative Treatment of Thyroid Affections" by George E. Beilby, Albany, N. Y.

"Some Recent Clinical Observations in Intestinal Obstruction, Both Acute and Chronic, With Demonstration of Specimens and Illustrations" by Joseph C. Bloodgood, Baltimore.

"The Abortive Treatment of Pneumonia" by G. Lenox Curtis, New York, N. Y.

"A New Disease: History, Symptoms and Pathology of an Hitherto Unreported Lesion" by Henry P. de Forest, New York, N. Y.

"Blood-Pressure Study: Some Unexpected Revelations" by Henry L. Elsner, Syracuse, N. Y.

"Typhoid Fever: Report of a Series of Cases With a Low Death Rate" by William S. Hubbard, Brooklyn, New York.

"Sanatorium Treatment" by B. O. Kinnear, Clifton Springs, N. Y.

"The Surgery of Foreign Bodies in the Respiratory Tract" by Willis G. MacDonald, Albany, N. Y.

"Indicanuria" by Joseph Day Olin, Watertown, N. Y.

"Underfeeding and its Associated Ills" by Dudley D. Roberts, Brooklyn, New York.

"The Treatment of Ventral Hernia" by Thomas B. Spence, Brooklyn, New York.

"New York State Medical Library" by Albert Vander Veer, Albany, N. Y.

"Cyst of the Mesentery: Resection of Twenty Inches of Small Intestine, Recovery" by Edgar A. Vander Veer, Albany, N. Y.

"Some Clinical Experiences with Arterio-Sclerosis" by Henry G. Webster, Brooklyn, N. Y.

There will also be a symposium on "Cancer," with papers presenting the most recent knowledge of this subject.

Correspondence.

"REPORT ON STERILE WATER ANESTHESIA IN THE OPERATIVE TREATMENT OF DISEASES OF THE RECTUM AND ANUS"—A CORRECTION.

EDITOR, NEW YORK STATE JOURNAL OF MEDICINE.

SIR: Will you kindly correct an error in the last issue of the *JOURNAL*. In the second paragraph from the last, page 390, at the end of my article, "Report on Sterile Water Anesthesia in the Operative Treatment of Diseases of the Rectum and Anus," the word "no" is omitted, making the paragraph read: "There was *post operative bleeding* in 295, there was slight hemorrhage in twenty, and profuse bleeding in five cases." It should read: "There was *no post operative bleeding* in 295, there was slight hemorrhage in twenty, and profuse bleeding in five cases."

If you will correct this in the next issue of the *JOURNAL* under the title of the paper you will greatly oblige me.

S. G. GANT.

Progress of Medicine.

PRACTICE OF MEDICINE.

EDITED BY

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DE LANCEY ROCHESTER, M.D.,

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THE CAUSE OF ACUTE DELIRIUM.

J. Jansky reports 15 cases of delirium acutum, 12 of which came to autopsy. The affection was found in 11 women and 4 men, occurring between the ages of 25 and 44 years, with the exception of 2 women of 17 and 52 years respectively. Almost all of the patients had hereditary stigmata. In some of the cases the delirium followed some physis affection; in others there was no etiologic factor to be found. In some cases an intoxication could be suspected, but in others there were no grounds for such a supposition. The duration of the affection lasted up to 14 days. Two women recovered, although their ages were 44 and 52 years respectively, and their cases were serious ones. All the other patients died. The findings at autopsy gave no explanation of the causes of death. In a few cases there was a waxy degeneration of the muscles, such as Fürstner has described. Historically there were found in some cases inflammatory changes, with well-marked meningo-encephalitic processes; in others were found more or less advanced degenerative processes, accompanied by hyperemia. Acute delirium therefore possesses no definite, specific, demonstrable anatomic lesion. The author is of the opinion that acute delirium and amnesia represent essentially similar pathologic processes, in which only the course, the aggravation of symptoms and the termination form the principal differences. Upon this basis, and from the characteristic symptoms which make a diagnosis possible in the first few days, he gives to the disease the designation "amnesia exhaustiva." In explaining the variety of conditions he takes into consideration the difference in individuals, unlike inclinations or resistance of different organisms, and qualitatively and quantitatively different etiologic factors.—*Zentralblatt f. innere Medicine*, from *Sbornik Klinicky*, Vol. VII., p. 181.

DEEP BREATHING.

Dr. John H. Pryor, of Buffalo, discussing the benefits of deep breathing, summarizes them as follows: increased oxygenation, improved nutrition, changes of a mechanical nature, ventilation and disinfection, massage of the lung and pleura, and drainage. In subacute, obstinate bronchitis, not dependent upon disease of the nose or throat no other method of treatment is so successful. Such cases improve rapidly, provided cough mixtures are discarded, and the patient is allowed to breathe fresh air in abundance. In

atypical, protracted cases of pneumonia the physician's efforts to secure or hasten recovery are often unavailing, physical resistance seems lacking, and reinfection and invasion of new territory continues, while persistent fever and consolidation linger in an unexpected and perplexing manner. There are times when forcible action of the affected lung for definite periods each day will be more strikingly successful than all other methods of treatment combined. The victims of slow pneumonia or subacute bronchitis are often kept too long indoors, and fresh air carefully avoided. Mental and physical apathy are occasionally due to this prevalent practice, and breathing in the open air is what the system demands. Undoubtedly there may be reasons why placing the patient in the open air may be considered unwise, even in these days when open air treatment for many ailments is becoming a beneficent craze. Under such circumstances a tin tube connecting with the outer air may be used at the bedside, and inhalations practiced. In acute or advanced cases of tuberculosis he doubts if any lasting benefit is to be derived by increased activity of the diseased lung, though he believes that the dangers from infection and hemorrhage are greatly exaggerated. When the evidence of an acute process or progressive lesion, as portrayed by the local signs and general symptoms, has disappeared, there seems to be no good reason why the affected and healing portion of the lung should not be fully aerated. We send patients to certain regions believed to be especially beneficial, and depend to an unknown extent upon the remedial influence of pure air. Is it not somewhat inconsistent to cautiously limit the supply of the curative agent for long, indefinite periods?—*New York Medical Journal*, Sept. 8, 1906.

LYMPHATIC LUKÆMIA.

"Lymphatic leukæmia, or more correctly speaking, lymphæmia or lymphocythæmia, is a condition presenting itself in many different forms, the differences met with being so various that at first it appears that one would be almost justified in asserting that every case is atypical," write Whipham and Leatham in their discussion of the subject. In spite of the diverse appearances shown by this disease it can be divided into two distinct classes—namely, acute and chronic—and, furthermore, these two may be subdivided into several types with which are associated certain more or less definite characteristics. In the chronic cases, which are decidedly less common than the acute, there are two constant features, the glandular enlargement and the extreme leucocytosis, approaching and frequently exceeding 100,000 per cubic millimetre. The majority of the white cells are lymphocytes, and in these chronic cases the small lymphocytes generally, but not always predominate. On the other hand, in the acute cases there may be a general enlargement of the lymph glands or there may not. Secondly, the leucocytosis may be extreme or of

only a very moderate extent, the total number of white cells not exceeding that seen in an inflammatory leucocytosis. And in the third place, such leucocytosis, whether of a marked or of a moderate grade, may be accompanied by extensive increase in the size of the lymphatic glands or by the absence of glandular enlargement. The commonest type of acute lymphæmia is that in which there is a general enlargement of the glands associated with an extreme leucocytosis, the predominating cell being the large lymphocyte.

In some cases with a high grade leucocytosis, however, the small lymphocyte is in excess, and this may or may not be associated with glandular enlargement. On the other hand, in those cases in which there is comparatively slight leucocytosis the predominating cell seems always to be the large lymphocyte. A point of great pathological importance in cases of acute lymphæmia is the fact that there may be a marked general enlargement of the lymph glands or there may be little or no such enlargement. Moreover, the cases in which there is no increase in the size of the lymph glands may show an enormous increase in the number of leucocytes, generally of the large variety, but occasionally of the small.—*Lancet*, Aug. 11, 1906.

SUPRARENALIN, A CAUSE OF ARTERIO-SCLEROSIS.

The suprarenal preparations have proven of such value in modern therapy that regret is universal when any unlooked-for detrimental effect is found which may follow their use. In November, 1903, Joshué first published the fact that he had found that by injecting dogs intravenously with adrenalin during some period of time atheromatous changes were found in their arteries. Other scientists took up the problem, among them some of the men of the Albany College, and their findings seem to quite nearly coincide. These changes consist in circumscribed thickening of the vessel walls, smaller or larger spots of calcification, and more or less regularly bounded aneurismal dilatations or diffuse ectasias. Only the larger arteries are affected, the medium and smaller arteries remain free. By rapidly ascending doses Fischer obtained high grade saccular and fusiform aneurisms. Dissecting aneurisms have also been observed. All these changes can take place after a short time, for Ziegler has found calcification of the aorta even after seven injections. Biland, of Königsberg, by experiments upon 18 dogs, has again verified the results found by other investigators. He noted further that, following the injections of suprarenalin, which was the preparation he used, the blood pressure was only temporarily increased, even where high grade atheromatous changes were produced. Hypertrophy of the heart was found in several animals which Biland explains as being due to an increased work on the heart because of the vascular changes. In some of the animals

potassium iodide was injected simultaneously with the suprarenalin, but in these cases the vascular changes were found to be even more pronounced. This is contrary to the experience of Korangi and Boberi, who have both found less vascular change in those animals treated also with the iodides.—*Deutsche Archiv für Klinische Medizin*, Vol. 87, No. 5.

Gynecology.

EDITED BY

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CARCINOMA OF THE CERVIX UTERI.

Samson found cancer in the parametrium, the pelvic lymph nodes or both, in twenty out of twenty-seven cases studied. In three of the cases the lymph nodes were affected without leaving metastases in the parametrium through which the disease had passed. The parametrium was most frequently involved, either *en masse* or in the form of thread-like processes frequently along the lymph channels or in the nerve-sheaths. This occurred in seventeen of the cases, in nine instances of which the lymph nodes were also involved. Sampson warns against mistaking adhesions from pelvic inflammatory disease for cancerous extension, since the inflammatory condition may cause pain which may be wrongly attributed to cancer. The parametrium may feel indurated and yet show no evidence of cancer; and yet direct extension of the disease into the parametrium is usually accompanied by a reaction on the part of the tissues, which manifests itself by a cellular infiltration or hypertrophy of this tissue. The microscope alone, insists the author, is to be relied upon in excluding cancer from the parametrium. A wide excision of the parametrium is demanded, not only because it is so frequently involved, but because the cancer is local in from one-half to two-thirds of the operable cases and probably even in forty per cent. of the extensive cases. The author closes his study with a plea for as early a diagnosis as possible, since most cases are fatal within three years from the beginning of the disease.—*American Journal of Obstetrics*, October, 1906.

Petit says that the extension of cervical cancer takes place in so many ways, that an operated case, which apparently was in the earliest stages, may show a recurrence within a few weeks. Some of the elements which help to determine the malignancy of a particular growth are the youth of the patient, the presence of pregnancy, the simultaneous presence of syphilis, and the form and appearance of the cellular elements under the microscope. The manner of the extension of the disease brings in its wake congestion with secondary hemorrhages, and beginning general infection is marked by cachexia and loss of weight. In the discussion, Doleris, Pinard and

Richelot spoke against the extended operation as urged by Wertheim, von Rosthorn, and others, and declared themselves satisfied with the vaginal extirpation of the uterus.—Session of the Société d'obstétrique et de pédiatre de Paris, December 11, 1905, reported in the *Zentralblatt für Gynaekologie*, October 27, 1906.

Cigheri has carefully studied ten cases of carcinoma of the uterus. He concludes that, if it is accepted that metastases can form at any time after the growth has gone beyond the mucous membrane and has entered the nearest lymph-channels; still it has been proven that the glands are attacked after the parametrium has become infiltrated. The site of the tumor has a decided influence upon the formation of metastases; the cancers developing from the cylindrical epithelium of the cervical canal lead to metastases much earlier than cancers of the vaginal portion or of the body. The hypogastric glands are usually the first to be attacked, later the iliac and the lumbar, and lastly the inguinal. The size of the lymph nodes bears no relation to their cancerous infiltration; large, hard glands are sometimes not involved, while small, normal looking glands, may be. The author urges as the best operative procedure, total abdominal hysterectomy, for by this operation the pelvic connective tissue can best be attacked and the mortality of the operation is steadily growing lower.—*Monatsschrift fuer Geburtshilfe und Gynaekologie*, Vol. xxiv, 2.

Franz discussed the operability of recurrent carcinoma of the uterus. He believes in operating upon every case which may be regarded as at all operable. Even though permanent cure is rarely to be attained, the patient is spared some years of life and of pain. He operates upon recurrent growths if the tumor is limited in all directions and is not firmly attached to the pelvic walls. Tumors intimately adherent to the pelvis are scarcely operable, although immobility in itself is not a contraindication to operation.—*Naturforschersammlung, Stuttgart*, September, 1906, reported in the *Zentralblatt fuer Gynaekologie*, November 3, 1906.

MYOMATA OF THE PELVIC CONNECTIVE TISSUE.

Hugel reports an interesting case of this character, dwelling especially upon the diagnosis. To facilitate the diagnosis in all abdominal tumors of uncertain location, he advises distension of the intestines with gas by way of the rectum. Myomata of this character are not great rarities and are to be thought of in connection with all small, hard tumors in the pelvis. Sometimes the retroperitoneal nature of the growth may be surmised from palpation alone. The tumors are usually movable—if they have not become incarcerated on account of their size—and may therefore be confused with ovarian tumors.—*Zentralblatt fuer Gynaekologie*, October 20, 1906.

UTILIZATION OF THE BROAD LIGAMENTS IN COMPLETE DESCENT OF THE UTERUS.

E. C. Dudley proposes a new operation for complete prolapse of the uterus. After discussing the causation and formation of this form of hernia, he describes his operation briefly as follows: Necessary repair is given to the posterior vaginal wall, and the cystocele is then operated upon much in the manner of Wertheim, i. e., by a vertical incision over the cystocele and by pushing the bladder back from the uterus. An incision is then made into each broad ligament carrying with it a thin shaving of cervix to avoid the utero-ovarian anastomosis. The severed lower two-thirds of the broad ligaments are then approximated end to end by catgut sutures, the cervix thus being pushed back. The adjacent parametric structures are thus drawn down and in extensive operations, the round ligaments too are included in the sutures. The cut edges of the vaginal wall are then approximated after the excision of the redundant mucous membrane. The upper sutures pass through the uterine wall keeping the bladder up so that it can not again prolapse between the uterus and the vagina. By this operation, the broad ligaments take the place of the uterus, anatomically speaking, especially when they are thus employed after the performance of an hysterectomy. They hold up the rectum, vagina, bladder and other parts of the pelvic floor, preventing their descent; and they also act in keeping the bladder and the rectum separated. Dudley recommends the end to end approximation of the broad ligaments in the manner described not only for total prolapse of the uterus, but in the performance of hysterectomy as well.—*Journal of the American Medical Association*, November 17, 1906.

VAGINAL HYSTERECTOMY FOR UTERINE PROLAPSE.

Kirschgessner has operated upon thirty-two patients with eminent satisfaction, he says, by removing the uterus vaginally. The uterus is first drawn down as far as possible and an incision made around it in the vaginal mucous membrane beginning just below the urethra. The peritoneum is opened posteriorly, the appendages ligated as far peripherally as possible, and the uterus amputated. The peritoneum is closed, anterior and posterior coloporrhaphy are performed, the stumps of the appendages being fixed in the vagina and the bladder and rectum sutured together. Some of the patients have been under observation as long as eleven years with no evidence of recurrence.—*Zeitschrift fuer Geburtshilfe und Gynaekologie*, Vol. lviii, 2, 1906.

The symptoms are not the disease; it follows, therefore, that logical treatment consists in removal of the cause and not simply of its manifestations.—*F. Forschheimer*.

County Societies.

BROOME COUNTY MEDICAL SOCIETY.

The Centennial Celebration was held at Binghamton, N. Y., October 24, 1906.

Program.

President's Address, by Dr. Frederick M. Miller.
"Personal Reminiscences of Some of the Older Members of the Broome County Medical Society," by Dr. John G. Orton.
Address: "A Comparison of Ourselves With Our Forebears," by Dr. Charles G. Stockton, of Buffalo, N. Y.
"Historical Reminiscences," by Dr. Daniel S. Burr.
Address: "Some Lessons of the Hour," by Dr. Joseph D. Bryant, of New York.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

STATED MEETING, November 20, 1906.

Scientific Program.

Paper: "The Medical Treatment of Those Gastric Disorders in Which the Help of the Surgeon is Often Demanded," by Charles G. Stockton, M.D., of Buffalo, N. Y.
Paper: "Certain Surgical Aspects of Chronic Gastric Disease," by James G. Mumford, M.D., of Boston, Mass.

SECTION ON OPHTHALMOLOGY.

November 27th.

"Report of a Case of Metastatic Carcinoma of the Choroid," by P. C. Jameson, M.D.
"Presentation of Patient—A Rare Case of Unilateral Buphthalmus," by D. W. Meyer, M.D.
"Presentation of Patient—A Case of Ophthalmoplegia Completa Bilateralis Externa, Due to Lead Poisoning," by A. Arbona, M.D.
"Presentation of Patient—Bilateral Buphthalmus," by E. W. Wright, M.D.
Central Topic for Discussion—Cataract Extraction.

SECTION ON PEDIATRICS.

November 28th.

A Report of the Committee upon Nomenclature of the Gastro-Intestinal Diseases of Infants and Children.

ONONDAGA MEDICAL SOCIETY.

QUARTERLY MEETING, October 23, 1906, at SYRACUSE, N. Y.

Program.

1. "Demonstration of Some New Rectal Instruments," by Dr. D. H. Murray, Syracuse.
2. "Some Observations on Anesthesia and Anesthetics," by Dr. J. J. Buettner, Syracuse.
3. Address: "A Century's Progress in Therapeutics," by Dr. J. L. Heffron, Syracuse.
4. "Clinical Thermometry (stereopticon illustrations)," by H. G. Norwood, Rochester.

OTSEGO COUNTY MEDICAL SOCIETY.

ONE HUNDRED AND FIRST ANNUAL MEETING, ONEONTA, N. Y., December 11, 1906.

Program.

Address by the President: "Persistent Headache," S. A. Mereness.
1. "Its Relation to Defective Vision and Eye Strain" by A. H. Brownell, Oneonta, N. Y.
2. "A Symptom of Constitutional and Nervous Disorders" by L. T. Genung, Worcester, N. Y.
General discussion led by W. S. Cook.
"The Importance of Early Recognition and Treatment of Some Congenital Deformities" by E. J. Parish, Oneonta, N. Y.
Discussion led by H. D. Sill.

QUEENS-NASSAU MEDICAL SOCIETY.

THE SEMI-ANNUAL MEETING, JAMAICA, N. Y., December 5, 1906.

Program.

Paper: "Pelvimetry in Obstetrics" by Sidney D. Jacobson, M.D., New York.
Paper: "Enteric Intoxication as a Cause of Nephritis" by Harris A. Houghton, M.D., Bayside.
President's address: William J. Burnett.
Discussion: "How Can we Make Our Society of Greater Interest and Benefit?"

SARATOGA MEDICAL SOCIETY.

REGULAR MEETING, November 2, 1906, AT SARATOGA SPRINGS, N. Y.

Program.

Diabetes:
"Etiology and Pathology" by Dr. Loop.
"Symptoms and Diagnosis" by Dr. Downs.
"Complications and Treatment" by Dr. Ledie.
Discussion, Dr. Sanford, Dr. Van Aernem and Dr. Comstock.
REGULAR MEETING, November 16, 1906, AT SARATOGA SPRINGS, NEW YORK.

Program.

Chronic Interstitial Nephritis:
"Etiology and Pathology" by Dr. Bentley.
"Symptoms and Diagnosis" by Dr. Castree.
"Complications and Treatment" by Dr. Sweetman.
Discussion, Dr. Varney, Dr. Thompson and Dr. Melick.

New Books.

SURGERY, ITS PRINCIPLES AND PRACTICE. By Various Authors. Edited by WILLIAM WILLIAMS KEEN, M.D., LL.D. Vol. I. Philadelphia, W. B. Saunders Company, 1906.

This work has been so well announced, that it is with a considerable degree of favorable expectancy, that its appearance has been awaited. The announcements preceding such works do not always give an adequate idea of the merits of the books discussed. That is in a measure true of this work. Prospectuses gave the impression that its authors were to be the most eminent and renowned specialists accepted as authorities throughout the civilized world. This we find to be not altogether the case; and we are glad that it is not, for it is doubtful if the flower of medical authorities and the most renowned specialists would produce a joint work of this sort which would measure up to the demands of the times. Much more practical and valuable works emanate from the pens of prospective renowned specialists, who hope that their pens may help them to their renown than from the world's accepted authorities. It does not require an eminent authority to write the most valuable chapter for such a work; but it does require a practical man who has a broad grasp of his subject, who has the patience to search the literature, who knows the needs of the student and practitioner, and who without self-display can clearly set forth what he well knows and what he desires to impart. We are pleased that this work is better than the prospectus prophesied.

Volume I is devoted to general surgery and the general principles of surgery, and contains twenty-two chapters by nearly as many authors. The first chapter is an historical sketch of the rise of surgery by James G. Mumford. Beginning with Hippocrates, it deals with the men who have notably contributed to the advancement of surgery down to Joseph Lister. A brief history of a few of the old surgeons is given along with an analysis of their work sufficient to show the rise of the art. Without hesitation we pronounce this the best short sketch of the history of surgery that has appeared in any contemporary work on surgery. The surgeon is always fascinated by the history of his art, but any lover of literature and history would be fascinated with this chapter. The author has breathed life into a

subject, which usually is presented as a dry narrative of events and dates. Dr. Mumford has presented an admirable critique of the fathers of surgery. Both the greatness of Hippocrates and the independent eminence of modern surgery are illustrated by the following: "Nearly five hundred years elapsed between the death of Hippocrates and the birth of Galen—a period equal to that which separates us from the battle of Agincourt and the ancient French surgeon, Guy de Chauliac. Galen revered Hippocrates and followed his teachings and quoted him in his books. Who quotes de Chauliac?" Of Galen he says: "His is a notable name, and the man was a great man. Certain dyspeptic moderns have felt called upon to sneer at him because he knew less than we know; but let us remember that the second century was not the twentieth century, and that according to his lights Galen did a very great work. None but a great man could have controlled medical thought for nearly sixteen hundred years." Dr. Mumford says that, "We must remember also, that what little Western learning survived through the dark ages was stored and guarded in monastic vaults and clerical libraries—wealth unrevealed and unknown even to the custodians, but still in some fashion preserved for the enlightenment of wiser generations"—as though the Church deserved credit for this. It made a waste of Europe, and out of the fertilizing piles of decomposing humanity grew its resplendent flowers—the mighty edifices, which have astonished the world. It suppressed every natural scientific truth which appeared, for natural science was contrary to its doctrines. If anything was permitted to survive, it was because it was emasculated of truths, which refuted its dogmas; and for this reason we have had preserved for us much silly rubbish, while oblivion has been the fate of much of the real learning of that unhappy period, when the Church was dominant.

Dr. Mumford's sketches of Vesalius, Pare, Von Haller, and John Hunter are masterly word-pictures of great masters. Reginald H. Fitz, the American surgeon, who first described the significance of the vermiform appendix and its role in disease, is paid a worthy tribute.

The chapter on surgical physiology by George W. Crile is an important innovation. This author is, indeed, an authority upon the subject, and his chapter embraces the factors in surgery which rest upon altered physiological actions. He says that there is scarcely an operation performed, or a diagnosis made that does not draw upon our store of knowledge of physiology. The effects of traumatism upon the heart and pressure upon the lungs, and the altered functions of these two organs, are discussed. The physiology of blood pressure in its relation to surgery, as would be expected, is admirably set forth.

The examination of the blood is discussed by John C. Da Costa, Jr. The author everywhere insists that the blood examination should never be considered alone, but that it is of value only when considered along with the clinical conditions. The chapter on infection and immunity by Ludwig Hektoen is of great value. He calls attention to the fact that the doctrine that infectious diseases are caused by micro-organisms is centuries old and was expressed with great clearness by Varro two thousand years ago. The author discusses the sources and avenues of infection from the standpoint of the practical pathologist. His description of immunity, of toxins and anti-toxins, opsonins and agglutinins, makes these subjects clear. The chapter on inflammation, by J. G. Adami, presents this subject in its modern light. Inflammation he considers to be "the series of local changes which constitute the reaction to injury to or irritation of a part." Injury and irritation are practically synonymous. He disagrees with the generally accepted belief that in health the body is free from microorganisms beyond the skin and mucous membranes. His investigations have shown him that there is a constant carriage of bacteria through the mucous membranes of the pharynx and upper respiratory tract and alimentary canal—particularly the latter—through the agency of the migratory leucocytes, and as constant a destruction of the same by several agencies.

The healthy organs, he says, are potentially, not absolutely, sterile. This is a matter of much importance to the surgeon, and throws light upon many obscure questions. The fate of the products of inflammation and the development of connective tissue are fully discussed. The treatment of inflammation is clearly set forth. In the chapter on suppuration and abscess, by Leonard Freeman, Bier's method of passive hyperemia is advocated. The author does not recommend removal of the glands by dissection in inguinal adenitis. The excellent chapter on ulceration is by the same author, as is also that on mortification or gangrene. This latter chapter contains a plate illustrating moist gangrene, which is one of the most perfect works of illustrative art in contemporaneous medical literature.

The process of repair is discussed by F. C. Wood, who presents this subject in the light of the most recent knowledge. Healing in all of the various tissues of the body is discussed. The bibliography of this chapter deserves especial comment. Thrombosis and embolism, by Charles H. Frazier, and a chapter on erysipelas by the same author, are well presented. The treatment of the latter disease by pure phenol and alcohol, as advocated by Phelps is not mentioned. Dr. Frazier also has the chapter on tetanus, in the definition of which he defines the muscular spasms as beginning in the jaw. As a matter of fact this is not always the case. The extreme opisthotonos, illustrated by Bell's picture, is far from a characteristic view of tetanus.

The special infections and diseases derived from animals, insects and reptiles, are described by Dr. Frazier. Under "traumatic fevers," by E. A. Smith, we find excellent descriptions of aseptic wound fever, septicemia, and pyemia. We are looking forward for the work which will give us a better classification of these conditions. Aseptic wound fever is an extremely complicated condition, and is probably rarely aseptic in open wounds. Septicemia and pyemia are not traumatic fevers, and it is misleading to call them so. They are infective diseases, just as are tuberculosis, erysipelas, or osteomyelitis, and may or may not be associated with traumatism.

The chapter on surgical tuberculosis, by J. C. Da Costa, is the ideal exposition of this subject for such a work. The new method of treatment (based upon old knowledge), which is minimizing greatly the necessity of operation, is properly emphasized. Chapters on chancroid and syphilis, by Edward Martin, are succinct and yet complete. Some three hundred and fifty pages are devoted to the consideration of tumors, by Bland-Sutton. This chapter employs the classification of Virchow modified by the author, and presents the most recent knowledge upon this subject. Wounds and contusions are discussed by Crile. This chapter is a complete presentation of the fundamental principles of the surgery of wounds. The striking plate, illustrating traumatic asphyxia, from the *Annals of Surgery*, adds a dramatic touch to the work. The author discusses in this chapter shock and collapse. There is no one more competent to write upon this subject than he. The practical means of combatting these conditions are presented. Of the drugs much employed, he says, there is much doubt as to their efficacy. "The administration of strychnin in shock is like beating a dying horse; it may call forth an effort if we beat hard enough, but it hastens the end."

Four more volumes of this work, we are informed, are to follow as fast as they can be printed. We hope that this first volume is an index of the quality of the others. If the same excellence continues as is discovered in this, Keen's Surgery will be the best exposition of modern surgery of our time. It surpasses other similar works in completeness, in literary style, in originality of illustrations and in the absence of overlapping and repetitions. We not only congratulate Dr. Keen and the publishers upon the appearance of this work, but we express the belief that it will be accepted by the professor of medicine as a modern authority upon the art and science of surgery.

INDEX

NOTE:—Original articles are indexed in *italics*. Department Articles are abbreviated as follows: Editorial (E); Items (I); New Books (N); Progress of Medicine (P).

Abrams, A.: The Blues (N).....	270	Backus, O.....	143
—: Man and His Poisons (N).....	347	Bacteriological studies in the surgical clinic (P)....	445
Act, An, to amend the public health laws.....	60	Bailey: Accident and Injury (N).....	305
Adams-Stokes disease (P).....	337	Bainbridge, W. S.....	179
Addison's disease (P).....	442	Baker, S.....	346, 452
<i>Address, Centennial, M. L. Bruce</i>	85	—, S. J.....	269, 304
—, —, <i>J. D. Bryant</i>	81	—, W. A.....	233, 247
—, —, <i>G. Cleveland</i>	82	Bakeshops, Unsanitary, in New York (I).....	407
—, —, <i>W. W. Keen</i>	92	Barker, L. F.....	451
—, —, <i>St. C. McKelway</i>	86	Bartley, E. H.....	268
—, —, <i>L. S. McMurtry</i>	91	Baruch, S.....	417
Ager, L. C.....	268	Beard: Sexual Neurasthenia (N).....	347
Ainsworth, H. R.....	269	Beer, Influence of, on Athletes (I).....	258
Albany Hospital, Mosher's Dept., Fourth Annual Report of (P).....	261	Beer-drinking on the increase (I).....	373
Albuminuria, Significance of (P).....	409	Belknap, E. W.....	269
Alcohol, Denatured (E).....	405	Bellevue Hospital, Paid physicians for (I).....	179
—, in carbolic acid poisoning (P).....	184	Benedict, A. L.....	204
—, relation of, to tuberculosis (E).....	471	Bensel, W.....	28
Alcoholism, Study of (I).....	227	Benzine and gasoline poisoning (I).....	410
Allen, A. H.....	304	Bequests to Brooklyn hospitals (I).....	407
—, S. B.....	452	<i>Biologists in Public Schools</i>	426
Amalgamation, <i>See</i> : Consolidation.		Birth insurance company fails (I).....	258
American Gastro-Enterological Assoc (I).....	179	—, rate in Paris (I).....	440
—, Gynecological Society (I).....	257	Bishop: Blood Pressure (N).....	348
—, Hospital in Constantinople (I).....	440	Bishop, L. F.....	248
—, Internat. Congress on Tuberculosis (I).....	407	Bladder, Anointing of, In after-treatment of operations for vesical calculi (P).....	290
—, Laryngological, etc., Soc. (I).....	135	—, <i>Resections of, In Rebellious Cystitis</i>	145
—, Medical Association (E, I).....	225, 255, 297, 297	<i>Blindness, Prevention of Unnecessary</i>	53
Anesthesia, Local (P).....	182	<i>Blood, Chemistry, Clinical, Report on</i>	457
—, —, in Otology (P).....	380	—, Occult, in the Feces, Diagnostic value of (P).....	442
—, Scopolamine-morphine-chloroform (P).....	230	—, —, —, <i>Detection of</i>	204
—, Sterile water.....	475	Boddy, E. C.....	189
—, —, —, in operative treatment of diseases of rectum and anus.....	388	Boettiger, C.....	305
Angell, E. B.....	269	Book Reviews, <i>See</i> : New Books.	
<i>Antithyreoidin, Therapeutic Value of, in Treatment of Exophthalmic Goitre</i>	235	Boorn, H. W.....	304
<i>Apomorphia, Some Experiences with</i>	76	Booth, A. W.....	57
Appendicitis and icterus (P).....	444	Bovaird, D., Jr.....	349
—, Causes of (P).....	442	Bowditch, H. P.....	258
—, Consecutive to inflammation of intestines in children (P).....	444	Bowel, Large, Surgery of. Practical points in (P).....	183
—, Etiology of punctiform hemorrhages in (P).....	299	Bowman, I.....	417
—, Freedom from, in Africa (I).....	408	Braman, H. S.....	304
—, operations, Primary wound closure without drainage in early (P).....	182	Brannan, J. W.....	143
—, <i>Relations of, to Diseases of the Uterine Adnexae and Vice Versa</i>	29	Breathing, Deep (P).....	476
—, research in Europe (I).....	408	Bright's disease, Chronic, Treatment of (P).....	334
—, Severe, Early diagnosis of (P).....	208	Bristow, A. T.....	250, 390
—, Treatment of, in its various stages (P).....	230	British Medical Association.....	180, 258, 329, 332, 373
<i>Appendix, Conditions within the, Causative of Its Inflammation</i>	307	Brodhead, G. L.....	189
Arbona, A.....	479	Brooklyn Central Dispensary (I).....	331
Arterial hypertension, Cause of (P).....	441	Brown: Eczema (N).....	418
Arterio-sclerosis as a general disease (P).....	137	Brown, W. M.....	452
—, <i>Pathological-clinical Consideration of</i>	163	Brownell, A. H.....	479
<i>Arthritis, Rheumatoid, Treatment of</i>	356	Bruce: <i>Materia Medica and Therapeutics</i> (N)....	384
—, <i>Toxic</i>	118	Bruce, M. L.....	85
—, (Discussion, etc.).....	141, 269	Bryant, J. D.....	46, 81, 479
Ashton: Text-book on the Practice of Gynecology (N).....	190	Buck, K.....	269
Association of American Physicians (I).....	258	Buettner, J. J.....	479
—, of Medical Librarians (I).....	332	Buffalo Academy of Medicine (I).....	331
Asthma, Vasomotor function in (P).....	228	—, Municipal Hospital (I).....	258
Athletics and longevity (E).....	404	—, water, Colon bacillus in (I).....	439
<i>Autopsy, As a Judge of our Bedside Conclusions</i> ..	224	Bulklev, L. D.....	179
		Bull, C. P., Jr.....	360
		Burnette, W. J.....	479
		Burr, D. S.....	479
		Butler: Text-Book of <i>Materia Medica</i> (N).....	191
		Caille: <i>Differential Diagnosis and Treatment of Disease</i> (N).....	143
		Calkin, J. R.....	189
		Camphor in diseases of the lungs (P).....	184
		Campbell, W. F.....	25
		Cancer mortality (I).....	407

- Cancer, Gastric, Early diagnosis of (P)..... 138
 —, of larynx, Remarks on the Microscopic
 Diagnosis and General Indications for
 Treatment of..... 19
 —, of stomach, Radical Removal of..... 63
 —, research in Sweden (I)..... 408
 —, and radiotherapy (P)..... 413
 Canteen question (I) 440
 Carcinoma, Mediastinal, Treatment of, with Roent-
 gen rays (P) 138
 — of the cervix uteri (P) 477
 — of the larynx 24
 — of the stomach, Surgical treatment of
 (P) 138
 —, Study of, International (E) 225
 —, Therapy of 160
 Cardwell, J. C. 452
 Carey, H. W. 269, 452
 Carr: Practice of Pediatrics (N) 417
 Carson, R. G. 268
 Carter, H. S. 457
 Cerebro-spinal meningitis in Germany (I)..... 297
 — Treatment of (P)..... 139
 Cæsarian section, Vaginal, Present status of..... 69
 Chadwick, C. N. 417
 Charities, State Board of (I) 226
 Chlorosis, Hydrotherapeutic treatment of (P).... 410
 Cholera in the Philippines. (I) (I) 372
 Chromosaccharometer, The (P) 377
 Church & Peterson: Nervous and Mental Diseases
 (N) 143
 Clark, L. P. 451
 Cleveland, F. A. 143
 — Grover 82
 Club-foot, Paralytic, Treatment of (P) 340
 Cohen, B. 392
 Coley, W. B. 346
 Colic, Diagnostic significance of (P) 181
 College of P. & S. of San Francisco (I) 407
 Collins, B. C. 268
 Comstock, G. F. 233
 Connecticut hospitals receive aid (I) 179
 Conner, L. A. 282
 Consolidation of Med. Soc. State of N. Y. and the
 N. Y. Med. Assoc. 1, 5
 Constipation, Chronic, Treatment of (E) 471
 Consumption and city crowding 403
 Contagious diseases in N. Y. City (I) 256
 Convalescence following abdominal section, Factors
 which further 158
 Conway, J. A. 269
 Cook, F. R. 435
 Cooley, J. J. 452
 Cornwall, E. E. 452
 Cotton: Medical Diseases of Infancy and Child-
 hood (N) 191
 Coville, L. 115
 Craig Colony of Epileptics 184
 Curie, Madame, Pension for (I) 297
 Cutler, A. W. 304
 Cyanosis with polycythemia (P) 378
 Cystitis, Catheter, Attempt to prevent (P) 183
 DaCosta, J. C., Jr. 189
 Damages for x-ray burns (I) 257
 Deaf child, Teaching the, To hear (P)..... 232
 Death rate in cities of New York State 227
 Delavan, D. B. 24
 Delicensing physicians (I) 372
 Delirium, Acute, Cause of (P) 476
 De Lorme: Manual of Pharmacy (N) 191
 De Schweinitz: Diseases of the Eye (N) 192
 Detroit College of Medicine (I) 257
 Diabetic gangrene, Preliminary symptoms of (P).. 410
 Diarrhea, Chronic, Dietetic treatment of (P).... 138
 Didama, H. D. 395
 Dietetics, Accuracy in (P) 259
 Digestion of catgut in Sahl's test (I) 336
 Diphtheria antitoxin in treatment of facial erysipelas
 —, Diagnosis and epidemiology of (P) ... 445
 —, Treatment and prevention of, By use of
 antitoxin 193
 Directory of the Amer. Med. Assoc. 15
 Disease in bedding (I) 372
 Disinfection of houses after consumption 129
 Dods, A. W. 304
 Dow, E. L. 143
 Dropsy and sodium chloride (E) 369
 —, Dechlorination treatment of (P) 408
 Druggists' responsibility, Limits of 333
 Drugs in therapeutics, Value of (P)..... 231
 Drunkenness in Liverpool (I) 180
 Duodenal ulcer, Perforating (P) 298
 Dyspepsia (E) 472
 Ear, Injury to, Caused by lightning (P)..... 231
 Eastman, F. C. 452
 Eating, Facts about (P)..... 138
 Echinococcus cyst of the liver..... 275
 Eclampsia, Prevention and treatment of..... 392
 Ectopic pregnancy (P)..... 302
 Eczema as a cause of death in children (P)..... 231
 —, due to tooth-powder (P)..... 442
 Edgar, J. C. 189
 Eiselsberg, Prof. Operated upon (I)..... 372
 Electrical resistance of the blood and urine as a
 test of the functional efficiency of the kidney
 (E) 368
 Elsner, H. L. 235
 Emaciation, Two possible causes of (P)..... 181
 Emergencies for the public (I)..... 440
 Emmet's Dr. T. A., Library (I)..... 331
 Empyema, Aspiration drainage in (P)..... 443
 —, Chronic, Treatment of, Dissection of the
 pleura in (P)..... 229
 —, Frontal and ethmoidal sinus (P) 232
 Epilepsy, Cause of, Methods of research into the.. 385
 —, Diet in, Salt-free (P)..... 441
 —, Etiology of, Prize for essay on (I)..... 474
 —, Pathology of, Prout-Clark..... 451
 Epileptics, Craig Colony for (I)..... 226
 Erdmann, J. F. 452
 Ergot, Therapeutic value of (P)..... 411
 Ethics, On the principles of..... 269
 —, Principles of medical, of the Amer. Med.
 Assoc 186
 Exophthalmic goitre, Surgical treatment of, Results
 of (P)..... 182
 Examining Board for the State of N. Y., A single
 (E) 470
 Fairbairn, H. A. 118
 Fatty acids in the infant's stomach (P)..... 416
 Ferguson, Dr., of Troy, N. Y. (I)..... 331
 Field hospital for the National Guard (I) 179
 Fisher, E. D. 232
 Flat-foot, Diagnosis and treatment of (E)..... 295
 Flint, Dr. Austin, Tribute to (I)..... 257
 Floating Hospital of St. John's Guild (I)..... 372
 Food preservatives 422
 Formic acid as a therapeutic agent (P)..... 230
 Formulae, To compel the publication of (I)..... 179
 Fosbury, L. D. 384
 Fowler, George Ryerson..... 250
 —, —, —, Memorial to (I)..... 257
 —, —, —, Obituary 78
 Fowler: The Operating Room and the Patient
 (N) 192
 Fowler: Treatise in Surgery (N)..... 190, 305
 —, R. S. 275
 Fractures, Modern treatment of (P)..... 182
 Frederick, C. C. 346
 French Congress for the Suppression of Illegal
 Practice (I)..... 332
 Fresh air treatment of diseases of the lungs (E).. 329
 Fruhwald: Reference Handbook of Diseases of
 Children (E)..... 191
 Fuller, B. C. 269, 304
 Gage, J. E. 452
 Gant, S. G. 388
 Gastric lesions, Surgical intervention in benign (P) 183
 —, ulcer and the thyroid gland (E)..... 131
 —, —, Lenhartz treatment of (P)..... 338
 Gaylord, H. R. 268
 Genius in medicine (P)..... 378

- Genung, L. T. 479
Gestation, Simultaneous extrauterine and intrauterine 203
 Gillette, A. A. 452
 —, H. S. 269
 Gibson, W. M. 232, 268, 346
Glandular affections, Acute, Clinical considerations of 219
 Glaucoma, Chronic, Treatment of, Combined iridectomy and sclerotomy in the (P) 440
 Glass, J. H. 346
Glasses, Fitting of, Observations on 461
Goitre, Exophthalmic 148
 Goldhorn 269
 Goldwater, S. S. 143
 Gonorrhoea in women (P) 184
 Gordinier, H. C. 452
 Gottheil, W. S. 189
 Graves' disease and acute rheumatism (P) 338
 Gunshot wounds inflicted with Japanese small calibre mantle bullets (P) 229
 Hanbridge, W. B. 190
 Harmon, G. E. H. 206
 Hartley, F. 269
 Harvard Medical School (I) 407
 Harvey Society, Lectures (I) 439
 Harvie, J. B. 190
 Hasbrouck, G. D. B. 395
 Haskell, C. K. 269
 Havard, V. 207
 Healer in trouble (I) 297
 Heart murmurs, Functional (P) 220
 Heffron, J. L. 232, 268, 395
 Hemiplegia, Double (P) 338
 Hemoptysis, Treatment of (P) 442
 Hemorrhage from hemorrhoids, Concealed (P) 227
 Hemorrhagic diathesis, Etiology of (P) 181
Heredity and asymmetrical development, Inquiry concerning remote 463
 Hill: Recent Advances in Physiology and Biochemistry (N) 192
 Hip, Congenital dislocation of, In children (P) 340
 Hodgkin's disease with eosinophilia (P) 337
 Holt: Diseases of Infancy and Childhood (N) 192
 Hospital cars (I) 407
 — Saturday and Sunday Assoc. (I) 226
 Hospitals, For cheaper (I) 179
 Houghton, A. A. 479
 Houston, D. W. 143
 Howard, E. H. 452
 Howard, W. R. 189
 Howell: Text-book of Physiology (N) 306
 Hoyer, F. F. 373
 Hubbard, W. S. 452
 Hubbell, A. A. 151
 Huber: Consumption (N) 417
 Hutchins, A. 451
 Huxley's definition of science 341
 Huxley, T. H. 293
Hydrotherapy, Development of scientific 139
Hyperemesis gravidarum, Treatment of 199
 Hyperlactation (P) 416
 Hysterectomy, Vaginal, For uterine prolapse (P) 478
 Hysterical fever (P) 341
 Illegal practice, Suppression of (I) 439
 — practitioner convicted (I) 297
Indigestion, Surgical treatment of 453
 Infant mortality (I) 372
 — in Liverpool 140
 Infantile paralysis, Operative treatment of (P) 339
Infectious diseases, Determination of end of danger of infection from 248
 Influenza and the influenza bacillus (P) 447
 Insane, Marriage of, Bill forbidding (I) 135
 Internal Medicine, German Congress of 129
 International Clinics (N) 32, 191, 234
 — Medical Congress, The XVth 129, 346
 — Tuberculosis Conference (I) 407
Intoxication of pregnancy, The Acid 73
 Iodine reaction in leucocytes (P) 380
 Iris, Atrophy of, Associated with tabes and general paralysis (P) 303
 Irish, R. H. 189
 Irrigation of the abdominal cavity from a bacteriological standpoint 183
 Isaacs, A. E. 307
 Jack, H. P. 29
 Jackson, S. D. 189
 Jacobi, A. 271, 367
 Jacobson, S. D. 479
 Jameson, P. C. 479
 Japanese medicine and sanitation (E) 177
 Jarman, G. W. 269
 Jastrow: The Subconscious (N) 348
 Jennings, F. S. 304, 451
 Jewish Hospital in Brooklyn (I) 227
 Jelliffe, S. E. 232
 Jones, W. B. 268, 269
 Kalish, R. 305
 Kane, J. J. 384
 Keen, W. W. 92, 408
 Keen: Surgery, Its Principles and Practice (N) 479
 Kelly: Walter Reed and Yellow Fever (N) 417
 Kelly, H. A. 145
 Kenyon, J. H. 269
 Killed by animals in India (I) 440
 Killian's frontal sinus operation 140
 Kirk, W. 143
 Kivlin, C. H. 189
 Klarmann: Crux of Pastoral Medicine (N) 191
 Knee-joint infections and their treatment (P) 412
 Knopf, S. A. 232
 Koplik: Diseases of Infancy and Childhood (N) 144
 Kysor, L. M. 269
 Laboratory of the Vanderbilt Clinic (I) 373
 Lacerations of the gastro-intestinal canal, Operative treatment of (P) 298
 Latcher, M. 304
 Ledlie 233
 Lefmann: Compend of Medical Chemistry (N) 144
 Leucocyte count in acute surgical disease, The differential (E) 224
 Leukemia, Differentiation of myelomatosis, and Hodgkin's disease (P) 299
 Leukemia, Lymphatic (P) 476
 Lewis, F. P. 53
 —, J. T. 17
 Library of Med. Soc. Co. of Kings 133
 Licenses, State Board has power to revoke (I) 332
 Liebermann, J. M. 288
 Life Insurance Examiners, International Congress of (I) 373
 Light treatment of blood parasitic diseases (E) 294
 Lincoln Hospital (I) 135
 Linson, J. J. 305
 Liver, Lacerations of, Diagnosis and treatment of (P) 379
 Lloyd, S. 160
 Loughran, E. H. 395
 Lucid, M. M. 451
 Ludwig's angina (P) 412
 Lunacy Commission, State 184
 Lutz, S. H. 268
 MacCoy, C. 232
 MacEvitt, J. C. 284
 Mackenzie, J. N. 19
Malpractice defense, What, Does for the profession and the public 17
 — Defense against alleged (I) 439
 Mambert, A. H. 305
 Manges, M. 417
 Manhattan Beach for convalescents (I) 179
 Manhattan, Eye, Ear, and Throat Hospital (I) 439
 Marasmus, Alcoholic dextrins and (P) 416
 Mars, J. D. 424
 Martine, A. 233
 Maxson, S. C. 233
 Mayo, W. J. & C. H. 63
 McCorkle, J. A. 268
 McKelway, St. C. 86
 McMurtrie, L. S. 91

- McSweeney, E. S. 305, 453
 Meat, Bad, in England (I) 332
 — inspection in New York (I) 297
Mediastinal tumors 25
 Medical education, Council on (I) 226
 — Examiners, State Board of Annual, report
 of 57
 — Directory of N. Y., N. J. and Conn. 5
 — legislation (I) 331
 — Library and Historical Journal (E) 225
 — Members in Austrian House of Parliament
 (I) 180
 — practice defined 180
 — schools to unite (I) 297
 Medical Society of the State of New York
 Agreement with Med. Soc., Co. Kings. 39
 Annual Meeting, 100th. 42, 45, 130
 — — — 101st 475
 Centenary of 35
 Centennial history of 46
 Committee on Arrangements, Report of. 4, 263
 — on Centennial Celebration 56
 — on Conference 58
 — on Legislation 49
 — on Public Health 51
 — on Publication 264
 — on Referendum 263
 — on Scientific Work 55
 — on Securing an Editor 60
 — to Select Counsel 55
 Council, Meeting of 45
 District Branches of, By-Laws of. 62
 History of 123, 134, 172, 217, 249, 291, 325, 361,
 400, 432, 466
 House of Delegates, Meeting of. 1, 37, 43, 262
 Medical Directory and Journal. 4, 333
 Miscellaneous 130, 136
 President's Address 46
 Registration of Physicians 266
 Secretary, Report of. 47, 264
 Treasurer, Report of. 50, 263
Medical study, Preparation for 353
 — teaching of to-day and the private quiz. 211
 Meningeal hemorrhage, Free interval in (P) 298
 Meningitis, Cerebro-spinal, Experimental, And its
 serum treatment (E) 405
 Meningococcus pharyngitis as the basis of epidemic
 meningitis (P) 228
 Mesentery, Chylous cysts of (P) 182
 — Solid tumors of (P) 182
 Methylene blue in treatment of inoperable cancer. 367
 Meyer, D. W. 479
 Meyer, E. J. 346
 Mice and pneumonia (P) 137
 Mikulicz memorial (I) 180
 Milk, Clean (E) 255
 — dealers fined (I) 179
 — education (E) 405
 —, in infant feeding, Role of pure cow's. 271
 — problem, From a sanitary standpoint. 247
 — supply, Protection of the New York. 28
 — shortage (I) 408
 Miller, A. B. 232
 —, F. M. 479
 Modern Clinical Medicine: Diseases of the Met-
 abolism and of the Blood (N) 190
 Montgomery, M. D. 452
 Montmarquet, J. D. 451
 Morat: Physiology of the Nervous System (N) 384
 Morris, J. E. K. 451
 Morris: Essentials of Materia Medica (N) 144
 Mortality in San Francisco earthquake (I) 407
 Mosquito extermination (I) 277, 373
 Moynihan: Abdominal Operations (N) 347
 —: Gall-stones and Their Surgical Treat-
 ment (N) 143
 Mumford, J. G. 4, 479
 Muren, G. M. 233, 242
 Murray, A. 452
 —, D. H. 470
 Myomata of the pelvic connective tissue (P) 478
 Myopia, Influence of full correction of (P) 303
 Myositis, Non-suppurative, in typhoid fever (P) 441
 Napier, C. D. 268
 National Public Health Society (I) 373
 Nelson, W. S. 233
 Neuman, L. H. 190
 Neurasthenia, The uterus and ovary of (P) 184
 New Books 32, 143, 190, 234, 270, 305, 347, 384, 417, 479
 New Rochelle, New Hospital for (I) 257
 Newton, R. C. 211
 New York Academy of Medicine (I) 227
 — — — — — Section on
 — — — — — Orthopedic
 — — — — — Surgery 381
 — — Association for Promoting the Inter-
 ests of the Blind (I) 135
 — — Skin and Cancer Hospital (I) 439
 — — State Journal of Medicine (E) 130
 Nichols, C. E. 269
 Noises, Crusade against objectionable. 129
 Northridge, W. A. 268
 Norwood, H. G. 479
 Nostrum vendors barred in Geneva (I) 372
 Nursing mothers, Prizes for (I) 440
 Observations on the accidents of recreation 371
 — on the alcohol question 473
 — on bacteriology and botany 438
 — on diversion 296
 — on education preparatory to the study
 of medicine 406
 — on hospital internship 178
 — on medical science and medical prac-
 tice 256
 — on the philosophy of medicine 135
 — on the prevention of disease 226
 — on voyages d'études médicales 134
 — on a well-ordered doctor's life 330
Ocular injuries, Immediate and early treatment of 151
 Opsonic power of the blood (P) 375
 Optic atrophy, Tabetic, And central scotoma (P) 450
 — neuritis in syringomelia (P) 304
Oration on medicine 93
 — surgery 103
 O'Reilly, R. 440
 Orton, J. G. 332, 479
 Osler: Principles and Practice of Medicine (N) 306
 —, Philosophy of 253
 Osmic acid injections for neuralgia 171
 Osteopathic bill, The 132, 136, 185
 Ostwald, Professor, Resignation of (I) 258
 Otitis media, Intracranial lesions as sequels of (P) 341
 Overton, F. 452
 Painter, H. M. 73
 Palmer 232
 Panama, Health conditions in (I) 297
Paranoia, Nosological status of 202
 Paris Medical Journal (I) 258
 Parish, E. J. 479
 Park, R. 103
 Parker, Willard, Library of (I) 439
 Patee: Practical Dietetics (N) 144
 Patent medicines, Ordinance to prohibit distribu-
 tion of (I) 180
 Pathogenic micro-organisms, including bacteria and
 protozoa 32
 Paul: Nursing in the Acute Infectious Diseases
 (N) 191
 Payment for medical services, To compel (I) 474
 Pease, H. D. 193
 Peddle, G. W. 76
 Pentosuria (P) 409
 Philippines, Medical and surgical observations in
 (P) 229
 Phillips, W. C. 373
Phlebitis following aseptic abdominal operations 390
 —, Femoral, Prognosis of post-operative (P) 230
 Pileher, L. S. 239
 Pilgrim, C. W. 257
 Pneumonia, Lobar, Prophylaxis of (P) 259
 —, Treatment of, Cold fresh air (P) 137
 Poisons, Sale of (I) 227

- Pollution of New York Bay (I)..... 256
Portland Medical Society, Resolutions adopted by (I)..... 332
Posey & Spiller: The Eye and the Nervous System (N)..... 418
Potter, W. W. 257
Practical Medicine Series: 1906, Vol. 1, General Medicine (N)..... 348
Practice of medicine, Definition of..... 431
Pregnancy, Toxæmia of (P)..... 301
— and mitral stenosis (P)..... 415
Privacy, Physician's right of (E)..... 294
Proceedings of the Conference of Sanitary Officers of the State of New York, 1905 (N)..... 192
Procidencia uteri..... 394
Prostate, Removal of, For the cure of Prostatic dysuria..... 239
—, *Inoperable conditions of, Treatment of*..... 242
Prostatic abscess, Treatment of, by urethral incision (P)..... 299
— hypertrophy, Non-operative treatment of (P)..... 139
— surgery, Recent reports on (P)..... 415
Proteid metabolism (E)..... 177
Pryor, J. H. 120
Pseudo-uremia of childhood (P)..... 139
Psoriasis, Treatment of (P)..... 139
Psychiatry, German Congress for Experimental.. 129
Public health in Austria, Minister of (I)..... 135
Publicity, Physicians object to (I)..... 332
Puerperal infection, Diagnosis and treatment of, Problems in (P)..... 139
— pyæmia, Operation for (P)..... 414
Pulse, The irregular (E)..... 370
Pure food bill (E)..... 370
Purin-free diet (E)..... 437
Putnam, H. C. 426
Pylorus, What causes the, To relax (P)..... 228
Quackery, The anti-, Movement in Europe..... 403
Rabies, Epidemic of (I)..... 408
Rachford: Neurotic Disorders of Childhood (N).. 384
Railroad accidents (I)..... 372
Reciprocity in medical licensure (E)..... 436
Reed, Walter, Memorial to (I)..... 474
Reese, F. D. 304
Reiger, J. 304
Relief fund for physicians (I)..... 227
Renal functions, Diagnosis of (P)..... 338
— hemorrhage following cooling of the body (P)..... 377
Respiratory innervation (P)..... 261
Resseguie..... 190
Restaurants, Unsanitary (I)..... 408
Rheumatism, Treatment of, By inunction (P).... 139
—, —, Mechanical (P)..... 227
Roby, G. 268
Rochester, D. 232
—, Infant mortality in (I)..... 439
Rockefeller Institute for Medical Research..... 135, 257
Roemer, W. B. 233
Roosevelt Hospital, Enlargement..... 372
Rose, L. W. 269
Ross, D. L. 269
Ross, F. W. 269
Ross, W. H. 233, 452
Ruggles, E. W. 269
Russell, J. W. 452
Russian Duma, Physicians in the (I)..... 332
Sackrider, J. R. 304
St. Francis Hospital (I)..... 179
Sanitary and moral prophylaxis (I)..... 179
— officers of the State of N. Y., Sixth annual conference of (I)..... 440
Sarcoma of the mediastinum (P)..... 409
Sausage factories closed (I)..... 297
Scorbutus, Infantile (P)..... 259
Scott, P. 452
Sea-sickness, A specific for (E)..... 296
Seaside Hospital for Tuberculosis (I)..... 179
Semmelweis memorial (I)..... 332
Sexual morality (E)..... 176
Shoulders, Forward, Study of (P)..... 339
Sill, H. D. 304
Silver salts in ocular therapeutics (P)..... 449
Skene memorial (I)..... 226
Sleep, Some truths about (E)..... 436
Small-pox (I)..... 227, 372
— in Manchester (I)..... 175
Smith, A. D. 452
—, E. E. 422
—, G. A. 452
Smoke nuisance in New York (I)..... 179
Snow: Currents of High Potential (N)..... 234
—, W. B. 356
Society meetings in Boston (I)..... 257
— of Sanitary and Moral Prophylaxis..... 342
Sodium aurate (P)..... 139
Sornberger, S. J. 304, 451
Spirocheta pallada, Seats of (P)..... 411
—, —, Rapid staining method for the (P)..... 260
Sprague, S. E. 417
Spratling, W. P. 385
Stamm, M. 69
Status lymphaticus, Clinical diagnosis of..... 282
Starr, F. W. 269
Sterility, Displacement of the Fallopian tubes to produce (P)..... 184
Stevens: Modern Materia Medica and Therapeutics (N)..... 144
Still's disease..... 360
Stockton, C. G. 479
Stomach, Post-operative acute dilatation of the... 284
— and intestines, Movements of, In some surgical conditions (P)..... 220
—, Surgery of, Present status of (P)..... 138
Stone, W. S. 199
Stow, B. 244
Streptococcus infections (P)..... 448
Sugar analysis, Quantitative (I)..... 336
Sulzman, F. M. 189
Suprarenalin, A cause of arterie-sclerosis (P).... 477
Sphyilis, Etiological relation of, To tabes and general paralysis of the insane (P)..... 376
—, Etiology of relapses in (P)..... 299
—, *Further researches on*..... 288
—, *in paretics, Somatic evidences of*..... 197
Syphilitic contagion from tertiary lesions (P).... 411
Tabes and general paralysis, Identity of (P)..... 337
— dorsalis, Early diagnosis of (P)..... 410
Taylor, A. N. 314
Tendon transplantation in pes calcaneo valgus (P) 231
Theophyllin, Diuretic action of (P)..... 334
Thompson, W. G. 143, 148
Thorington: The Ophthalmoscope and How to Use It (N)..... 191
Thornton: Dose-Book and Manual of Prescription Writing (N)..... 144
Thrombosis, Puerperal septic, Surgical treatment of (E)..... 328
Tompkins, O. A. 451
Toms, S. W. S. 461
Tonsils, The, As portals of entry for general infection (P)..... 258
Towne..... 190
Townsend, W. R. 190
Toxic arthritis, Correspondence on..... 180
Trachoma, Epidemic (I)..... 373
—, Increase of (I)..... 407
— in New York schools (I)..... 439
Transactions of Amer. Electrotherapeutic Association, 1904 (N)..... 234
— of College of Physicians of Philadelphia, Vol. 27 (N)..... 305
— of Lackawanna County Med. Soc., 1905 (N)..... 191
Trembley, C. C. 304
Trick, H. R. 233
Tubal abortion and rupture, Causes of (P)..... 303
Tuberculosis, Abdominal, in Great Britain (I).... 333
—, Antitoxin for (I)..... 227
—, Federal action against (I)..... 179

- Tuberculosis, Fight against (P)..... 335
 —, Fresh air necessary in 367
 —, Immunity to, Among line workers (I) 180
 —, of children, *Portals of entry and sources of infection in* 349
 —, of the mammary gland and its operative treatment (P) 379
 —, Pulmonary, Incompatible with mitral stenosis (P) 377
 —, —, *Sanatorium treatment of* 120, 142
 —, —, Treatment of, By passive hyperemia (P) 378
 —, sanatorium, New York City (I).... 226
 —, Treatment of, Home (E) 254
 —, —, Immunization (P) .. 441
 Tuberculous children, Shore hospital for (I).... 331
 Twichell, D. C. 304
 Typhoid, Intestinal hemorrhage in, Frequency of (P) 412
 —, *fever* 115, 140
 —, —, Diet in, A more liberal (P).... 181, 378
 —, —, Epidemic of (I) 227
 —, —, in Brooklyn (I) 407
 —, —, in Washington (I) 440
 —, —, Treatment of, By appendicostomy (P) 230
 —, perforation, Diagnosis and treatment of (E) 254
 Typhus fever in Philadelphia (I) 372
 —, —, on a steamer (I) 440
 Ulcer, Gastric, With tumor (P) 259
 Ulcers of the stomach and duodenum, Perforating (P) 236
 Unhygienic immunity (E) 368
 United States Army Medical Corps examinations (I) 297
 —, —, Navy, Medical vacancies in (I).... 180
 Urethral stricture, Conservative treatment of (P). 183
 Urine, Phosphatic (P) 442
 Uterus, Rupture of, With escape of child (P).... 231
 Vaccination accident (I) 227
 —, in Pennsylvania (I) 440
 Van Cott, J. M. 163, 268
 Vander Veer, A 257, 305
 Varices of the lower limbs, Total resection of the saphenous veins in (P) 413
 Variola and vaccinia 424
 Vascular tension (P) 409
 Venereal disease, *Legal measures to prevent*.... 314
 —, —, *Should not safeguards from, Be thrown around marriage* 313
 Venereal diseases in the army and their prophylaxis 207
 —, —, in the navy and their prophylaxis 206
 —, —, *infection through marriage, Value of education and treatment as safeguards in.* 311
 —, —, prophylaxis in Berlin (I)..... 332
 Veronal poisoning (P) 337
 Vienna, General surgical clinic in (I)..... 332
 Vomiting of pregnancy, Pernicious (P)..... 300
 —, —, —, Toxemic (P) 414
 Waldo, R. 233, 394
 Walker, H. P. 269, 304
 Walter: X-Rays in General Practice (N)..... 234
 Walsh, J. J. 123, 172, 217, 249, 291, 304, 325, 361, 400, 432, 466
 Warbasse, J. P. 78, 451, 452
 Ward, S. B. 93
 Ware, M. W. 419
 Waterbury, Conn., New hospital at (I) 440
 Weigel, L. A. 297
 Welles: The Ellwoods (N) 144
 —: The Lute and Lay (N) 144
 West, F. E. 268
 West Side Hospital bill vetoed (I) 257
 Wharton: *Minor and Operative Surgery* (N).... 144
 Wheelock, C. F. 353
 Whitbeck, J. E. W. 203
 White & Martin: *Genito Urinary and Venereal Diseases* (N) 348
 White, W. A. 202
 Whooping cough, The microbe of (I) 408
 Wiggin, F. H. 158, 232
 Wilcox: *Essential of Genito Urinary and Venereal Diseases* (N) 191
 Willard, C. E. 346
 Williams: *Food and Diet in Health and Disease* (N) 234
 Williams, G. O. 384, 463
 Winfield, J. M. 197
 Wilson, M. J. 346
 Wilson: *The Complete Pocket Formulary* (N)... 384
 Wiseman, J. R. 235
 Woglom, W. H. 268
 Wolf, G. G. L. 189
 Wood, H. C. 440
 Wright, W. W. 479
 Wyeth, J. A. 313
 X-ray, Tumor of breast cured by 435
 Yale Medical School (I)..... 297
 Yellow fever, Without mosquitos there can be no (P) 181
 Yeo: *Manual of Medical Treatment or Clinical Therapeutics* (N) 270

ORIGINAL ARTICLES

	PAGE
WILLIAM A. BAKER—The Milk Problem from a Sanitary Standpoint	247
A. L. BENEDICT—The Detection of Occult Blood in the Feces—A Modification of the Boas Test	204
WALTER BENSEL—The Protection of the New York Milk Supply	28
LOUIS FAUGERES BISHOP—The Determination of the End of Danger of Infection from Patients Who Have Suffered from Infectious Diseases.....	248
DAVID BOVAIRD, JR.—Portals of Entry and Sources of Infection in the Tuberculosis of Children....	349
ALGERNON T. BRISTOW—George Ryerson Fowler.....	250
ALGERNON T. BRISTOW—Phlebitis Following Aseptic Abdominal Operations	390
JOSEPH D. BRYANT—Address	81
HON. M. LINN BRUCE—Address	85
C. P. BULL, JR.—Still's Disease	360
WILLIAM FRANCIS CAMPBELL—Mediastinal Tumors	25
HERBERT SWIFT CARTER—Report on the Clinical Chemistry of the Blood in Various Diseases.....	457
HON. GROVER CLEVELAND—Address	82
BERNARD COHEN—The Prevention and Treatment of Eclampsia	392
LEWIS A. CONNER—The Clinical Diagnosis of Status Lymphaticus	282
FINLEY R. COOK—Tumor of the Breast Cured by the X-Ray	435
LUZERNE COVILLE—Typhoid Fever: With Especial Reference to its Incubation Period and Re- incubation Cycles	115
D. BRYSON DELAVAN—Carcinoma of the Larynx	24
HENRY L. ELSNER and JOSEPH R. WISEMAN—The Therapeutic Value of Antithyreoidin in the Treatment of Exophthalmic Goitre and Kindred Affections: A Preliminary Report	235
HENRY A. FAIRBAIRN—Toxic Arthritis.....	118
JOHN A. FORDYCE—The Value of Education and Treatment as Safeguards in Venereal Infection Through Marriage	311
RUSSELL S. FOWLER—Echinococcus Cyst of the Liver. With a Report of Ten Cases Personally Observed, and a Differential Consideration of Tumors of the Liver	275, 322
SAMUEL G. GANT—Report on Sterile Water Anesthesia in the Operative Treatment of Diseases of the Rectum and Anus	388
GEORGE E. H. HARMON—Venereal Diseases in the Navy and their Prophylaxis	206
COL. VALERY HAVARD—Venereal Diseases in the Army and their Prophylaxis	207
JOHN L. HEFFRON—Henry Darwin Didama	395
ALVIN A. HUBBELL—The Immediate and Early Treatment of Ocular Injuries	151
A. E. ISAACS—Conditions Within the Appendix Causative of its Inflammation	307
HARVEY P. JACK—Relations of Appendicitis to Diseases of the Uterine Adnexæ and Vice Versa.....	29
A. JACOBI—The Role of Pure Cow's Milk in Infant Feeding	271, 316
WILLIAM WILLIAMS KEEN—Address	92
HOWARD A. KELLY—Resections of the Bladder in Rebellious Cystitis	145
F. PARK LEWIS—The Prevention of Unnecessary Blindness	53
JAMES TAYLOR LEWIS—What Organized Malpractice Defense Does for the Profession and the Public.	17
J. MONROE LIEBERMANN—Further Research on Syphilis: By what Data, Sign or Symptom Can we Determine a Cure	288
SAMUEL LLOYD—The Therapy of Carcinoma	160
JOHN C. MAC EVITT—Post-Operative Acute Dilatation of the Stomach	284
ST. CLAIR MCKELWAY—Address	86
JOHN NOLAND MACKENZIE—Remarks on the Microscopic Diagnosis and General Indications for Treatment of Cancer of the Larynx	19
LEWIS S. McMURTRY—Address	91
E. S. McSWEENEY—The Surgical Treatment of Indigestion.	453

ORIGINAL ARTICLES—Continued

J. D. MARS—Observations Regarding Variola and Vaccinia	424
WILLIAM J. MAYO and CHARLES H. MAYO—The Radical Removal of Cancer of the Stomach..	63
G. MORGAN MUREN—Treatment of Inoperable Conditions of the Prostate	242
RICHARD COLE NEWTON—The Medical Teaching of To-Day and the Private Quiz	211
H. McM. PAINTER—The Acid Intoxication of Pregnancy	73
ROSWELL PARK—Oration on Surgery.....	103, 167
HERBERT D. PEASE—Some Features and Results of the Treatment and Prevention of Diphtheria by the Use of Antitoxin	193
GEORGE H. PEDDLE—Some Experiences with Apomorphia	76
LEWIS STEPHEN PILCHER—Some Observations upon the Removal of the Prostate for the Cure of Prostatic Dysuria	239
JOHN H. PRYOR—Comments on the Results of the Sanatorium Treatment of Pulmonary Tuberculosis.	120
HELEN C. PUTNAM—Biologists in Public Schools, An Aid to Morals and Prosperity	426
E. E. SMITH—Are Preservatives in Food Injurious to Health?	422
WILLIAM BENHAM SNOW—The Treatment of Rheumatoid Arthritis and Allied Conditions of the Joints	356
WILLIAM P. SPRATLING—Methods of Research into the Causes of Epilepsy; Its Curability and its Point of Greatest Prognostic Value	385
M. STAMM—The Present Status of Vaginal Cæsarian Section	69
WILLIAM S. STONE—The Treatment of Hyperemesis Gravidarum	199
BOND STOW—The Autopsy as a Judge of our Bedside Conclusions. Illustrated by a Case of Fatty Heart Mistaken for Valvular Disease.....	244
ARTHUR N. TAYLOR—Legal Measures to Prevent Venereal Diseases	314
W. GILMAN THOMPSON—Exophthalmic Goitre: Clinical Notes on Forty-three Cases (Several In- cluding the Use of the Rogers-Beebe Cytotoxic Serum)	148
S. W. S. TOMS—Some Observations on the Fitting of Glasses	461
JOSHUA M. VAN COTT—A Pathological-Clinical Consideration of Arterio-Sclerosis	163
RALPH WALDO—Procidencia Uteri	394
JAMES J. WALSH—History of the Medical Society of the State of New York, 123, 172, 217, 249, 291, 325, 361, 400, 432, 466	
SAMUEL B. WARD—Oration on Medicine.....	93
MARTIN W. WARE—Clinical Considerations of Acute Glandular Affections	419
CHARLES F. WHEELOCK—Preparation for the Course of Medical Study	353
WILLIAM A. WHITE—The Nosological Status of Paranoia.	202
JOHN E. W. WHITBECK—Simultaneous Extrauterine and Intrauterine Gestation	203
FREDERICK HOLME WIGGIN—Factors which Further Convalescence Following Abdominal Section.	158
GEORGE O. WILLIAMS—An Inquiry Concerning Remote Heredity and Asymmetrical Development..	463
JAMES MAC FARLANE WINFIELD—Somatic Evidences of Syphilis in Paretics	197
JOHN A. WYETH—Should not Safeguards from Venereal Disease be Thrown Around Marriage?.....	313

