- - PROCEEDINGS - -

OF THE

NEBRASKA

STATE MEDICAL SOCIETY

THIRTY-SECOND ANNUAL SESSION,

1900.

PUBLISHED BY THE SOCIETY
The Nebraska State Medical Society does not hold itself responsible for, nor necessarily endorse, any of the papers herein.

A. D. WILKINSON,
Secretary Nebraska State Medical Society.
ROBERT McCONAUGHY, M.D.
President Nebraska State Medical Society.
ROBERT McCONAUGHY, M.D.

Was born April 6, 1852, in Mount Pleasant, Westmoreland County, Pa. He received his education at the public school and academy at that place, at Elders Ridge Academy and Lafayette College, Easton, Pa., and his medical degree at Jefferson Medical College, Philadelphia, in 1875.

He entered the practice of his profession at his old home, with his father, James McConaughy, M.D., who had already served the people of that community nearly forty years. This partnership lasted ten years, and in 1885 he came to York, Neb., to visit two married sisters living there, decided to remain, and entered into partnership with Dr. W. M. Knapp. The Doctor's father and mother removed to York in 1886, where the father died July 18, 1900, in his ninetieth year, and the mother Jan. 19, 1900, in her seventy-eighth year.

Dr. McConaughy's father, five uncles and one cousin entered the medical profession, and all but one graduated from Jefferson Medical College. While living in Pennsylvania Dr. McConaughy held the position of division surgeon of the Pennsylvania R. R. Co., and since coming to Nebraska has held the appointments of surgeon of the F. E. & M. V. R. R. Co., and grand medical examiner of the Ancient Order of United Workmen. He is now surgeon and secretary of the Board of United States Pension Examiners, at York.
L. J. ABBOTT, M.D.
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OFFICERS AND COMMITTEES
of the NEBRASKA STATE MEDICAL SOCIETY.
1900-1901.

OFFICERS.

H. M. McClanahan, Omaha.................................President
J. A. Andrews, Eustis........................................First Vice-President
INEZ C. Philbrick, Lincoln.............................Second Vice-President
A. D. Wilkinson, Lincoln.................................Recording Secretary
H. B. Lowry, Lincoln..........................Corresponding Secretary and Librarian
J. L. Greene, University Place.....................Treasurer

COMMITTEES.

CREDENTIALS—A. D. Wilkinson, ex officio, Chairman, Lincoln.
   First Congressional District—A. B. Anderson, Pawnee City.
   Second Congressional District—J. P. Lord, Omaha.
   Third Congressional District—E. J. C. Sward, Oakland.
   Fourth Congressional District—I. N. Pickett, Odell.
   Fifth Congressional District—George Roeder, Grand Island.
   Sixth Congressional District—R. C. Talbot, Broken Bow.
NECROLOGY—C. Watson, Chairman, Nebraska City; E. A. Benton, Central City; F. D. Haldeman, Ord.
GRIEVANCES—M. L. Hildreth, Chairman, Lyons; G. W. Shidler, York; J. B. Hungate, Weeping Water.
AUDITING—R. C. MacDonald, Chairman, Fremont; W. M. Knapp, Aurora; F. E. Beal, Springfield.
MEDICAL LEGISLATION—B. F. Crummer, Chairman, Omaha; J. W. Bullard, Pawnee City; W. L. Dayton, Lincoln; O. Grothan, St. Paul; A. D. Wilkinson, Lincoln.

CHAIRMEN OF SECTIONS.

PRACTICE OF MEDICINE—W. B. Ely, Ainsworth.
SURGERY—P. H. Salter, Norfolk.
OBSTETRICS AND GYNECOLOGY—Ewing Brown, Omaha.
NERVOUS AND MENTAL DISEASES—C. E. Coffin, Asylum.
ANATOMY AND PHYSIOLOGY—George P. Clements, Clarkson.
OPHTHALMOLOGY AND OTOLoGY—F. S. Owens, Omaha.
MEDICAL JURISPRUDENCE, MEDICAL CHEMISTRY AND TOXICOLOGY—A. C. Stokes, Omaha.
MATERIA MEDICA AND THERAPEUTICS—W. D. Shields, Holdrege.
PATHOLOGY AND HISTOLOGY—H. B. Hamilton, Omaha.
PUBLIC HYGIENE AND MEDICAL LEGISLATION—J. V. Beghtol, Friend.
DERMATOLOGY—Maurice A. Hoover, Kearney.
LARYNGOLOGY AND RHINOLoGY—S. E. Cook, Lincoln.
The thirty-second annual session of the Nebraska State Medical Society met at Thurston Rifles' Hall, Omaha, May 8, 9 and 10, 1900. The first session was called to order at 11:30 a.m.; Dr. Robert McConaughy, president, in the chair.

The Committee on Credentials was unable to report at this time.

Reading of the minutes was dispensed with.

RECORDING SECRETARY'S REPORT.

The Secretary then read his annual report, which was as follows:

My report is brief. The society is in a most flourishing condition, with a total membership of about 325, which is one-third of the entire regular profession of the state—a pretty fair proportion 'tis true, but let us put forward every effort during the coming year and each member take it upon himself to secure a new member at our next meeting.

One of the most difficult things in connection with our meetings is the failure, usually, to get good railroad rates, for it has been impossible in the past to guarantee 100 bona fide fares to secure the certificate plan, and this means an expense of at least $11 for a man to come from Chicago to sign the certificates. Now, my remedy would be to urge the other state societies—medical, dental and pharmaceutical—to meet at the same time and place that we do, and thus we would be able to get an open rate. I trust this will be taken up by the members and the Secretary be instructed to communicate with the other bodies.
10  NEBRASKA STATE MEDICAL SOCIETY.

FINANCIAL REPORT.

1899.

RECEIPTS.
May 11, Received from Treasurer balance due the Secretary .................. $ 7.50
May 11, Received from Treasurer for expenses............................................ 100.00
May 9, 10 and 11, Received dues from members (acting as Treasurer) .......... 233.00
May 9, 10 and 11, Received membership fees............................................. 180.00

$520.50

1899.

DISBURSEMENTS.
May 11, Balance due the Secretary ....................................................... $ 7.50
May 10, Incidentals May meeting ......................................................... .45
May 15, Account book (cash) ............................................................... .35
May 15, Letter file ................................................................................. .25
May 20, Blank vouchers ........................................................................... .25
June 23, Wrapping twine ......................................................................... .10
June 26, Envelopes ................................................................................ .10
June 13, Mailing tubes ........................................................................... 2.00
June 24, Letter-heads and envelopes ...................................................... 6.00
Aug. 15, Library paste ............................................................................. .40
Nov. 22, Drayage on Proceedings ............................................................. .50
Nov. 22, Tying Transactions ................................................................... 1.00
Nov. 23, Delivering Transactions, city ..................................................... 1.50
Dec. 13, Twine ......................................................................................... .15
Dec. 13, Letter-file for 1900 .................................................................... .25

1900.
Feb. 23, Rubber stamp ............................................................................ .55
Mar. 1, Circular letter and envelopes ....................................................... 9.00
Mar. 27, Postal cards ............................................................................. 4.50
April 7, L. D. T. boy—books to library ................................................... .25
May 2, Programmes ............................................................................. 16.00
May 8, Stamps for year ......................................................................... 19.23
May 8, Express and revenue stamps ....................................................... 28.09

Total expenses ...................................................................................... $ 90.92

1899.
May 12, Paid Dr. J. L. Greene, membership fees................................. $180.00
May 12, Paid Dr. J. L. Greene, dues from members ............................. 233.00

413.00

1900.
May 8, By Secretary's check to balance .............................................. 9.08

$520.50

Respectfully submitted,

A. D. WILKINSON, Secretary.

Secretary's report was referred to Auditing Committee.
Dr. J. L. Greene, Treasurer, read his annual report, which was as follows:

TREASURER'S REPORT.

Dr. J. L. Greene, Treasurer, in account with Nebraska State Medical Society:

1899.
May 11, To cash from Dr. W. M. Knapp........$ 521.30
May 12, To cash from Dr. A. D. Wilkinson, 36 new members ............... 180.00
May 12, To cash from Dr. A. D. Wilkinson for dues which he collected during the 1899 meeting ............. 233.00

1900.
May 1, To cash collected from members on account of dues from May 11, 1899, to May 1, 1900................. 189.00

Total $1,123.30

CONTRA.

1899.
May 11, Amount paid Order No. 1 .............. $ 100.00
May 11, Amount paid Order No. 2 .............. 100.00
May 11, Amount paid Order No. 3 ..............  7.50
May 11, Amount paid Order No. 4 .............. 100.00
May 11, Amount paid Order No. 5 ..............  12.00
Nov. 21, Amount paid Order No. 6 .............. 184.60

1900.
May 1, Cash to balance......................... 619.20

Total $1,123.30

May 1, 1900, To cash balance................... $ 619.20

The Auditing Committee having recommended that the stubs and unsigned receipts be preserved for their use, I have them and an alphabetical list of all payments made, upon account of dues to Dr. Wilkinson and myself, at hand and file them with this report.

I now hand the Secretary New York drafts for the balance in my hands belonging to this society. All of which is most respectfully submitted.  J. L. Greene, Treasurer.

The report was filed with the Secretary and referred to Auditing Committee.
Dr. von Mansfelde moved that a vote of thanks of the association be offered the Secretary and Treasurer for presenting the best reports ever made to the society. Carried.

Moved by Dr. von Mansfelde that the original minutes of the Society be kept in the safest vault that can be secured. Carried.

No other committees being ready to report, Society adjourned to meet at 2 o'clock p.m.

AFTERNOON SESSION.

TUESDAY, May 8, 2 o'clock p.m.

The first Section of the session—that of Therapeutics—was taken up. The chairman not being present, Dr. Harold Gifford, of Omaha, the only representative of the Section, read a paper on “The Nature of the Antiphlogistic Action of Salicylate of Sodium,” which was discussed by O. Grothan, St. Paul, and Dr. A. S. von Mansfelde, of Ashland.

At this point motion was made that the privileges of the floor be extended to all the physicians who had made application for membership and which had not been acted upon by the Committee on Credentials.

The next Section—“Surgery”—was taken up and a paper read by Dr. C. C. Allison, of Omaha, chairman of the Section, who took for his subject “Septic Peritonitis.” Discussed by Drs. B. B. Davis, Omaha; J. P. Lord, Omaha; O. Grothan, St. Paul; A. S. von Mansfelde, Ashland; W. A. Henry, Omaha, and J. A. Andrews, Eustis. This was followed by the following papers:


- Dr. J. P. Lord, Omaha, “Leucocytosis as a Factor in Surgical Diagnosis.” Discussed by Drs. A. S. von Mansfelde, Ashland; W. O. Henry, Omaha, and H. W. Orr, Lincoln.
Dr. B. B. Davis, Omaha, "Unusual Contents of the Hernial Sac." Discussed by Drs. J. P. Lord, Omaha; J. A. Andrews, Eustis, and Claude Watson, Nebraska City.

Dr. H. P. Hamilton, Omaha, "Report of Some Suppurative Cases of Parotid Gland, With Remarks on Same." Discussed by Drs. A. S. von Mansfelde, Ashland; W. D. Shields, Holdrege; Jay G. Roberts, Hastings; W. O. Bridges, Omaha; C. C. Allison, Omaha; J. B. Hungate, Weeping Water; R. M. Stone, Omaha, and J. L. Greene, University Place.

Dr. Davis, of Omaha, moved that Drs. Treynor and McCrea, Jr., of Council Bluffs, Iowa, be made members of this society by invitation.

Adjourned to 8 o'clock p.m.

EVENING SESSION.

TUESDAY EVENING, 8 p.m.

Dr. J. B. Hungate, Second Vice-President, took the chair, and President McConaughy delivered his address, which, on motion, was referred to a committee of three—Drs. von Mansfelde, Grothan and Watson.

The chairman of the Section on Public Hygiene and Medical Legislation not being present, this department of the programme was well represented by Drs. H. Winnett Orr, of Lincoln, and B. F. Crummer, of Omaha, the former’s paper, "Medical Legislation in Nebraska" and the latter’s "Medical Registration" elicited a spirited discussion, participated in by Drs. von Mansfelde, Anderson, Wilson (Table Rock), Roberts, McConaughy, Watson, Butler, Philbrick, Lord, Andrews and Pollard.

The President announced a meeting of the Committee on Credentials for Wednesday morning at 8:30 o'clock.

Adjourned to Wednesday morning at 9 o'clock.
Society was called to order by the President, and Dr. H. Winnett Orr, of Lincoln, took the floor to close the discussion on "Medical Legislation," at the close of which Dr. von Mansfelde moved that the Secretary of this society be put in correspondence with the secretaries of other societies and complete the plan suggested and go to work. Carried. (See discussion.)

The Committee on Credentials was completed by the appointment of Drs. A. Bear, of Norfolk, and Charles Rosewater, of Omaha, to fill vacancies, and forty-four applicants were elected to full membership.

The Section on Pathology was taken up, and Dr. W. R. Lavender, of Omaha, gave a very interesting talk on "Some Phases of the Protoplasmic Cells," at the close of which he was unanimously selected as a representative of this body in a joint session next year with the Pharmaceutical Society at Lincoln.

Under this Section J. E. Summers, Jr., M.D., exhibited and demonstrated the following gross pathological specimens:

1. "Cystoma Papilliferum Sarcomatosum of the Ovary," the cysts of which were filled with pseudo mucin.
2. "Carcinoma of Breast," showing hyaline degeneration.
3. "Perforating Ulcer of Duodenum, Near the Pyloric Valve."

W. R. Lavender, M.D., exhibited and demonstrated "Atheroma of Ascending Portion and Arch of the Aorta"; also microscopical slide sections of all the above pathological specimens.

The Section on Obstetrics and Gynecology was next considered. The first paper was read by Dr. Charles Rosewater, Omaha, on "Lacerations of the Perineum." Discussed by Drs.
THIRTY-SECOND ANNUAL SESSION.

von Mansfelde, Ashland; Bear, Norfolk; Roberts, Hastings; Greene, University Place; Philbrick, Lincoln, and Gibbs, Omaha, followed by Drs. A. J. Clark, Albion, on "Some Practical Thoughts in Obstetrics"; A. B. Anderson, Pawnee City, on "Some Obstetrical Experiences," and Maurice A. Hoover, Kearney, on "The Experiences of a General Practitioner in the Field of Obstetrics." These papers being of similar interest and character, were discussed as a whole by Drs. von Mansfelde, Ashland, and Rosewater, Omaha, when further discussion was postponed until the opening of the afternoon session.

Adjourned to 2 p.m.

AFTERNOON SESSION.

WEDNESDAY, May 9, 2 p.m.

Dr. J. P. Lord, Omaha, presented a case of congenital hip-joint dislocation, showing result of an operation, after which the discussion on Drs. Clark's, Anderson's and Hoover's papers was continued, participated in by Drs. Merriam, Omaha; Rosewater, Omaha; Inches, Scribner; Crummer, Omaha; Bullard, Pawnee City; Pollard, Nehawka; Andrews, Eustis; Philbrick, Lincoln, and Gibbs, Omaha.

Dr. W. O. Henry read a paper on "Ectopic Gestation." Discussed by Drs. Jonas and Rosewater, Omaha; and Dr. F. A. Butler, Harvard, read a paper on "Labor Cases in Flat Pelvis, With a Report of Cases."

The Section concluded by presenting a symposium as follows:

"The Contracted Pelvis," Dr. Emma Warren Demaree, Roca.


“The Relation of the Obstetric Forceps to Contracted Pelvis,” Dr. Charles Rosewater, Omaha.

“Symphysiotomy and Cesarean Section,” Dr. A. F. Jonas, Omaha. Discussed by Dr. A. S. von Mansfelde, Ashland. Society adjourned to 7 o’clock p.m.

EVENING SESSION.

WEDNESDAY, May 9, 1900, 8 p.m.

The President: The society will please come to order. We will refer back to the business which was passed early in the session. Among the annual reports we have not yet had the report of the Corresponding Secretary and Librarian. I see he is here at this time, and we will now listen to his report.

The report of Dr. H. B. Lowry, Corresponding Secretary and Librarian, was here read as follows:

OMAHA, NEB., May 9, 1900.

Mr. President:—Your Corresponding Secretary and Librarian begs to submit the following report:

The Transactions of the Nebraska State Medical Society for 1899 have been sent as follows:

1. University of California.
1. Students’ Library, Rush Medical College.
1. Academy of Medicine, New York.
1. Kansas Medical Society.
1. Kentucky State Medical Society.
1. Alabama State Medical Society.
1. Arkansas Medical Society.
1. California Medical Society.
1. Colorado State Medical Society.
1. Florida Medical Society.
1. Illinois Medical Society.
The following publications have been received:


History of King's County Medical Society.


Your Librarian wishes again to ask members having re-
prints to send a copy to the Society's library at the State University, where they will be cared for in the same excellent manner that our books now are, and will always be easily accessible. Respectfully submitted, H. B. Lowry, Corresponding Secretary and Librarian.

Dr. von Mansfelde: I move that the report be placed on file.

Said motion was duly seconded and carried.

The President: We will now have the report of the Committee on Grievances, Dr. Charles Inches, chairman.

Dr. Charles Inches: I have never written out a report, but there is something that turned up this noon that must be presented by the committee. Both Dr. Swartz, of Oakland, and Dr. Crummer are familiar with the case. It is something that I think must be considered pretty wisely. I can not do anything more than to ask Dr. Crummer to state the case and suggest a procedure to carry it out.

Dr. B. F. Crummer: Mr. President, Ladies and Gentlemen—I would very much prefer that this committee would formulate its report, with recommendations. In fact, I think that would be the regular way to present the subject, but as Dr. Inches says, the committee's attention has only this noon been called to this matter. It relates to a case from Oakland—a man that presented an application to the board for a certificate, and it afterward developed that the man was not a graduate. I, unauthorized, had it presented to the Board of Health, and the Attorney-General decided that it was an error in making his application, and it did not constitute a violation under our law. So it was put over until we could show by a sworn statement that he is incompetent, and not a graduate physician. The attorney for this physician has made an attack upon Dr. Swartz, of Oakland, who signed the petition, and the charge against Dr. Swartz is that he is doing it from malice, which is not true. Dr. Swartz has received a letter from the attorney in which the attorney says he has been on the ground and has been investigating Dr. Swartz's
standing, etc., and we think it is a vicious attack upon him; we think it is the duty of the members of this society to take this matter up and help out any case of this kind. I think this society should raise sufficient money to get testimony here from Sweden to prosecute this man for perjury.

Dr. J. E. Moore: Last Saturday this attorney from Wahoo came into my office and, knowing I had formerly lived in Oakland, and in a very nice way asked me if I knew anything in regard to a certain case of a woman who died in confinement in Oakland. I said I knew the woman, but knew nothing about the case. He said, “Did you ever examine her heart to see if she died of heart disease,” and I said I never did; and I could see the man was trying to gain some point, and, of course, I was evasive in my answers, and the attorney saw that I was. And he says, “Dr. Swartz is doing very dirty work up in Oakland, and we are trying to get up some of the old matters against him,” and I informed him that I had practiced for nine months in the same town and that he was a perfectly honorable and reliable physician. And that shows the underhanded means they are taking to try and get some charge against Dr. Swartz.

Dr. Nesbitt: I am very much interested in this case, being associated very closely with my friend, Dr. Swartz. Something as to the character of this man that is trying to malign Dr. Swartz. Not very long ago he was called to see a case that had some pain in the head and some obscure symptoms, and he said to the people that this man had water on the brain and he advised them to apply a fly-blister, and in a short time he had a good-sized blister, and that is the way he prescribed for the patient who had water on the brain. He is a Swede, and there are a good many Swedes there, and that is the way he works himself into the confidence of the people.

Dr. Long: I do not know any of the parties concerned in this matter, but for the life of me I can not see why this concerns the Grievance Committee or the society. I raise the point of order that it is out of order.
Dr. Inches: Now, what we have been laboring and struggling to do for years is to advance our standard. Dr. Crummer thinks I am too conservative, but I think there is merit enough in this case so we ought to stand by it. In this case there is roguery; at least this man has perjured himself right out and out, and this lawyer has been trying to dig up something to malign this man and send it down here; it is almost like blackmail, and I think we ought to stand by it.

The President: If I were called upon to decide the point of order, I would say that the matter does not belong to the Committee on Grievances. The Committee on Grievances is to decide grievances between members of the society. This is a matter between a member of the society and some one who is not a member of the society.

Dr. von Mansfelde: Here is the point. I am afraid you are not exactly right in your supposition. This matter does not concern this society, as far as Dr. Swartz is concerned. I make this motion: That this matter of Dr. Swartz be referred to our Board of Trustees, with power to act.

Said motion was duly seconded and carried.

The President: We will now hear from the Committee on Necrology, Dr. von Mansfelde, chairman.

Dr. von Mansfelde: Before making the official report, I desire to refer briefly to two physicians who were formerly members of this society, but have been called hence. One of them, one of the oldest physicians in Nebraska, who in early years was a bright light in this state, Dr. L. J. Abbott, who died in South Omaha during the present year. The other one I wish to call your attention to is Dr. G. L. Humphrey, of Monroe, Neb., who has recently died.

Dr. von Mansfelde then read the report of the Committee on Necrology, as follows:

Your committee, pro tempore, beg leave to preface their report with the suggestion that hereafter the Secretary be a member ex officio of this important committee and that the duty of reporting the demise of members shall be considered
so sacred a one that no excuse shall be entertained for non-fulfillment of its requirements.

Death has invaded our ranks again this year, and has taken from our membership Drs. E. W. Chase, Omaha; A. E. Schofield, Tilden, and P. M. Hobbs, Wymore, and from the profession at large Drs. L. J. Abbott, South Omaha, and G. L. Humphreys, Monroe; men eminent as teachers and practitioners, beloved by their fellow men and missed from our meetings.

Your committee recommends that our condolences, properly inscribed, be sent to the immediate relatives of the deceased members; that these resolutions be spread upon our minutes; that engravings of these members, if procurable, be therewith incorporated, and that as a further mark of respect these resolutions be adopted by a rising vote.

A. S. von Mansfelde, Chairman Committee, pro tem.

Member: I move the adoption of the report.

Said motion was duly seconded.

Dr. Baer: I don't exactly understand now, but I did know something about it at one time, the relations of Dr. Abbott, one of the earlier presidents of this society, and perhaps did more to encourage it, foster it and build it up than most of us, but it seems to me, some years ago, some little trouble occurred and that he has not been a member of the society for the last few years. But Dr. Abbott was a member of the society for twenty-five years, and I think, he having been a very honored member of the society, we should include in these resolutions and in our report a high tribute to the memory of a good man. I thought a good deal of Dr. Abbott, and all the old surgeons of the state remember him. I remember him in '67 or '68, and way up into the '70s, the man had an immense practice, and he always labored for the prosperity and advancement of this society. I would like to see the name of Dr. Abbott incorporated in the proceedings of the society, expressing condolence with his family in his death, etc. I think the man really deserves
it, and I want to say that I think he was one of the best physicians Nebraska ever had. He was not a great surgeon, but he was an all 'round practitioner; he was a good man, and I don't think it would be anything unjust, or impairing the standing of this society, to record the death of this great and good man who was a member of the society.

Dr. von Mansfelde: I wish to say that Dr. Abbott withdrew from the society because it refused to admit a certain applicant whom he introduced.

Dr. Baer: I move that the Committee on Necrology be instructed, or requested, to incorporate a resolution expressing our regret on the death of Dr. L. J. Abbott.

The President: I want to say a word, before I put the motion, about Dr. Humphreys. Dr. Humphreys graduated from college at the same time I did; he was a very active man, a good man and a good physician, and I would like to have the name of Dr. Humphreys included.

Dr. Baer: I will include that in the motion.

Said motion, as amended, was duly seconded and carried.

The death of Dr. L. J. Abbott brings to mind many peculiarities of the late doctor. He was brought up in the hotbed of abolition, for his father's house in Troy, Miami County, Ohio, was known as one of the stations of the underground railroad that covered the escape of runaway slaves. This early education lived with him all through life. He was at all times the friend of the oppressed and could be found on that side. When he came to Nebraska, in 1861, he located on the prairie beyond Omaha and there he practiced his profession, thus he commenced early in the history of Nebraska; his memory was excellent, and he had the entire history of this state in his mind, and his recent lecture on "The State of Nebraska," before the Historical Society, at Lincoln, was one of the best ever read before that body. His data was always correct. This fine memory and mind aided him materially in his profession. He seldom, if ever, forgot a patient, and he could readily call back their treatment. His scholarly ability was
very marked, and when he undertook to present his side of a question his arguments were clear and concise. His broad education, which he received from his parents, never left him through all his life.

In his early life in Nebraska he entered into many enterprises and was among the first men who saw that sheep-raising was one of the industries that should be advanced in our state, and introduced a flock of sheep in the state as early as 1863. And years after that he and his brother continued the feeding and raising of sheep on their big farm near Fontenelle.

After his settlement in Fremont he took much interest in all its enterprises. When he did not have money to enter into the new enterprises he was always generous with his time.

At one time the demand was so great on Dr. Abbott's services that he was called from points forty miles distant. And one time, in the early part of the 70s, when an epidemic of fever was prevailing near Fontenelle and up through Logan Creek country, he kept a team at a half-way station and rode the distance of forty miles many a day. He would jump from one buggy into another that was ready for him as he drove up. He had a remarkable constitution, and never knew what sickness was until his final taking away. Previous to his recent illness he had been for four years superintendent of the Lincoln Insane Asylum, which place he filled with remarkable ability. After his term was up, and Governor Poynter appointed another superintendent, Dr. Abbott removed to South Omaha, where he intended to establish a sanitarium for the treatment of chronic diseases.

Dr. L. J. Abbott was born in Blue Hill, Hancock County, Maine, September 15, 1831; moved with his parents to Troy, Miami County, Ohio, in 1834, and lived there until he came to Nebraska, in the summer of 1861; he then located on a farm at what is now known as Irvington, and engaged in sheep-raising and practicing medicine for four years; then he spent two years at Fontenelle, and finally came to Fremont, where he resided since 1867, until he went to Lincoln,
about four years ago. He has been president of the State Medical Society. The doctor has been a member of the legislature, and was pension examiner for a great many years. He has been president of the Board of Education and a member of the Board of Health of Fremont. He was a commissioner of the State Board of Insanity. He has also held various other positions. He was married at Troy, Ohio, in 1854, to Clara F. Culbertson, a native of that place. They have had eleven children. He was stricken with paralysis February 12, 1900, and dissolution occurred February 22 at his home in South Omaha. Interment took place at Fremont.

The President: The next thing in order is the report of the Auditing Committee, Dr. D. E. Sedgwick, of York, chairman.

Dr. D. E. Sedgwick here read the report of the Auditing Committee, as follows:

Session Nebraska State Medical Society,

OMAHA, NEB., May 9, 1900.

We, the undersigned auditing committee, hereby certify that we have examined the accounts of the Secretary and Treasurer and found the same correct.

We recommend the expense account of Treasurer of $12.77 be allowed and that an order be drawn for same.

D. E. SEDGWICK.
I. N. PICKETT.
J. A. POLLARD.

Member: I move that the report of the Auditing Committee be adopted.

Said motion was duly seconded and carried.

The President: We will now hear from the Special Committee on the President’s Address, Dr. von Mansfelde, chairman.

Dr. von Mansfelde here read the report of the Special Committee on the President’s Address, as follows:
Your committee appointed to consider the address of the President beg leave to report that the society can not too earnestly harbor the advice with which the address is overrunning.

That, all that part of the address referring to medical legislation be referred to the Committee on Medical Legislation, with the recommendation that said committee give as much attention to the President's suggestion as they so eminently deserve.

A. S. von Mansfelde, Chairman.
O. Grothian.
Claude Watson.

Member: I move that the report of the Special Committee on the President's Address be adopted.

Said motion was duly seconded and carried.

Dr. Jonas: About a year ago, at Columbus, there were several of us at the meeting, and two of us were elected delegates to the International Convention, to be held in Paris the first week in August. One of us was not a member of the American Association, and consequently his appointment was not legal. Since then he has become a member. I refer to Dr. Lowry, of Lincoln. He expects to take a trip abroad this summer, and would like to attend the Medical Conference. I therefore move you that this society specially request that committee who has this matter in charge to reappoint Dr. Lowry as a delegate to the International Conference in Paris.

Said motion was duly seconded and carried.

The President: Are there any matters to come up under the head of unfinished business?

The Secretary: The matter of trying to secure the meeting of the different societies in the same town at the same time, merely to secure railroad tickets on the certificate plan, or open rates if possible. At this meeting we have not been able to secure any railroad rates, which works a hardship on
some of the people from the western part of the state who have to pay railroad fare. And I move, Mr. President, that we make an effort to secure, or communicate with the other medical bodies, the Pharmaceutical Association, the Dental Association, the Eclectic and Homeopathic Societies, to see if we can not meet at the same time and the same place next year in order to secure reduced railroad rates.

Said motion was duly seconded and carried.

Dr. Crummer: I want to present a resolution here, which I will read, and I would like to have the society act upon it:

Resolved, That the members of this society contribute $5 each, so far as they feel able, to constitute a special fund to be placed in the hands of the Trustees of the Nebraska State Medical Society to be used, so far as needed, to secure such testimony from the Caroline Institute of Stockholm, Sweden, as may show whether or not one August Lagerkraus, of Oakland, Neb., is or is not a graduate of said institute, and if he is not, to take such steps as may be necessary to convict said Lagerkraus of perjury, he having stated under oath that he had so graduated. The Board of Trustees to have charge of this investigation and prosecution.

Dr. Crummer: I move the adoption of the resolution.

Said motion was duly seconded.

Dr. von Mansfelde: This is out of order, as there has already been a resolution passed on this subject.

Dr. Inches: That is just the milk of the cocoanut of all this matter. The quacks can get together in a minute and get their money and get their matters together, and you are beat. There must be something of this kind done to back up what Dr. Crummer suggests here. We have got to trust some one to act for us; can we trust Dr. Crummer? We must do this sort of thing or we will have to stop talking about them.

The motion to adopt said resolution was here put by the President, and carried.

Dr. von Mansfelde: There is one thing more, Mr. Presi-
dent, and that is there should be some compensation besides
the dues given to the Treasurer of this society. He is doing
too much work for his dues alone, and before the new Treas­
urer is elected I move you that the Treasurer receive $25 a
year for his services.

Dr. Baer: I second the motion.

Motion carried.

Dr. Lowry: I move that this society recommend Dr. 
Crummer to the Governor for reappointment on the Board of
Health for another term.

Said motion was duly seconded and carried.

ELECTION OF OFFICERS.

For President the informal ballot resulted as follows: Mc-
Clanahan, 47; B. B. Davis, 7; Jonas, 3; Lavender, 3; Pol­
lard, 1; Nesbitt, 1; Butler, 1; Hoover, 1; Inches, 1; Ely,
1; Mitchell, 1; Long, 1; Hungate, 1. On motion, the in­
formal ballot was made formal, and Dr. H. M. McClanahan,
of Omaha, was declared elected President.

For First Vice-President the following informal ballot was
cast: A. B. Anderson, 2; Bullard, 3; Pollard, 2; Andrews,
23; Nesbit, 4; Wilson, 1; Pickett, 1; Allison, 2; Philbrick,
12; Jonas, 4; Watson, 1; Coulter, 1; Hungate, 5; Ely, 4;
Lord, 4; Davis, 1; Traynor, 1; Long, 1; Shields, 2; Laven­
der, 1. A formal ballot was then taken, which resulted as
follows: Andrews, 44; Philbrick, 24; Anderson, 4; Lavен-
der, 1; Jonas, 1; Pickett, 1. Dr. J. A. Andrews, of Eustis,
receiving a majority of votes cast, was declared elected First
Vice-President.

For Second Vice-President the informal ballot resulted as
follows: Philbrick, 31; Bullard, 3; Watson, 2; Jonas, 1;
Nesbit, 3; Stokes, 2; B. B. Davis, 1; Greene, 1; Pickett, 2;
McKeeby, 1; Lavender, 1; Anderson, 1. On motion, the in­
formal ballot was made formal, and Dr. Inez C. Philbrick, of
Lincoln, having received a majority of the votes cast, was
declared elected Second Vice-President.
The Treasurer was instructed to cast the unanimous vote of the society for A. D. Wilkinson for Recording Secretary. In the same manner Dr. H. B. Lowry was re-elected to the office of Corresponding Secretary and Librarian, and Dr. J. L. Greene to that of Treasurer.

Dr. Pollard: I have a burden on my mind that I have been wanting to get rid of for some time. There is a great deal of talk in the society about getting in new members, about the expenses of the society, about raising money to prosecute quacks, and various other things. I do not think, however, the main point has been touched upon or spoken of in this society, at least not while I have been here. I wish to say that if you wish to increase the membership of your society you have got to interest the country practitioners, and one point that I think will help greatly in this is to put the Section “Practice of Medicine” among the first on the program, and gives us fellows a chance to explain what little we know and talk among ourselves. During my presence at the meetings of the society, up until last year, prominence has been given to specialists; their papers have been admirable, their discussions have been admirable, but we fellows out in the country who have to remember everything and can not go very deep into anything would like to have something that will meet our needs, and have it early in the session so, if necessary, we can get away. Now this year we have not got to the Section on “Practice” yet, and we have one day more, and we are very far behind on the program. How can you expect us to come up here year after year without giving us a little chance to air what little we think we know. Now I am not saying a word against the specialists; I don’t blame them any; they do what is right when they respond to the invitations for papers, but we come up once a year, and it is very pleasant to be here, but it is hard for some of us to get away from home to stay so long. Now this burden is off my mind, and I feel better that I am rid of it.

Dr. Garten: I move that the Secretary of this society be
THIRTY-SECOND ANNUAL SESSION.

authorized to place all papers on General Practice on the first of the program for next year.

Said motion was duly seconded and carried.

Dr. Crook: I move that hereafter, or for the next year, a member be allowed to appear upon the program in but one Section, and for but one paper only.

Said motion was duly seconded.

Dr. von Mansfelde: I move to lay the motion on the table.

Said motion to lay on the table was duly seconded, put by the President and lost, there being 23 votes for and 24 votes against.

Dr. Pollard: I move to substitute by saying that no member shall read the second paper until all other papers have been finished.

Said motion was duly seconded.

Dr. Cook: I will withdraw my original motion in favor of the substitute.

The substitute motion as made by Dr. Pollard was here put by the President and lost.

The original motion made by Dr. Cook was then put by the President, and carried.

Dr. Millroy: I move that at the next meeting the work of the society be divided by the Secretary into two Sections, and that the work be carried on in those two sections simultaneously.

No second to this motion.

On motion, the society adjourned until the following day, May 10, 1900, at 9 o'clock a.m.

At the close of this session the society was invited by the Omaha Medical Society to be its guest at a banquet given at the Iler Grand.
MORNING SESSION.

THURSDAY, May 10, 9:45 a.m.

The closing of the discussion on the Obstetrical Section was only participated in by Dr. Butler, of Harvard, after which the Section on Nervous and Mental Diseases was taken up, and the chairman, Dr. J. M. Aikin, of Omaha, read a paper, an "Address on Nervous and Mental Diseases." Dr. F. E. Coulter, of Omaha, read a paper on "Observations on Cerebral Localization," which was discussed by Drs. Aikin, Omaha; Ely, Ainsworth, and Bullard, of Pawnee City. Dr. Minerva M. Newbeeker, Lincoln, not being present, her paper was read by title, after which the Section closed by Dr. Jay G. Roberts, Hastings, reading a paper on "Psychic Shock." Discussed by Drs. D. E. Sedgwick, York, and J. M. Aikin, Omaha.

The Section on Practice of Medicine was next taken up, the chairman, Dr. J. W. Bullard, taking as his subject "A Plea for More Painstaking Examination in the Diagnosis of Chronic Diseases"—discussed by Drs. Ely, Ainsworth, Stokes, Omaha; Hildreth, Lyons; Rosewater and Ross of Omaha.

Dr. George W. Wilson, of Curtis, read a very excellent paper on "How We Live and Why We Die"—discussed by Drs. J. P. Lord, Omaha; J. A. Pollard of Nehawka.

Adjourned to 1 p.m.

AFTERNOON SESSION.

THURSDAY, May 10, 1 p.m.

Dr. B. F. Crummer, Omaha, read a paper on "The Diagnosis of Cancer of the Lungs and Pleura"—discussed by Dr. W. O. Bridges, Omaha.

Dr. J. A. Pollard, of Nebraska, read a paper on "A Specific Treatment of Diphtheria and Other Sore Throats"; Dr. W. O. Bridges, of Omaha, "Treatment of Pneumonia," which was
discussed by Drs. Mitchell, Lord, Nesbit, Milroy, Hungate, Rosewater, Ross and Lavender.

Dr. Charles Rosewater, Omaha, closed the section by reading a paper on "Medical Treatment of Appendicitis," discussed by Bullard, Hamilton, Stone, Lord and W. O. Henry.

The Secretary: I herewith present a bill from the Committee on Arrangements, as follows:
Dr. A. D. Wilkinson, Secretary N. S. M. Society.

My Dear Doctor:—I inclose accounts which I presume should be paid by N. S. M. Society:

The Whitehead & Hoag Company .................. $15 10
Eisile & Co, for cloth sign ....................... 3 00
Hall rent from Thurston Rifles (C. M. Richards) .... 40 00

Total ............................................. $58 10

Yours truly,

EWING BROWN,
Chairman Committee of Arrangements, N. S. M. S.

May 9, 1900.

Dr. Dayton: I would like to know if it is the custom of the society to pay for these incidentals, or whether it is the custom of the Committee on Arrangements to furnish these at the expense of the local society.

Dr. Lord: I am on the Committee on Arrangements, and would like to say just a word in regard to this matter. It may be that it is customary to have these bills paid by the members of the profession in the town in which the society is held. I told Dr. Wilkinson that if that was the custom, it was a very poor one; that I thought this society with its six or eight hundred dollars in the treasury should pay these few bills. Now, it may not look well for me as a member of the profession from Omaha to make these remarks, but it is true. Our expense in the Omaha Society largely eats up the dues of the local physicians, and a great many of them object to the other expenses. The result of these large expenses which occur when the society is held here is that the members of the profession here have to assess themselves from
ten to twenty-five dollars, and only a few of them will do that. Here in Omaha, where we have things pretty well organized, in a labor way, we can't get banquet accommodations for anything reasonable, neither can we get hall rent for a very small sum, and the result is that there is $150 or $200 that usually has to be raised by the local profession.

Now, I maintain that this custom is a bad one, where it inflicts on the local society these expenses which ought to be paid by this society, and I shall favor this same thing next year when we come to Lincoln, and though it may be in bad taste right here, I am going to make a motion that the society pay these bills hereafter for these expenses.

DR. PHILBRICK: I second the motion.

THE PRESIDENT: The motion is that this bill be paid, and that the society pay these bills in the future.

DR. DAYTON: I move as a substitute that the society pay the bills already contracted, as read by the Secretary, and that the resolution be passed with reference to paying future bills. Said substitute motion was duly seconded and carried.

THE PRESIDENT: We now come to the section of Dermatology, Dr. F. A. Butler, of Harvard, Chairman. The first paper under this section is "Infantile Eczema," by Dr. Butler. Dr. Butler is not present. The next paper is "Elephantiasis. Report of a Case," by Dr. C. C. Moyer, of Lincoln. Dr. Moyer is not present. We now come to the section of "Ophthalmology and Otology," Dr. W. L. Dayton, Lincoln, chairman. The first paper under this section is "Intraocular Tumors," by Dr. W. L. Dayton.

Dr. W. L. Dayton here read his paper, "Intraocular Tumors."

Discussed by Dr. Owen.

THE PRESIDENT: The next paper under this section is "Heterophoria," by Dr. J. A. Haggard, Nebraska City. Dr. Haggard is not present. The next paper is "A Case in Which Lost Balance of the Recti Muscles of the Eye Produced a Profound Impression Upon the Nervous System, Masking
the True Source of Disease,” by Dr. M. H. Garten, of Lincoln. Dr. Garten is not present. The next paper under this section is “Report of Some Cases of Internal Ear Disease,” by Dr. F. S. Owen, of Omaha.

Dr. F. S. Owen read his paper, “Report of Some Cases of Internal Ear Disease.”

The President: Dr. Owen’s paper is now before the society. Has anyone anything to offer on the paper?

Dr. Dayton: Owing to the fact that the Doctor is called away on an emergency case, I will not discuss the paper myself.

The President: The next paper under this section is “Otitis Media,” by Dr. John P. Williams, of Lincoln.

On motion, this paper was read by title.

The President: The next paper is “Differential Diagnosis in Some of the Inflammatory Diseases of the Eye,” by Dr. J. W. Bullard, Pawnee City. Dr. Bullard is not present. The next paper is “Optic Neuritis as a Factor in General Diseases,” by Dr. S. E. Cook, Lincoln. Dr. Cook is not present. We will now take up the next section “Laryngology,” by Dr. W. N. Hunt, Central City, chairman. The first paper under this section is “How Shall We Manage Our Cases of Membranous Croup,” by Dr. W. N. Hunt. Dr. Hunt is not present. The next paper under this section is “Defects of the Voice in Speech and Song,” by Dr. J. H. Tyndale, of Lincoln. Dr. Tyndale is not present. The next paper is “Congenital Occlusion of the Posterior Nares,” by Dr. George H. Bicknell, of Omaha.

On motion this paper was read by title.

The President: The next section on the program is “Medical Jurisprudence, Medical Chemistry and Toxicology.” Dr. F. D. Haldeman, Ord, chairman. The first paper under this section is “Prescription Writing and Dangerous Mixtures,” by Dr. F. D. Haldeman. Dr. Haldeman is not present.

The President: The next paper under this section is
“Some Points in the Chemistry of Toxicology,” by Dr. C. S. Minnich, of Palmer. Dr. Minnich is not present.

The following delegates were elected to represent the Nebraska State Medical Society at the meeting of the American Medical Association held at Atlantic City, June 5-8, 1900.

LIST OF DELEGATES.

W. L. Dayton, Lincoln.
M. H. Garten, Lincoln.
A. R. Mitchell, Lincoln.
H. B. Lowry, Lincoln.
J. O. Carter, Lincoln.
A. I. McKinnon, Havelock.
J. Lue Sutherland, Grand Island.
J. L. Greene, University Place.
B. B. Davis, Omaha.
J. P. Lord, Omaha.
F. S. Owen, Omaha.
J. E. Summers, Jr., Omaha.
B. F. Crummer, Omaha.
R. C. Moore, Omaha.
H. Gifford, Omaha.
Syl. Person, Stanton.
F. A. Butler, Harvard.
C. C. Allison, Omaha.

The following officers were then installed: President, H. M. McClanahan, Omaha; First Vice-President, J. A. Andrews, Eustis; Second Vice-President, Inez C. Philbrick, Lincoln; Recording Secretary, A. D. Wilkinson, Lincoln; Corresponding Secretary and Librarian, H. B. Lowry, Lincoln; Treasurer, J. L. Greene, University Place.

The President: Gentlemen of the Society, this concludes the program.

On motion the Society adjourned sine die.
NEW MEMBERS.

H. Winnett Orr, Lincoln, University of Michigan, 1899.
Voorhees Lucas, North Platte, Omaha Medical, 1895.
August Anderson, Norfolk, Rush Medical, 1892.
Edson M. Carpenter, Omaha, University City of New York, 1886.
John Hiett, Beaver Crossing, Marion Sims, 1893.
Charles L. Nichols, Omaha, Rush Medical, 1898.
Clarence C. Greene, Beaver City, Jefferson Medical, 1888.
W. K. Yeakel, Omaha, Col. P. S., Chicago, 1899.
William Berry, Omaha, Starling Medical, 1888.
E. C. Henry, Omaha, Jno. A. Creighton Col., 1895.
Geo. S. Murphy, Burr Oak, Kans., Jno. A. Creighton Col., 1896.
J. S. Livingston, Plattsmouth, Omaha Medical, 1898.
W. J. Pinkerton, Mead, Omaha Medical, 1898.
G. R. Gilbert, Omaha, Omaha Medical, 1896.
William R. Hobbs, Omaha, Detroit Medical, 1893.
Frank C. Clark, Craig, Starling Medical, 1898.
Frank W. Johnson, Fullerton, Omaha Medical, 1894.
Solon R. Towne, Omaha, Dartmouth Medical, 1875.
George Ireland, Papillion, Omaha Medical, 1897.
Rufus D. Mason, Omaha, Med. Dept. University of Iowa, 1887.
Frederick J. Wearne, Omaha, Creighton Medical, 1898.
Geo. H. Bicknell, Omaha, Omaha Medical, 1895.
Frederick Rustin, Omaha, University of N. Y., 1896.
Wm. J. Brownrigg, Omaha, Rush Medical, 1882.
J. M. Liggitt, Farnam, Starling Medical, 1897.
E. E. Barr, Whitman, Med. Dept. State University of Iowa, 1887.
J. J. Cameron, Kearney, McGill, 1888.
William L. Carlyle, Kimball, Rush Medical, 1893.
A. S. Main, Loup City, Keokuk Medical, 1897.
John P. Williams, Lincoln, Chicago Medical, 1896.
Chas. H. Breuer, David City, Creighton Medical, 1896.
Frank G. Snyder, Bradshaw, Barnes Medical, 1897.
C. P. Fall, Beatrice, Col. P. & S., Chicago, 1888.
John M. Neely, Elmwood, Kentucky School of Med., 1896.
Allen B. Cherry, Winside, Med. Dept. Univ. of Iowa, 1890.
Andrew J. Baker, Columbus, Omaha Medical, 1892.
Francis P. Dorsey, Hartington, University Louisville, 1895.
A. C. Stokes, Omaha, Omaha Medical, 1899.

The following members registered.

Ainsworth: W. B. Ely.
Albion: A. J. Clark.
Beatrice: C. P. Fall, D. A. Walden.
Beaver Crossing: John Hiett, C. W. Doty.
Bennett: Jonas Hoover.
Bertrand: George W. Wilson.
Bloomington: Ella P. Sumner.
Bradshaw: Frank G. Snyder.
Brainerd: A. P. Haynes.
Carleton: H. S. Hickock.
Central City: E. A. Benton.
Columbus: Berthold Tiesing.
Cozad: J. H. Fochtman.
Craig: F. C. Clark.
Douglas: A. H. Hostetter.
Elmwood: J. M. Neely.
Eustis: J. A. Andrews.
Fairbury: G. L. Pritchett.
Farnam: J. M. Liggitt.
Fremont: L. B. Smith, R. C. McDonald.
Friend: J. V. Beghtol.
Grand Island: George Roeder.
Hartington: F. P. Dorsey.
Harvard: F. A. Butler.
Havelock: A. I. McKinnon.
Hooper: W. O. Wisner.
Kearney: Maurice A. Hoover.
Louisville: Thos. C. Hollister.
Lyons: M. L. Hildreth.
Millard: H. Link.
Murray: George V. Allen.
Nebraska City: Claude Watson.
Nehawka: J. A. Pollard.
Norfolk: Alexander Bear.
North Platte: Voorhees Lucas.
Octavia: A. Murphy.
Odell: I. N. Pickett.
Osceola: L. M. Shaw.
Papillion: George Ireland.
Pender: John Stout.
Ponca: Marie L. Groté.
Ragan: Dan R. Rogers.
Red Cloud: F. E. McKeeney.
Roca: Emma W. Demaree.
St. Paul: O. Grothan.
Scribner: Chas. Inches.
Shelton: E. L. Smith.
Shickley: R. Woods.
Snyder: H. W. Parchen.
Stanton: Syl. Person.
Syracuse: I. L. Smith.
Table Rock: W. H. Wilson.
Tekamah: I. Lukens, A. D. Nesbit.
University Place: J. L. Greene.
Wakefield: Robert Q. Rowse.
Weeping Water: J. B. Hungate.
Western: T. J. Chidester.
Winside: A. B. Cherry.
PRESIDENT'S ADDRESS.

ROBERT M'CONAUGNY, M.D., YORK.

We have been summoned to the bedside and are watching the passing out of a century. A century wafted in on the dying breath of George Washington and Benjamin Rush; cradled in the lap of Thomas Jefferson and Edward Jenner; schooled under the tutelage of Andrew Jackson, Sir Astley Cooper, and Philip Syng Physick; marshalled under the banner of Abraham Lincoln, Samuel D. Gross, Joseph Pancoast, Thomas D. Mutter, Valentine Mott, Austin Flint, Oliver Wendell Holmes, William Pepper, Rudolph Virchow, and Louis Pasteur; passing away pillowed on the arm of William McKinley, Jacob M. DaCosta, Nathan S. Davis, and Robert Koch. A century in which has been revealed to the world more of divine love and human charity than was ever before known. A century of marvelous discoveries, of wonderful progress, of untold relief for suffering humanity, of health for incurable disease. A century in which chemistry became a new science, revealing the processes of nutrition, respiration, secretion. The century of the microscope and the new world of germ life; of experimental physiology and comparative anatomy; of pathological research and morbid anatomy. The century of the discovery of auscultation and percussion; of thorough and painstaking investigation and differential diagnosis of disease; of vastly improved therapeutics and pharmacology, by which the active principle is separated from the inert substance. A century, the greatest and grandest in the history of medical science.
I would not presume to instruct so intelligent a body of men and women as the Nebraska State Medical Society, nor to enlarge upon the wonderful discoveries of the passing century. Neither do I wish to dig up the buried failures of the past to haunt your waking hours, for I know you have been troubled, yet have profited by such experiences as you have passed through.

As we gather here for the closing meeting of this nineteenth century, it should be with mingled feelings of sadness and gladness; sadness for the opportunities wasted, and the little we have accomplished for ourselves and humanity; gladness for the hope of future success opening up before us, which shall stimulate us to greater, more exalted deeds of usefulness and pure beneficence. Retrospection is not profitable unless it inspires us to reconsecrate our lives to the holy cause to which they have been dedicated.

Failures will occur so long as man is finite. Loss of opportunity, or a failure to grasp the opportunity when it does appear, is sure to cause defeat. For the former we are not responsible; the latter is dependent entirely upon our own effort—or lack of effort—unless, indeed, we are not endowed with the mental, moral, and physical ability to grasp the situation; in which event we have mistaken our calling and ought to make haste to discover, if possible, what our proper sphere is, and once more put ourselves in the line of success.

Failure is due not only to lack of ability; it may be entirely unavoidable. Early failures may be speedily overcome, and lead on to the highest possible success; late failures may be but the beginning of the end, and cause irretrievable disaster. In young manhood and womanhood, and in middle life, we rapidly recover lost opportunity. In later life, though strongly fortified by experience, we may not be able to snatch victory from defeat. Washington had his Brandywine, but he also had his Yorktown. Napoleon was invincible in the vigor of his manhood, but Waterloo was the ending of his brilliant career; fame and fortune were gone and could never
be recovered. Lee felt secure in his fame, but he had his Appomattox. Gladstone met victory and defeat successively, but his life was crowned with a halo of glory.

The success of one means the failure of another. If Napoleon had a Waterloo, so had Wellington. If Lee had an Appomattox, so had Grant. We must not tear down others in order that we may build up self, but an honest, clean strife to reach the summit is at all times a laudable and praiseworthy ambition.

Fellow members, the most of us are young, with the high and noble purpose to reach the goal of our ambitions. Let the strife be honorable and fair, with no stain of dishonor to mar the beauty of an honored career. If there are any Waterloos to face, may they come to us while we have the strength to meet them and to turn defeat into glorious victory. If they come to us in the later years there is almost sure to be no resurrection. Success obtained through a long line of accumulated experiences, by fair and honorable warfare, and over a rival of equal honor and courage, is commendable and worthy of ever-increasing honors and rewards.

In the varied walks of life there is no calling superior to the one we represent, either in lofty purpose, life of self-denial, or deeds of charity. The story of the good Samaritan, the example of the Great Physician Himself, who in His work and teaching exalted our profession, put upon it the stamp of His approval, by making the healing of the body one with the healing of the soul. He who said to the paralytic "Thy sins be forgiven thee," took up the case where the neurologist had failed, and said, "Take up thy bed and walk." He who through the magic touch of the hem of His garment healed the woman who for twelve long years suffered many things of many gynecologists, said also, "Thy faith hath saved thee." He who by a word, a touch, or a poultice of clay accomplished that which the ophthalmologist was unable to perform, by removing the thick veil of the sightless eye, and revealing the glory of a beautiful world, also let in through this window.
of the soul the brighter glory of the Sun of Righteousness to the darkened soul. He who by a word and a touch made the loathsome skin of the outcast leper as clear and fresh as that of a beautiful child, did what even the dermatologist of today fails to do, and at the same time declares the loathsome disease to be but a type of the more loathsome leprosy of sin. He who possessed the power even over death itself demonstrated in His own body that He alone had discovered the true elixir of life, and that it could not be made effectual, beyond man's allotted time, in preventing the natural decay of these earthly temples; but that it was a resurrection into a new and a higher life, the only genuine perpetual fountain of youth. The Son of God, who was also the Son of man, whose mission was to heal the soul, was so touched by the sight of the halt, the lame, the blind, the deaf, the palsied, the leprous, and the fever-consumed humanity about Him, that loving sympathy compelled Him to add to His life mission that of healing the body. Thus did He voluntarily place Himself at the very head of the noble profession to which we are devoting our lives, and the world has accorded Him the additional title of the Great Physician.

With such a model before us we ought to be loving, sympathetic, painstaking, faithful, upright, honest, straightforward, unselfish, manly, womanly, in all our intercourse with those who confide to our keeping their physical, mental, and even moral weaknesses and infirmities.

And yet the world is full of quackery, charlatanism, humbuggery, in the form of Schlatterism, Weltmerism, Dowieism, Eddyism, and scores of other "isms," which force themselves within the sacred precincts of the home, by means of religious and secular press, magazine, circular, letter, poster, and book. With brazen, sacrilegious effrontery do they claim to have received the miraculous power of the Divine Physician, and boldly practice their blasphemous incantations in the presence of an enlightened Christian people. What would the Great Physician do, were He on the earth today, as He beheld
the great army of bloodthirsty leeches that has fastened itself upon a too-easily deluded, disease-ridden humanity, and is sucking the life-blood of its helpless victims? Methinks He would be filled with righteous wrath, as He was when He visited the holy temple and found its sacred enclosure filled with a grasping, profane mob, whose itching palms caused them to forget the sanctity of the place. He would take up the scourge of small cords, consisting of law, order, protection, justice, chivalry, humanity, and charity, and drive out these arrant knaves—break up these dens of thieves.

Methinks the most execrable of all these highway robbers are the pious, canting hypocrites who claim that the mantle of the Great Physician has fallen upon them, and who use the livery of Heaven in which to serve the devil. From some of them it will be necessary to cast out more than seven devils, as an atonement for the impostures they have practiced upon a poor, weak-minded humanity.

It is a reproach to the intelligence of a state or a nation, that such impostors are permitted to carry on, undisturbed, their nefarious practices; that the secular and even the religious press open their columns and are found willing to condone, apologize for, and even defend them.

What is the remedy? Is it to educate the people, or is it to crush out by law the infamous business? You can no more educate the man or woman whose mind is impaired and body weakened by disease, to believe that recovery depends upon avoiding these sharks, than you can educate the poor creature whose abnormal appetite for red liquor compels him to satisfy the craving for the unnatural stimulant to believe that the fiery serpent is a mocker. Neither can you persuade his friends to use their influence in keeping him out of the clutches of these ignorant and brazen mountebanks; because their false notions of sympathy prevent their interference. They read the self-laudatory press notices, and are led either to believe in them, or are so influenced by them as to decline
to interfere; thinking there might possibly be some virtue in them, and therefore possible help for the sufferer. No, my friends, you can not reason with a sick man, nor with his friends. The only educational hope is in the man when he is well and vigorous. You must reverse the old proverb—

When the devil was sick, the devil a saint would be,
But when the devil got well, the devil a saint was he.

The educational remedy is the true one, but the truth must be clinched by welding it into a law. When you get the law, supported by good healthful public sentiment, you have a sure foundation upon which to build. There is a good, wholesome respect and veneration for a law founded on what the people believe to be truth and justice. Such a law can be enforced, if those most interested are alert and active in bringing the offender to justice.

Why are the laws against murder and theft so rigidly enforced? Because the friends of the killed and the robbed demand swift punishment. The reasons may be humanitarian or financial. A brother’s blood is spilled, or his property stolen. When a brother man, weak and suffering, falls among thieves, who strip him of his raiment—and his pocket-book—wound him most sorely, and depart leaving him half dead—or wholly defunct—who is to come to the rescue? It is not the priest nor the Levite, the men who are so bound up in their own affairs as to be indifferent to the fate of the injured fellow-being. It is the good Samaritan, or the good physician, who not only binds up his wounds, pouring in oil and wine and some good advice; who not only places him upon an ass and starts him for home, but also tells him what an ass he has been. It is the same good physician who must invoke the strong arm of the law to bring to justice the criminal and compel atonement for crime.

If unlawful taking of life, and even petty crimes, are so swiftly punished, why should the blatant demagogue escape, who, when a life hangs in the balance, dares thrust in his personality, assume responsibility, and as surely murder his
victim as if he had used knife or ball? Are we afraid of being accused of self-interest because we dare uphold the law against all forms of professional lawlessness? I am not afraid of being charged with selfishness if I hunt down the villain who has stolen my pocket-book and robbed my family. No, brethren; medical law will never be vindicated if we wait for the lawyer, the merchant, the farmer, or the preacher to take the lead in the vindication. Our training, our interest, our humanity fit us to occupy the front rank in the battle of learning and ignorance, education and superstition, law and lawlessness.

In these days of higher education and thorough training, no minister is permitted to stand in the pulpit, proclaim the unsearchable riches of Christ, and expound the sacred writings, without having completed the required course of study and passed the necessary examination, showing himself thoroughly equipped for the responsible trust. And the minister is the man who guards the entrance to that ministry, to see that no unworthy shepherd enters the fold, or to cast him out if he do unworthily gain admission.

No lawyer is allowed to stand up in defense of a case, where life and property are in danger until he has shown himself thoroughly equipped, by hard study and rigid examination, to defend the interests of his client.

No doctor dare presume to hang out his modest shingle until he has completed four years of study, lecture, and clinic, successfully passed the required examination, and had his qualifications passed upon by a state board of examiners. All this is required to show that he is in a measure qualified to have a human life entrusted to his keeping.

And yet the charlatan, the quack, the mountebank, the vendor of vile and secret nostrums, the inventor or herald of some new system of transferring to himself the pocket-book of a poor deluded victim, together with so much of said victim’s infirmity as rests beneath his dome of thought, is permitted to run at large and practice upon the credulity of
his victims; whereas the man of learning, of scientific attainments, must sit quietly by, with closed mouth and shackled hands, unable to utter a protest, or raise an arm in defense; because, forsooth, it would be unprofessional—beneath his dignity.

No, brethren, the doctor is the man who should protect his fellow man against such villainy, and himself against such unjust treatment. It is neither good law nor good logic to allow these unprofessional tramps to ply their vocation unmolested. We require the man who scrabes our face, and the man who treats our body after the life has passed out of it, to show the necessary qualifications for such duties. Why should we demand less of the man upon whom is placed the responsibility of life and death?

The law demands the punishment of the man who, by slow poison, or swift bullet, takes the life of another. Why should it deal any more leniently with the one who wilfully sacrifices a human life by assuming control of the treatment of disease, when he knows, and the public knows, he has no qualifications whatever for the grave responsibility? When a life is lost or hopelessly wrecked, he just as surely commits a crime as does the assassin with bullet or poison.

Why is it so much harder to enforce right living in our profession than any other? Why is there so much restlessness within our own ranks? Either we must suppress the unprofessional conduct without, or permit more freedom within the lines of the profession. Either it is all right, or it is all wrong, that men eminently qualified in a certain line or specialty, are not allowed to say to the world that they are competent and duly qualified, by special study, clinical advantage, and long experience, to treat certain diseases. And yet, if this first bar is let down, the temptation is very strong for a brother who is not duly qualified to claim the same privilege, and down goes the second bar.

But whether we will or not, the bars are dropping, and we are in various ways embracing the opportunity of getting
ourselves prominently before the public. We are known as a college professor, or a hospital lecturer. We are a railway surgeon, or a pension examiner. We are a member in ordinary, or a fellow extraordinary, to his majesty the King of High Rollers, or the Queen of Good Dressers. We are so busy that we can not take time to eat, or to be civil. So say our wives—and they are good advertising mediums.

But to be serious. We must be true to the grand old code of ethics, or we must fling wide open the doors, and let the world decide and take its chances. In this age of wild exaggeration and of gross misrepresentation, of marked-down goods and ninety-nine-cent business, it is hard to keep our noble profession off the bargain-counter of competition. It takes strong convictions and a well-balanced mind to resist the temptation to advertise our abilities and display our wares to a waiting world. The old way of winning confidence and reputation, by honest effort, patient perseverance, hard study, severe struggle, and ripe experience, is too slow for this fast age. We must win our way to popular favor by a short-cut route to fame and fortune. Instead of being advertised by our loving friends, we must throw aside our native modesty, and blow a long, loud blast upon our own bugle.

Which is the right course to pursue? Ought we to give the people what they want, or ought we still to insist that true scientific attainment has the right of way? It is not only the quack who is playing to win in this disreputable game, but there are many of our own cloth who, lacking the ability to successfully cope with their more learned brethren by fair means, force themselves into the good graces of the public by kindly letting them into the secret of how much they know, and modestly informing them of the numerous cures they have made, and the many difficult operations they have performed.

The Nebraska State Medical Society is not composed of such self-made men, but of self-made men and women of an
entirely different stamp. But, brethren, this society is a small part of the medical profession of this great state. We are the truly progressive element of the profession, and we ought to be doing more to bring into line these wandering sheep. If we cannot bring them in, we ought to show them up in their true colors, and not allow them to practice their impositions under the guise of skilled professionals.

This society has a great mission, and that is to unite all intelligent, skilled, honest men and women into a strong, vigorous organization—an organization that will command the respect of the people and compel the law-making power to pass such wise laws that the self-respecting physician and the too indifferent and indulgent public will alike be protected. We have the ability and the power to make ourselves heard and felt in such a revolution. Are we willing to use our strength, or are we content to let the whole matter go by default?

Brethren, I fear we can not effect such an organization so long as we are divided among ourselves into various “pathies” and “isms”; while some of us insist upon infinitesimal medication and attenuation, and displaying above our doorway the magic word “homeopathist”; while others persist in discarding all so-called poisonous minerals, and insist upon confining ourselves to Nature’s own vegetable compounds, and inscribing over our portal the magic word “eclectic.” Even while we make our plea for right and justice, the lawmaker and the general public recognize us as a house divided against itself, and say, “Physician, heal thyself.”

We must obliterate these lines of demarcation, throw aside this exclusiveness, before we can convince others that we are honest in our plea for rational and scientific medicine. The world sees that there are now three recognized systems of medical practice, two of which are specific in their methods of treatment. The people naturally reason that if these special therapeutic systems are right, why should not other therapeutic, magnetic, mental, physio-medical, osteopathic, or dislocated systems be also right?
Let those of us who have already gained the recognition of the law-making body throw aside our own hobbies and demand a medical law that will apply with equal force to all who desire to practice the healing art: a law that shall require of every man or woman who desires to be entrusted with the care of so sacred a thing as a human life, made in the image and likeness of its God, a thorough classical, scientific, and medical education—a rigid examination that shall not be limited to some narrow system, pathy, or ism, but that shall cover the whole broad field of scientific medicine; a law that will show no favoritism, but that will mete out equal and exact justice to all who present themselves.

Brethren, let us get down to a solid basis, and then make demands of our public servants. Then shall we be heard for our much speaking, and I fear not until then.

We are largely responsible for the position in which we find ourselves with respect to the public. We are the guardians of the public health, and if we do not watch well the gateways, if we do not raise the educational standard among the people, we can not expect to win their respect, and to maintain on a higher plane the science which has more possibilities in the future than any other on the face of the earth. Let us not be afraid to face the problem that confronts us, and put an end to quacks and quackery.
THE NATURE OF THE ANTIPHLOGISTIC ACTION OF SODIUM SALICYLATE.

H. GIFFORD, M.D., OMAHA.

I think it can not be doubted that aside from what may be a specific action in acute rheumatism, sodium salicylate has a marked antiphlogistic action in all localized inflammations involving areas of only moderate extent. In all deep-seated inflammations of the eye, without regard to previous or coexistent rheumatism, the salicylate is my main reliance, except in specific infections; and even in syphilitic iritis it has a decided tendency to reduce the inflammation, though it can not replace mercury here. On the other hand, in the interstitial keratitis of hereditary syphilis it is of more value than mercury and iodid together. That its action is entirely independent of any rheumatic diathesis is perhaps best shown by its beneficial effect in sympathetic ophthalmia, an infectious disease of which the germ is not known, but which certainly has no connection with rheumatism.

In a paper which I read before the Omaha Medical Society several years ago I stated my conclusion that in producing these effects the salicylate probably acts as a germicide. This conclusion was based on the fact that in several inflammations the best results could be obtained only by very large doses, and that the effect on the inflammation did not seem to be proportionate to the systemic effects, but, on the contrary, was most pronounced in the patients who showed the greatest tolerance for the drug. In order to test the truth of this theory, I have begun some experiments which are not yet completed, but of which a preliminary report may be of some interest to the society. The problem to be solved may be stated in this way: Granted that to produce a marked
antiphlogistic action a man of 150 pounds weight must take 150 grs. of salicylate in the twenty-four hours; is there present in his system at any time during this period, or after the last dose has been taken, enough salicylate to produce a distinct influence on the growth of pathogenic germs?

The elimination of salicylate by the kidneys proceeds with great rapidity—I have found it in the urine in less than five minutes after taking 15 grs. dissolved in brandy—and to get at the quantity existing in the body at any one time, I have adopted the following plan: A patient who is about to begin taking salicylate empties the bladder immediately before taking the first dose, then all the urine which is passed between this time and one-half hour after the last of the ten 15-gr. doses has been taken is saved and the amount of salicylate which it contains is estimated, and as about 95 per cent. of the salicylate which leaves the body does so through the urine, it is evident that the amount thus obtained plus 5 per cent. is approximately the difference between the 150 grs. taken and the amount remaining in the body. The quantitative analyses have been kindly made for me by Professor Stokes, of the Omaha Medical College, and the results obtained in three different patients indicate that the amount remaining in the first patient was approximately 12 grs.; in the second, 22 grs.; in the third, 19 grs., or an average of 17 grs. In determining how strong a concentration of the salt is thus made available for checking the growth of any supposed germs in the body, it is evidently incorrect to assume that the salicylate is all contained in the blood; from the capillaries it must diffuse out through all the soft tissues. All things considered, it is perhaps safest to assume that the salicylate is distributed through the whole body, minus the skeleton, which in a man of one hundred and fifty pounds weight would leave 17 grs. in 130 pounds, or a strength of the salicylate mixture of 1:52529.

The question now arises: Is a salicylate solution of this strength capable, in the test-tube, of markedly checking the growth of the ordinary pathogenic germs? I say “checking
the growth," because it is not necessary in order that a disease may be helped by a drug, that the germs which cause it should be actually killed by it within the body. A slight check to their growth may be sufficient to allow the body-cells to get the upper hand and do the rest. Unfortunately for the theory with which I started out, it appears from the experiments thus far made that a strength of from 1 to 1000 to 1 to 500 is necessary to check the growth of the ordinary white and yellow pus cocci very decidedly. The latter grew quite profusely on agar containing the salicylate in the strength of 1 to 1000, but upon that containing 1 to 500 they did not grow at all; and the anthrax bacillus, while it grew in agar containing 1 to 1000, did so very sparingly.

It is evident, then, that so far as these experiments go, the evidence is distinctly opposed to the conclusion that the salicylate, even in doses of 150 grs. in fifteen hours, has much direct effect on the growth of germs within the body. If this is so, then how is its antiphlogistic effect produced? Without attempting to consider all the theories which have been suggested, it seems to me that that of Oltramare is the most plausible, according to which a local depletion is produced by the general capillary dilatation, which the salicylate causes. To state this more definitely, let us assume that in a small inflamed area the arterioles are already dilated to the maximum by the bacterial toxins; if now, with no increase in the strength or rapidity of the heart-beat, the arterioles all through the rest of the body are dilated through the action of the salicylate, it is evident that less blood would pass through the inflamed area in a given time than before the drug was administered. But it may be asked: Is it certain that reducing the blood-supply to an inflamed area tends to check bacterial growth in it? I will admit that on this point there is room for controversy, but a discussion of this phase of the subject would require a separate paper to do it justice. It is frequently assumed that the complex that we call inflammation is nature's effort to subdue the germs, and that its effect is in the direction of checking their growth; but
there are many clinical observations which indicate the contrary.

To sum up briefly, these experiments are of interest chiefly in indicating the difficulty of obtaining a high concentration of salicylate in the system on account of the remarkable rapidity with which it is eliminated; and second, in showing that some of the common germs are not particularly sensitive to its action.
SEPTIC PERITONITIS, STUDIED FROM ITS MAJOR POINTS OF ORIGIN.

CHARLES C. ALLISON, M.D., OMAHA.

So grave is the prognosis in general septic peritonitis that many observers of repute deny the possibility of recovery when the entire peritoneum is thus involved.

It is intended here to limit our remarks to nontraumatic, septic peritonitis and to study its development from the more common points of origin. We are thus enabled to estimate more accurately the anatomical surroundings which in a measure modify the progress of the disease and to anticipate in some degree the mycotic influences, which are really the most important agents in influencing the prognosis.

On four points in particular may we look as especially vulnerable and whence the inflammation may be, with proper bacterial stimulation, very lethal in its course.

Named in order of relative frequency, as major points of origin of septic peritoneal inflammation, they are as follows: The appendix, the Fallopian tube, the gall-bladder, and the stomach and duodenum.

The lower right quadrant of the abdomen, therefore, leads as an elective site of origin. All degrees of severity may be here represented, but our limitations are to an actual septic peritoneal involvement, which is always grave, but which is modified in its abdominal relations by being marginal in origin.

Eliminating the comparatively rare condition of sudden rupture of tube or appendix in the presence of virulent organisms, in which death follows in thirty-six to forty-eight hours, the natural topography of the region favors the development of a protective barrier.
Adherent intestinal coils are supplemented by the omentum in building a protective wall between the general cavity and the local inflammation, and it takes but a moderate experience to teach us how quickly and how effectually the adhesions are developed.

The difficulty seems to lie in selecting a plan of management which will aid in the formation of these adhesions, and more particularly in deciding in a given case whether they are really a safe obstruction to a more general peritoneal inflammation.

It is quite generally accepted that rest—to obtain which the withdrawal of food is essential—enemas and gentle laxatives are in a great measure successful. To determine, however, at a timely moment whether these conditions are really conservative has repeatedly taxed the judgment of every practitioner.

If the local disturbances are held in abeyance; if gas is being expelled; if the pain is disassociated with evidence of collapse; if the paroxysms grow gradually less severe and more localized; if with these signs the pulse, the respiration, the muscular rigidity, the general aspect of the patient and the temperature are in accord, a degree of safety may be looked upon as established.

All these points, however, must be weighed together; hence it is that the bedside picture is the only guide in deciding upon the treatment in a given case.

Sudden amelioration of pain may mean: 1. Gangrenous appendix—such a case was recently seen in its last moments in which the autopsy verified this diagnosis. 2. It may mean the shock of general peritonitis. 3. It may mean abscess formation; therefore periods of apparent truce are always suggestive of danger unless all of the symptoms are in harmony and point toward actual convalescence.

If the peritonitis be of tubal origin, the same natural protection of location to some degree limits the inflammation and the history of the case gives some clue to the bacterial feature of the trouble. The local and general symptoms in
The rupture may be infraperitoneal; its onset may seem purely inflammatory, because some local inflammation may antedate its origin; it may occur during lactation, its extraperitoneal rupture may be followed by a remission in the symptoms and a localized peritonitis slowly develop. In other words, the symptoms may be comparatively subacute and in a measure misleading. In a case lately operated on, the mother nursed a 13-months-old child. I saw her on Tuesday, presenting a tumor at the side of the uterus, which was tender, and seemed to fluctuate; the uterus was partially fixed. The temperature in the afternoon was 99.5 F. She had not menstruated since the birth of the child, now over one year old. Eight days before this observation was made she had been suddenly seized with a severe pelvic pain and, in her language, she said that she felt dizzy and thought she would faint. This distress has gradually disappeared, and she now came for treatment for what she considered to be the results of a former labor.

The treatment indicated was clearly a vaginal section with an infraperitoneal rupture of the Fallopian tube, due to early pregnancy as a most probable condition, and this was found to be the case, yet I confess that it would not have been so readily suspected had not two similar cases been similarly treated and given similar histories in the last eight months.

The paroxysmal nature of the pain, its remissions, and the shock which attended its first development, with a low range of temperature and the history of feeling faint, will usually guide us in the right direction when there is an early rupture below the peritoneum, even when the menstrual history is of no avail. When the initial symptoms of acute peritonitis are located in the right upper quadrant of the abdomen we may
suspect the lesion to have its origin about the liver appendages. When this process is acute, it is apt to extend to phlegmon of the gall-bladder or to its rupture due to ulceration or to stones.

In acute phlegmonous cholecystitis the clinical picture is that of an acute peritonitis attended by sudden collapse. The early pain radiates from the right hypochondriac area over the abdomen and to the right infrascapular region. Ilius, subnormal temperature, enfeebled pulse, attempts at vomiting, rapid respiration and pronounced shock are the leading symptoms. Should the infective process be less virulent, the inflammation may be limited by adhesions, or the extravasation may be directed to the pouch of peritoneum in front of the right kidney. This cavity is limited below by the transverse mesocolon, internally by the spine, externally by the abdominal parietes. It may contain one pint of fluid, and the infection of this portion of the peritoneum may be entirely localized, either by adhesions at the foramen of Winslow or by the fact that this opening does not overflow.

The symptoms in this case resemble a perinephric abscess in that the swelling and edema are postero-lateral in location.

In September, 1898, this condition was found in a male aged 42, from Wakefield, Neb. The symptoms were those of acute pain in the right side of the abdomen attended by chill, sharp elevation in temperature and some swelling in the axillary line below the liver. It was my impression that we had a perinephritic abscess, but an exploration revealed a pus cavity which contained a gall-stone, and the gall-bladder, which had ruptured, was drained through this lumbar incision, the patient making a good recovery. The least frequent of the acute peritoneal infections is caused by the perforation of an acute gastric or duodenal ulcer, yet the symptoms in this comparatively rare condition are correspondingly overwhelming and the collapse more rapid than any other conditions named.

Some knowledge of the frequency of this trouble may be gathered from the observations of Welch, who found gastric
ulcer in 5 per cent. of his necropsies, while the comparative number which perforate, according to the analysis of Deschfield, is 6.5 per cent., while Brinton gives 15 per cent. as the proportion which end in perforation. These figures represent the termination of gastric ulcer treated medically, yet it is the appreciation of the symptoms which denote perforation that we now study. It is true the clinical picture which follows this catastrophe depends largely on the location of the ulcer. In nearly 90 per cent. the rupture is on the anterior wall of the stomach, in but 2 per cent. it is posterior, while the remainder are found near the pylorus.

Perforation, occurring, as it most frequently does, after a full meal, leads to rapid extravasation of the stomach contents into the cavity. The only hope for a limitation of the inflammation lies, first, in the development of adhesions, in the immediate vicinity of the ulcer, in which case an abscess will be the usual termination, and the pus may burrow in any direction, involving the liver or pancreas, or appear as a parietal inflammation, or the fluid may be limited to but a small portion of the peritoneal surface and become to a certain extent shut off from the general cavity by the omentum, the falciform ligament supplemented by adhesions. It is this moderate extravasation that frequently leads to the development of the subphrenic abscess.

The symptoms are acute pain, rapid collapse, rigid abdomen, subnormal temperature, leucocytosis, absence of liver dulness, and rapid respiration. This picture following a history of gastric ulcer will be strongly suggestive of perforation, the management of which, granting that the sufferer is not in dangerous collapse, must be upon surgical lines. The prospects for a successful issue, however, must depend almost altogether on the length of time between the perforation and the employment of the surgical therapeutics, which include exploration over the affected area with careful cleansing of the inflamed peritoneal surface. The same rule which promises most in the management of peritoneal inflammations from other sources might be recommended in this connection, and
that is the careful cleansing of the peritoneum at the sight of its first infection. If we can be sure the infection is localized, our efforts should cease with the toilet of this part of the surface. If, however, the general cavity has been invaded, we would recommend an irrigation of the entire peritoneal surface, and to accomplish this in the face of any considerable amount of inflammatory exudate a counteropening should be made on the opposite side, through which the warm salt solution may be introduced in large quantities, after which drainage should be employed in the dependent portions of the cavity and the patient's strength supported by the usual remedies.

DISCUSSION.

Dr. B. B. Davis: I do not think such a valuable paper as this should be passed without discussion. The paper is so clear and to the point, however, that I see very little to add. With the exception of commenting briefly on the question of diagnosis, I have nothing to add. The matter of making the diagnosis as between these different things has occasionally been the occasion of a good deal of difficulty to myself, and I think, no doubt, all are troubled more or less in arriving at a clear understanding of the primary cause. He speaks about making a diagnosis of a ruptured tubal pregnancy, which calls to my mind a case in which I was at sea as to whether it was tubal pregnancy or appendicitis. The history which the woman gave, she not being very intelligent, was such that I could not get very much information from it, and after I came to operate I did not know where to make the incision. I thought if it was a ruptured tubal pregnancy that a median incision would be the thing, and finally, just at the last minute, the dullness in the region of the appendix was so pronounced that I thought I would make the incision the same as I would for appendicitis. The result was, I made an incision, took out a lot of clots and found a ruptured tube. The case has always been an interesting one to me.

The temperature, as Dr. Allison says, is the thing that tells the least. I notice in his citation of the several symptoms which we have in these cases, that he mentions temperature last because it is of the least importance, and I think that is true in almost all cases. But where one meets a case such as I did a few weeks ago, in which we had a peritonitis starting from the appendix, and for several hours the woman had been in a state of collapse, with subnormal temperature, and when I got to the bedside of the patient she was in such a condition that I felt that anything we could do by a simple incision was not going to do at all; I felt that here was a case where if I operated she would die, and if I did not operate she would probably die anyway, and so under the circumstances I concluded it was my
duty not to operate, and I did not, but I recommended that she be packed in ice, and I gave her absolutely nothing but enemata to nourish her. This was late one night, and the next morning she began to discharge pus from the bowels, and she recovered. Possibly she might have withstood an operation, but with that subnormal temperature I felt she could not, and so in that case I placed a great deal of weight on the temperature. I still believe that if I had operated on this patient she would have died.

There is one other condition where we sometimes have trouble, and this was forcibly brought to my mind by a case where it seemed a very difficult matter to make the diagnosis between gall-stones and appendicitis. In this case the patient was a hysterical girl, and no matter where I pressed over the right side of the abdomen, she elicited the same marks of distress; the muscles became rigid and the patient would almost scream. At first I thought it was purely a case of hysteria, and had it not been for my confidence in the physician who sent her to me, I think I might have discharged her without an operation, but inasmuch as she had had three or four attacks in rapid succession, and each one a little worse than the one before, we decided to operate, and we cut a little too high for appendicitis and too low for the gall-bladder. Appendicitis was found and the incision extended downward. The operation was done a little over two weeks ago and the girl has been apparently comfortable ever since. So, in a great many of these cases it is extremely difficult to determine which is the particular source of the trouble, but the more we study these cases and the more carefully we get at the symptoms in each case, the more ready we will be to make a good diagnosis.

Dr. Lord: Notwithstanding the great familiarity of surgeons with these conditions, who are operating daily for lesions within the abdomen, it is my opinion that it really does not matter so very much in many of our cases about these fine points of diagnosis; that with all our wisdom and experience, however exclusive we are in our methods of diagnosis, we are fooled very often in regard to conditions found, and we have all failed so often, the question sometimes arises: Is it worth our while to bother our heads so much in regard to these very fine points of diagnosis? These failures are going to follow us, even though we have done the best we can. We operate for appendicitis and find a ruptured tube, or find tubal pregnancy; or operate for obstructive disease of the gall-bladder, and find carcinoma. Yet it is true that the more light we get we become better acquainted with the diagnosis of difficult differential points.

In the paper which I will read I will endeavor to show two points in diagnosis which are of value. And I am going to do more than refer you at that time. So I will not take much time now, but in cases of tubal pregnancy, ruptured or unruptured, the absence of leucocytosis and evidence of hemorrhage as shown by alteration in the blood, does very much to exclude suppurative conditions. And as
we bring these various matters of diagnostic finesse to bear, we are from year to year learning to discriminate. Of course, this does not say that we will always act by positive knowledge, especially to distinguish fully between these conditions, but it all helps.

It is a common experience that with these very acute conditions—acute as we see them—the physical signs are so limited that it is with the greatest difficulty that the surgeon can decide on the point for the proper incision to suit the case. This, I have found under these conditions, where you experience this uncertainty about selecting the proper part, that we can usually exclude the upper or lower half. If in this upper part, the incision should be above the umbilicus; if in the lower half, below, and most often a median incision should be made, with secondary, lateral incision, if necessary.

Dr. Grothian: I would like to make a remark with reference to a point touched on by Dr. Davis, and also by Dr. Allison, viz.: Operation during collapse. In the majority of cases where collapse is due to rupture of appendicular or other abscesses within the abdominal cavity we must either operate without waiting for reaction or not at all. This is also true of general septic peritonitis. I call to mind a case which I had not long ago, which was operated on about 5 p.m. for a ruptured appendicular abscess. The rupture occurred about 10 a.m. She was in profound collapse; face, hands and feet cold; pulse 150, temperature 104 F. In contradistinction to what Dr. Davis brought out about low temperature, I did operate and the woman recovered and is well now. With the free use of the Thiersch solution, we can operate now in collapse, where a few years ago we were unable to do so with any prospect of recovery. In fact, it is our duty to operate in many of these cases whether the temperature is high or low, for, thanks to the normal salt solution, results are obtained which we cannot rightly withhold from our patients, even if our mortality tables should not be so pleasant to behold.

There is one more point, I think, in connection with suppuration or infection from rupture in the upper peritoneal cavity that should not be overlooked, which is, placing the patient in such position as to obtain drainage from above downward, and finally, in women, through the cul-de-sac. Dr. Fowler, of Brooklyn, calls attention to the elevation of the foot of the bed for this purpose. We have all witnessed the rapidity with which collapse and death follow perforation in the epigastric region, while a patient with the same condition existing below the umbilicus may even recover under the most adverse circumstances. The rapidity of absorption high in the peritoneal cavity overwhelms the system at once, hence our efforts should be directed toward draining that part, even at the expense of accumulation in the pelvic cavity.

Dr. J. A. Andrews: It seems quite proper to relate personal experiences in discussing papers, and I suppose I will be allowed to take a part. Speaking of infection brings to my mind a case which I brought to Dr. Henry in 1896. I was called to see the lady, found
the uterus about the size of a four-months' pregnancy, quite a bit of hemorrhage, pains at intervals similar to labor pains. While the hemorrhage was quite profuse at the time I saw her, yet I was not very anxious about it because she was a strong, hardy woman, had been used to out-door work, and I told them I would see them the next day. They informed me that it was not necessary to see her again until they sent word, so I did not see her until about ten days. I received a message to call again. I found it impossible to insert a speculum at all, and the abdomen was so enlarged that it was about the size of a seven-months' pregnancy. The house in which they lived was not an ideal one in which to do an operation, but nevertheless, in order to give the lady a chance to recover, I decided to operate. She was suffering so much pain that it would have been almost impossible to remove her to another house. We prepared a bed, stretched a sheet fastened to the rafters, on which was soil for covering. I sent for several to help, but they refused on the ground that I would not stay and take care of the patient after the operation, on account of taking my own wife to a hospital. I found the temperature, after I saw her the second time, to be 101, pulse 150, and very weak. I sent for help, and it was refused. The next thing was to start for St. Joseph's Hospital with her. We had to remain over night, and during the night nature was very kind to us. Through the bowels she discharged something like a gallon of pus and blood, and I do not know what all. The abdomen was flat the next morning. I was in the country and not there at the time the discharge took place, but there was a little over a gallon of it that they had saved. Whether they had poured any water into it or not I could not say. There was no temperature the next morning; the pulse 115; no pain, and she wanted breakfast, but we immediately proceeded to the hospital. She never had any more temperature while I had the care of her. I had to return home immediately after bringing her here. I received a letter from Dr. Henry shortly afterward in which he said that he had operated on her and had removed a tubal pregnancy. She has since borne a healthy child, and been particularly healthy and strong, and why she had no temperature after that rupture in the bowels I do not know. But in these cases it seems to me we would get a great deal more out of it if we followed the treatment than we would by simply reporting the cases of operation. I have never met Dr. Henry and talked with him about the matter to learn if he remembers the case, or what treatment the lady received.
RECTAL ABSCESS.
R. D. MASON, M.D., OMAHA.

An abscess in the rectal or ischiorectal region differs in some important particulars from the same affection in any other part of the body. An eminent authority on this class of diseases says: "It may be considered a rule that an acute inflammation in this region will go on to suppuration and hence that antiphlogistic measures adopted with a view of securing resolution are useless." Ordinarily, when a collection of pus is known to exist if a free opening is made for its escape, restoration of the parts soon occurs and the patient is well. Not so, however, in the case under consideration, for the following reasons: Many of them begin in what are known as stercoral abscesses or those having their origin on the inside of the bowel. These abscesses, of course, communicate with the interior of the bowel and contain stercoraceous or fecal matter.

When opened from below, either by nature or the surgeon, a complete fistula results and healing does not occur. 2. These abscesses occur as a rule close to the lumen of the bowel, even if not actually opening into it, and the daily action of the rectum and sometimes also of the bladder in filling and emptying their contents acts in the nature of a massage forcing pus into loose connective tissue and along muscular sheaths that were previously healthy. 3. The parts affected are generally loose connective tissue or fascia, which lies in close apposition or surrounds the largest, coarsest-grained muscles in the body, making an ideal location for pus to extend into new territory or burrow along coarse muscular fibers.

As regards etiology, we find many of the stercoral or so-called idiopathic variety that, so far as can be ascertained,
have no cause. They simply develop from the interior of the bowel and are probably due to the lodgment in the rectal pouch of foreign bodies that have been swallowed.

I have removed from these abscesses pieces of wooden toothpicks, spicula of bone, etc. Professor Agnew reported finding in one of these abscesses part of the breast-bone of a snipe and in another two grains of corn. A case is also recorded in which the abscess cavity contained part of a plate of false teeth. This form of the disease always results in fistula, as the internal opening through the bowel is the first thing that forms, and when the opening is made or is formed by nature, later the fistula is completed.

Probably the most common form of abscess is that resulting from traumatism. This may be due to accidental injuries, as from kicks, falls, etc., or as sometimes happens, from improperly performed operations done for other affections. There are two common forms of abscesses that occur as a result of other diseases. The first is where an abscess forms as a result of stricture. This may occur in two ways: First, from the irritation caused by the retention of bowel contents above the stricture, and, second, when it occurs below the stricture. That occurring above seems to be a conservative effort on the part of nature to form a new channel for the discharge of fecal matter to take the place of the natural one now nearly or quite closed, and the other is due to deficient nutrition of the parts below the stricture, from blood stains or possibly local thrombosis due to a deposit of fibrinous matter in the strictured portion of the bowel. The other disease which may be productive of abscess as a complication is tuberculosis. This, to be strictly accurate, is not an abscess at all but is a local breaking down of tissue due to either a local deposit of tubercle which goes through the same process of degeneration and breaking down that occurs in lung tissue, or it may occur from a local injury that in a healthy person would cause no serious trouble, but in a tubercular patient can not be repaired by nature on account of lack of vitality. In the latter case there is no deposit of tubercle as a cause,
although no doubt infection generally occurs from bacilli coughed up from the lungs and swallowed. In either case the contents of the abscess does not contain true pus-cells, and is not usually accompanied by the inflammatory process. The treatment of these cases is very important, owing to the fact that burrowing and fistulous sinuses occur so readily. When the inflammatory process has started from any cause, it is very important that the patient be put to bed and kept there, as I know of no disease more influenced by position than the one under consideration. The overdistended venous circulation can not be relieved in the upright position. It is better to apply cold than heat, as the object is not to bring pus to the surface but to prevent its formation. This should be continued only until it is seen that the formation of pus can not be prevented. When it is determined with reasonable certainty that pus is present, no time should be lost, but an opening should be made, no matter how deep it may be necessary to go to make an outlet for its escape. I have no words at my command strong enough to express my condemnation of the habit of poulticing these cases, as is so often done. It is urged that it will bring the pus to the surface. If it is known to be present, why not bring it to the surface surgically, by a clean free incision, rather than wait for breaking down of tissue by use of a dirty poultice, while the pus is making its way in various unexpected directions? In case no pus is found, no very great harm is done, at least not so much as would result from the burrowing of an extensive abscess and the formation of two or three fistulous openings. A long, straight bistoury should be inserted into the center of the swelling until pus is seen to issue from the wound beside the blade. It may be necessary to go up four inches and possibly to make more than one incision. It is useless to wait for fluctuation, as it rarely appears. In making the incision the patient should be put under the influence of an anesthetic unless the case is a very mild one. In case pus is formed, a free opening should be made and all broken down tissue removed by the use of the finger or scalpel handle, after which
the cavity should be irrigated with a solution of bichlorid of a strength of 1 to 2,000. In case much pus is present a solution of peroxid of hydrogen may be used, but this should, under no circumstances, be used unless there is a free opening, for the effervescence which ensues may drive the pus into previously healthy tissue. After cleaning the cavity it should be very lightly packed with iodoform gauze for one or two days, when the latter may be omitted and, if the cavity is quite deep, a rubber drain may be employed. After the opening for the discharge of pus has been made, moist heat may be employed, as at this time it is very grateful to the patient, and acts as a local sedative and aids in the reparative process. This is best accomplished by wringing gauze out of hot water, applying it and placing over it a rubber bag filled with hot water to retain the heat. A large number of these cases result in fistula, no matter how carefully they are treated, and if left to themselves or improperly managed they nearly all result in fistula. Allingham reports 151 fistulas out of 196 cases treated; only 45 were cured without fistula. In less skillful hands the results would not have been so good. In treating these cases it is always best to inform the patient that a fistula will probably result, otherwise they will censure their physician for something for which he was not to blame. The question is often asked: Why not operate on the fistula at the time the abscess is opened as long as it is known that the fistula will result and require operation later? At first thought this would seem to be the best thing to do, but when it is remembered that the tissues are gorged with blood and weakened with pus formation, it will be seen that this is not best, and results have shown that operations on fistulas at this time are not satisfactory. The better plan is to get the abscess in as good condition as possible and, if necessary, build up the patient somewhat and then operate on the fistula. After the patient has been operated on, it is not best to confine him too closely to the bed, especially if there is any tubercular trouble, for the fresh air and exercise are very beneficial. If the opening is properly made, the drainage is good and the use of the-
muscles about the abscess cavity tends to force the contents out and keep it empty instead of causing new channels to form, as would have occurred before the opening was made.

DISCUSSION.

Dr. Hungate: I was impressed by what the paper had to say in regard to the hydrogen peroxid as an aid in diagnosis, injecting it into the abscess to determine the size of the sac before proceeding further. I made an examination one time of a pyramidal cyst in a boy. I remember we had an abscess in that locality, but it could not be denominated a rectal abscess; it had some of the signs of abscess caused by a contusion of the sac; it was more posterior to the rectum and was cystic in character and very tender, and there was some discharge. I made an injection of pure peroxid with a small glass syringe and within a minute my patient called out, "It is going to bust, Doc! Be quick." When I quit injecting it showed me at once the size of the abscess, and I could see I had one there about the size of a hen's egg, and then I discovered that the cause of the abscess was a quantity of hair and shreds of clothing that had in some way become inverted and had grown into the skin, and had formed an abscess or cyst there from an exterior cause. I want to emphasize that the pure hydrogen peroxid is sometimes a material aid in diagnosis, and in using the peroxid early you will be better able to make your diagnosis and determine the size and contents, and whether it communicates with some other cavity.

Dr. Roberts: I did not understand the Doctor to make any reference to syphilis as a causative factor in this disorder, and what particularly calls my attention to it is a case I had in Dr. Senn's clinic in Chicago. The patient was a young lady some 18 years of age, who was suffering from some trouble in the ischiorectal region. Upon examination I found several fistulous openings about the anus. I suspected syphilitic trouble at the start, but could obtain absolutely no history of previous skin eruptions. Numerous scars, however, pointed to previous existence of ulceration in about the same locality. After obtaining the family history as far as possible, I came to the conclusion that I had a case of hereditary syphilis, which subsequently proved to be correct. Of course, tuberculosis was considered and an examination pursued along that line, the microscope failing to reveal the presence of tuberele bacilli in the pus. The patient was put upon iodid and progressed in a short time to a satisfactory recovery.

Dr. R. D. Mason: I have nothing further to say, except that it is dangerous to use hydrogen peroxid in that way. It will not only fill the cavity, but in the system it will force this pus into the regions that were previously healthy, and cause bad results. Of course, it could, in some cases, not do much danger, but in some cases it might.
LEUCOCYTOSIS AS A FACTOR IN SURGICAL DIAGNOSIS.

JOHN PRENTISS LORD, M.D., OMAHA.

It is but comparatively recently that the abnormal relations of the white cells have been considered as factors of diagnostic and prognostic values. That blood-counting is a most valuable aid, not only before an operation, for diagnostic purposes, but also after an operation, for prognostic purposes, can not be denied; yet how little is this important symptom brought in to help us in this community. With the easy method of staining, the comparative cheapness of the hemacytometer, and the accessibility of the microscope, there is no reason why we should be in darkness as to this symptom. Leucocytosis, or the absence of it, is now, excepting in the blood diseases, used to indicate the presence or absence of pus, or of any active inflammatory condition of the system. The number of leucocytes is not always proportionate to the amount of pus, but is proportionate, as a rule, to the virility of the infecting organism; thus we may have a greater leucocytosis in a cellulitis of the finger, of streptococcal origin, than in a large pelvic abscess. Again, the amount of leucocytosis may depend on whether the pus-formation is thoroughly walled off, or as to the death of the germs contained in the abscess cavity.

Having, then, this fairly certain way of knowing the presence or absence of pus, or inflammatory condition in the body, how valuable is this factor in the differential diagnosis of typhoid fever or appendicitis; the various colics—intestinal, uterine, hepatic, renal; or intestinal obstruction; of pneumonia or meningitis; lumbago or perinephric abscess. In such instances a blood-count would almost certainly be corroborative evidence either one way or the other.
Not only is the blood-count valuable before operations, but it is valuable after operations, to indicate the subsidence or extension of suppurative conditions. Thus, in appendicular abscesses which have been opened for drainage, a leucocyte count is of more value as to the efficiency of the drain than is the temperature chart. Leucocytosis is a more stable quantity than temperature, the latter being easily affected by so many conditions of minor importance.

The writer presents this evening a brief history of several cases, which stand to show, not only the value of the blood-count, but also its accuracy. Some of the cases mentioned were rather obscure, but were much enlightened by knowledge of the presence or absence of leucocytosis.

Case 1.—Male, age 9. Present history began Oct. 15, 1899, with headaches, pain in the back and epigastrium, and some diarrhea. The following day the pain in the back still continued, but pain in the stomach gradually shifted its position to the umbilicus, and then to the right iliac fossa, where it has since remained. The child vomited two or three times. Bowels now constipated. October 17, bowels still constipated, no vomiting, pain in the back still marked, but the pain and tenderness on pressure in the right iliac fossa still acute; headache still persistent. Patient is admitted to the hospital. Presented for examination the following conditions: Temperature 101.2; pulse 108; facies anxious, tongue dry, and heavily coated; lungs are clear, though respiration is rapid; abdomen, no spots are made out; spleen is felt; abdomen is retracted. There is some rigidity of the muscles of the right abdomen, which is particularly marked on the right iliac fossa; slight sensitiveness on pressure over McBurney's point. No masses made out, owing to the muscular rigidity. Patient gave no Widal reaction; leucocytosis 16,400. Diagnosis acute appendicitis. Operation at once. A gangrenous appendix was found lying behind the cecum. Around its tip was a small amount of sero-purulent fluid. Appendix was amputated and the wound left open and drained.
October 20—Leucocytes 8500. Some discharge from the wound.

October 27—Leucocytes 8000. Patient recovered uneventfully. This case simulated typhoid and appendicitis. Symptoms suggesting typhoid were: pain in the back, malaise, headache, and pain in the right iliac fossa. The symptoms contraindicating typhoid were: the sudden onset; the severe pain in the right iliac fossa; the leucocytosis; no Widal reaction, though this latter is rarely obtained in the early stages of the disease. The symptoms pointing toward appendicitis were: the sudden onset; the vomiting; the muscular rigidity, and the shifting of the pain from epigastrium and the umbilicus to the iliac fossa.

**Case 2.**—Male, age 19. Aug. 12, 1899, patient gave up his work owing to his general indisposition and severe headache, which had been continuing for the past five or six days. The next day he had a chill and vomited. His headache continued. He had epistaxis; bowels constipated. He also complained of a severe pain in the back and limbs. He felt so miserable that he went to bed, where he remained until August 18, when he was admitted to the hospital, above symptoms having continued. Physical examination, August 18, showed him to be in an apathetic condition. Face was flushed; tongue heavily coated; few herpes of the lips; heart was negative; pulse 98 and of good quality; lungs were clear; abdomen slightly distended. Some rigidity and tenderness on pressure, in region of the right iliac fossa. A distinct mass was found around McBurney's point, sausage-like in character, and slightly sensitive to pressure; temperature 103; patient has no typical spots; the spleen is not made out; the blood gives no Widal reaction; leucocytes 6500. An enema was given and the mass above referred to almost disappeared when the enema resulted successfully. Diagnosis: typhoid fever. The case ran a typical course, giving Widal reaction some two weeks later. Then the blood-count indicated typhoid fever, as did the slow onset of the disease, pain in the back, headache, epistaxis, etc. The case was puzzling, however, owing
to the mass in the right iliac fossa, the sensitiveness there, and the absence of spots or enlarged spleen, and no Widal reaction.

CASE 3.—Female, age 16. Patient had always been of nervous temperament, and had complained for the last two years of a dragging pain situated chiefly in the iliac fossa. Patient was admitted to the hospital June 12, 1899. Three days prior to that time, after having eaten a meal of indigestibles, she complained of pain in the epigastrium and in the right iliac fossa. She began to vomit. This continued till the time of her admittance to the hospital, her chief symptom being persistent pain in the right iliac fossa, and vomiting; bowels regular. On admission, the patient's abdomen hard, rigid, and a suspicion of a mass was felt in the right iliac fossa. This was indefinite, owing to the rigidity of the muscles and the pain caused by manipulation. Pulse 96; temperature 103; leucocytes 7500. Diagnosis: appendicitis. Under anesthetic, muscular rigidity largely disappeared, and the mass was felt deep in the pelvis. Neither kidney made out. Operation at once, which revealed an appendix with a few old adhesions surrounding it. The right kidney was deep in the pelvis and freely movable. In this case the leucocytes were but little above normal, and did not indicate any suppurative lesion nor inflammatory process, and had the absence of leucocytosis been given as prominent a position as her other symptoms, the emergency operation would not have been performed.

CASE 4.—Male, age 37. Admitted to the hospital Oct. 15, 1899. Two years prior to this time patient noticed loss of appetite, and had indigestion disturbances. Several weeks later he noticed that he vomited some blood. Did not vomit blood again for several months, but he had vomiting occasionally after meals, and lost some flesh and strength. These conditions went on for several months, he being apparently well at intervals. Six weeks before admission to the hospital he had an exacerbation of his gastric and intestinal symptoms, and complained of severe burning pains in the epigastrium.
For the past four weeks the patient has been in bed. He has been unable to retain solid food on his stomach and has vomited blood several times. On admission to the hospital the history obtained from friends was: Eighteen hours ago he complained of severe epigastric pains, and a few hours later went into collapse. A physician was called, who, thinking of a possible attempt at suicide by poison, washed out the stomach, obtaining only the contents of the stomach with a few blood-stains. Stimulants were left in the stomach, and given hypodermically. He failed to rally, and was brought into the hospital on an ambulance. His physical examination indicated typical general peritonitis. Leucocytes 4500. Patient died within a few hours. Autopsy showed a general peritonitis following perforation of a gastric ulcer. The lining of the stomach showed the cicatricial remains of several ulcers on the posterior wall. The absence of leucocytosis in this case is probably explained by the fact that the patient died without offering any apparent resistance to the infection.

Case 5.—Female, domestic, age 24. This report is in direct contrast with the preceding patients. Thirty-six hours before admission to the hospital, while at her work, the patient was taken with violent pain in the appendix region, and vomited several times. She went to bed. Applied hot-water bag to abdomen and drank some tea, which produced more vomiting. The pains still continued severe in character, and in the same spot. A physician was called, who made a possible diagnosis of appendicitis and applied a plaster to the affected area. He also gave a few grains of calomel and a small dose of morphine. The next morning the pain was more severe and extended over a large area, being present in both iliac fossae. The vomiting was persistent and her prostration extreme. Operation was advised, but refused. A few hours later, the patient's condition steadily growing worse, consent to operation was obtained, and the patient was removed to the hospital. On admission to the hospital the temperature was 104; pulse 132. Physical examination revealed a general peri-
tonitis, the abdomen being distended; no abdominal breathing; abdomen held rigid, no masses made out; general tenderness to pressure. Vaginal examination was negative. Leucocyte count 19,500. Operation performed at once, a long incision being made over appendix region. A gangrenous appendix and much pus, which seemed to be free in the peritoneal cavity, were removed. A similar incision was made in the left iliac fossa, this incision also finding pus, apparently free in the peritoneal cavity. Several rubber drainage-tubes were inserted through these openings. Intestines were drawn out of the wound. The lymph was removed and peritoneal cavity was flushed with several gallons of salt solution. Patient removed to her bed, and continual irrigation kept up through tubes. Convalescence was slow, but patient was up in six weeks.

Leucocyte count: Three days after operation, 13,000; six days, 11,000; ten days, 8000; fourteen days, 6000. The diminution of leucocytes shows the result of effectual drainage.

Case 6.—Male, age 7. Admitted to the hospital July 12. Ten days before admittance he was struck on the shin, but paid little attention to it. Two days later the limb became painful, red and swollen. The child also had a chill; the swelling increased and the pain became more intense during the next forty-eight hours. The child was brought to the hospital with a leg which showed some swelling, ecchymosis, and localized tenderness. Leucocyte count 16,700. An incision was made over the most prominent portion of swelling, down through the periosteum, underneath which was a quantity of pus.

Case 7.—Male, age 38. Admitted to the hospital Feb. 12, 1899. The history was that of an appendicitis of two weeks’ standing, with the formation of a large abscess. Leucocyte count 12,000. Operation performed February 13, and abscess evacuated.

February 18—Leucocyte count 7800. Temperature 100; pulse 84. Discharge profuse and foul.

February 22—Leucocyte count 7800. Temperature 100; pulse 84. Discharge profuse and foul.

February 29—Leucocyte count 8000. Temperature 101; pulse 80.

March 1—Patient has a cough and complains of pain in the right chest. Leucocyte count 10,000. Temperature 101; pulse 88.

March 3—There is an area of flatness over the right chest behind. Leucocyte count 17,000. Temperature 100; pulse 92. An exploring needle inserted into pleural cavity obtained pus.

March 4—A rib was resected, and much pus evacuated.

March 7—Leucocyte count 10,000. Temperature 99.

March 10—Leucocyte count 7000. Temperature 100.

Convalescence uneventful. Patient discharged cured April 5. In this case, after the original operation the leucocyte count was more valuable as an index to the formation of a new septic process, or the insufficient drainage of the old process, than the temperature chart.

Case 8.—Miss H. Suppuration following laparotomy, draining freely. Temperature 98 in morning, 101 in evening. Leucocytosis 7300, indicating an absence of leucocytosis in free suppuration with good drainage.

Case 9.—Mr. G., smelter, leaded. Complained of great pain in abdomen. Temperature 98 in morning, 104 and 105 in the evening; pulse 120. Pus suspected; operation considered. Muscles over the belly very rigid. Blood count (white) 8400. No operation; recovery. Diagnosis: auto-intoxication.

Case 10.—Mr. G., age 20. Reinfection of infected stump. Temperature very septic, rising to 105 in evening, and normal in the morning. Drainage imperfect. Blood count 28,200 on one day and 32,800 on the next. Pus finally evacuated, and patient recovered.
Case 11.—Mr. D., age 47. Tubercular abscess of shoulder-joint. Apparently mixed infection, carrying a septic temperature; pus not discharging very much. Blood count 5300.

Case 12.—Male, age 32. Thirty-six hours following an operation for removal of appendix, between attacks, had slight chill, and temperature continued to go up, reaching 104. Pus suspected and leucocytic count made, and found 23,000 to the c.mm. In twenty-four hours more we had a well-developed lobar pneumonia. Three days after first count temperature came down some, and count showed 8500.

Case 13.—Mrs. H., had typhoid fever in September, from which she recovered. She began to have severe attacks of pain in the region of the gall-bladder, and occasionally vomiting, which grew worse. General appearance was good. Temperature normal in mouth, but evening rise of 100. Tumor could be palpated in region of gall-bladder. Gall-stones and possibly pus suspected, but count showed only 4000 multinuclear leucocytes to the c.mm. Exploratory incision made, and suppurative cholecystitis, with gall-stones, found. Failure to find leucocytosis probably due to pus being well walled off, and no absorption going on.

Case 14.—Father H., in third week of severe typhoid. Made count of mononuclear leucocytes 3500 and multinuclear leucocytes of 2500, which goes to show that you do not get leucocytosis in typhoid fever.

Case 15.—Male, colored, age 39. Came into hospital with diagnosis made of some kidney trouble, possibly pyonephrosis. Great pain on left side, in region of kidney. Muscles rigid; palpable tumor. Temperature ranging from 99 to 100. Blood-count showed leucocytes 7800. Excluding pus, operation showed a rupture of spleen. A full analysis of the blood would probably have indicated the hemorrhagic condition.

Case 16.—Mrs. D., age 35. Came to hospital complaining of pain in lower abdomen, griping in character. Some fever and chills. Blood count showed 28,000 multinuclear leucocytes; pus suspected; found and drained through vagina.

It is therefore proved that leucocytosis is a sufficiently stable factor in suppurative conditions to make its presence or absence of great significance, and may be the means of clearing up a diagnosis. In a suppurative condition, as exemplified in appendicitis, a day's delay may mean death, however skillful a delayed operation may be, and many who escape might by an earlier diagnosis be saved weeks of suppuration, hernia, and subsequent operation.

The number of polymorphonuclear leucocytes may be of great significance in post-operative cases suspected of infection, because of the temperature curve which may be elevated by transitory causes. The onset of grip in an operative case may scare the surgeon out of a night's sleep. Grip shows no increase of leucocytes. Infection would give a marked increase, which would be an early guide to its relief.

The writer is not unmindful of the fact that there is a greater leucocytosis in infants and children, in pregnant women, and during digestion, and that it varies materially in different diseases. Competent and credible observers have demonstrated that the blood of even those subjects, affected with certain diseases, shows the characteristic changes. Dr. Head, of Minneapolis, says the leucocyte count in children is more characteristic in typhoid or appendicitis than in the adult. And to establish a diagnosis of the pathological conditions in otitis media in children, it is especially valuable. The same writer values a leucocyte count more highly than the Widal reaction in a case of obscure fever in a child.

The subject of leucocytosis is not new; in fact, it has been fairly well understood for a number of years, but observations hitherto have been mostly confined to the physiological rather
than to the clinical laboratory. The observations of the writer have simply been in the line of work pursued by others, who have succeeded very well in showing that it shows clinical evidence of value, and that where finesse in diagnosis is attempted it may be indispensable. One needs only to peruse the chapter on this subject in the able work of Cabot to be convinced of its value, and recent text-books on surgery are beginning to give a chapter to its consideration. Among other statements made in the “International Text-Book of Surgery,” in its chapter on this subject, are these: “The leucocyte count may suggest the diagnosis at an early stage when practically no pain or fever is present.” “Purulent accumulations, in a cerebral sinus following middle-ear trouble, sometimes show themselves through the blood-count when there is nothing else to suggest the diagnosis.” The positive or negative indications given by the blood may aid very materially in the differential diagnosis of many conditions otherwise obscure.

While the work of the writer is in an embryonic stage, yet the results have been sufficiently gratifying to cause him to regard leucocytosis as a factor of great value in surgical diagnosis. The writer is indebted to both Dr. Paul Ellis and Dr. Frederick Rustin for much valuable assistance in the pursuance of this work.

DISCUSSION.

Dr. von Mansfelde: I do not like to rise so often, but certainly Dr. Lord’s paper is a very important one, and it is highly commendable, and he ought to be congratulated on the work he has done.

Dr. Henry: I think the Doctor ought to be congratulated on his original investigations along this line. While probably a proper diagnosis can not be made from that line, yet we will assume so.

Dr. H. W. Orr: It was not mentioned, I believe, either by the Doctor in his paper or in the discussion which followed, that a count of the white blood-cells is of great importance sometimes in the diagnosis of chronic as well as of acute conditions. In tumor-like growths in various parts of the abdominal cavity, such as the retroperitoneal glands, or in enlargement of the spleen or liver, a count of the white blood-cells will often serve to make a differential diagnosis between a new growth or enlargements of the organs due to some form of leukemia. A study of the white blood-cells will also serve to differentiate the various forms of leukemia. Painless swellings, unaccompanied by pyrexia, but really due to an inflam-
matory process, may also be distinguishable by this means from enlargements possessing the same physical characteristics, but due to causes which will have no effect on the number or character of the leucocytes. I wish to congratulate Dr. Lord on this presentation of an interesting series of cases and to hope that the future has in store as much of advance in this direction as the conditions at present seem to promise.

Dr. J. P. Lord: I take this occasion to make a statement which I should have made before, but which I do not wish to neglect to make, and that is this: In the collection of these cases it was necessary to have considerable help, and I want to express my thanks to Dr. Ellis for a great deal of help in this matter, and to acknowledge the help of Dr. Rustin, and I want to say also, if you desire to follow this subject further, the work of Cabot on "Clinical Examination of the Blood" is invaluable. It has been found that, with a little experience, this examination does not require the laboratory, necessarily. By carrying a 33 per cent. solution of glacial acetic acid—as suggested by Head, of Minneapolis—and doing the mixing immediately, by putting a rubber band around the ends of the tube, its examination can be delayed two or three hours, when, upon reaching the office, but a few minutes are required. There is a great deal to this subject and, as Dr. Orr has suggested, I have not touched all the conditions in which it may be valuable, and I find its literature quite voluminous—much more so than I thought when I began—and with greater familiarity with the work already accomplished in this field, we will doubtless be able to make a larger use of its advantages.
UNUSUAL CONTENTS OF THE HERNIAL SAC.

BYRON B. DAVIS, M.D., OMAHA.

The hernial sac usually contains omentum or small intestine or both. The easily reducible cases are for the most part enterocoeles. Omentum is so ready to form adhesions to the peritoneal covering that, in the experience of the writer, a very large percentage of so-called epiploceles contain adherent omentum. It may not be adherent over a great area, but about the deep ring enough adhesions are likely to exist to hold a small amount of omentum within the ring even after the extruded part has apparently been returned to the abdominal cavity. Such cases may be fairly well controlled by a well-fitting truss; but if the pressure be even momentarily relaxed, the omentum, being held always directly over the opening, prolapses at once into the sac. If now the truss is allowed to press as before without the immediate reposition of the prolapsed omentum, the trauma is likely to produce more adhesions.

Extensive adhesions between the prolapsed omentum and the sac are caused chiefly by one of three factors, sometimes by a combination of them: 1, temporary obstruction or strangulation with sufficient trauma to produce adhesions; 2, the pressure of a truss over incompletely reduced hernial contents; 3, one of the vaunted cases "without the use of the knife or detention from business." When early operation upon all cases not easily and completely retained by a truss becomes the rule; when the truss is never used where the reduction is incomplete; and when the quack methods go out of fashion, adhesions, instead of being the rule, will be one of the rare conditions found.
The presence of any other of the viscera than omentum or small intestine is unusual. It always means that the normal intra-abdominal relations have been violently disturbed. All of the several abdominal viscera, with the single exception of the pancreas, have been found in the hernial sac.

When the uterus, the stomach, the large intestine, the liver, spleen, or kidney have migrated into the sac, one does not have to be profoundly versed in anatomy to realize that some of the ligaments have been greatly stretched. In cases of pronounced gastro-enteroptosis with a coexisting hernia it is not surprising that viscera other than omentum and small intestine should find their way through the hernial opening. In one case of pronounced gastro-enteroptosis with a hernia in the linea alba and a left inguinal hernia, the latter containing small intestine and omentum, while the hernia in the linea alba contained omentum, small intestine and the transverse colon with a portion of the ascending colon. Had this hernia been allowed to continue, the stomach would also probably have found its way into the hernial sac, since the traction of the transverse colon upon the gastrocolic omentum had caused the greater curvature of the stomach to present at the hernial opening.

In a Syrian, recently seen and examined at the Omaha Medical College Dispensary, the unusual condition was presented of a large hernia in the linea alba above the umbilicus which evidently contained the transverse colon. He came seeking relief from obstinate constipation. When the obstruction was nearly complete he was troubled with gaseous distension and pain in the region of the ascending colon. He was to have been operated on, but failed to present himself at the hospital.

When viscera have migrated for some distance and made their way through an opening in the abdominal wall it is always questionable whether operative intervention will be curative, unless the surgeon does more than to close the hernial ring. As soon as the extruded viscera are replaced there is an increase of the abdominal pressure. This is likely to
induce a recurrence of the hernia or, as in a recent case of the writer, any other weak point in the abdominal wall is likely to become the site of a new hernia.

Case 1.—H. J., a male infant, 12 months old. At the age of 1 month a slight bulging was noticed in the left groin. It rapidly enlarged and reached the body of the scrotum. As time went on the mass in the scrotum exceeded the size of a man’s fist; and it was found impossible to cause all of the mass to disappear. His parents consulted Dr. Anderson, of Stromsburg, who was unable to reduce the hernia except in part, and wisely concluded that any effort to use a truss would be a dangerous procedure. He brought him to me, and after all permissible efforts at taxis had been used, there was still a mass in the scrotum almost as large as my fist. Operative intervention was advised and carried out on the following day, but with some misgivings, because of the presence of a bronchitis.

When the sac was opened it was found to contain a mass of omentum, twelve to fifteen inches of ilium and the cecum, appendix and a part of the ascending colon. The cecum was firmly adherent to the bottom of the sac. The adhesions were loosened; the appendix, three inches long and with thick, dense walls, removed, and the remaining contents returned with great difficulty to the abdominal cavity. It was very apparent to all onlookers that the sudden reposition of all the extruded viscera overdistended the abdominal cavity, and for a time I almost despaired of getting all the small intestines in. The hernia was of the congenital variety, and after trimming off the excess the cord was covered. By this time the patient showed such marked evidences of shock that we were content to simply push back the cord and close the wound quickly without following the usual Bassini method.

Unfortunately the pre-existing bronchitis plus the anesthetic resulted in bronchopneumonia, and for several days the little fellow’s life was in jeopardy; but he finally recovered. The increased intra-abdominal pressure coincident with the return of the extruded viscera, together with the strain of the
severe cough, resulted in the appearance of a small hernia on the other side.

This is the only time I have ever seen the cecum and appendix in the sac of a left-sided inguinal hernia. The mode in which this was brought about would seem to be by traction. If the lower part of the ilium first entered the scrotum by traction upon the cecum, extrusion of that viscus could easily be produced. In another child a right inguinal hernia was found to contain the appendix.

Case 2.—I. E., a male, 2½ years old, for a year had had a hernia of the right inguinal variety. It seemed to be reducible, but all efforts to use a truss had produced such screaming and manifestation of suffering that the parent's had been glad to desist. These efforts, made at several different times, had also been followed by fever, tympanites and vomiting. The hernia was becoming larger.

When the patient was brought to me the hernia was easily reducible, but there still seemed a little more fullness than on the opposite side, and any pressure caused crying in an otherwise remarkably good-natured child. With this condition I did not hesitate to advise operation, which was carried out in the presence of the students of Omaha Medical College.

An enlarged appendix, thickened from inflammation, was found occupying the entire length of the sac and adherent. All the other contents of the sac had been easily reducible, but when a truss was made to press upon the adherent appendix a traumatic appendicitis was produced. The condition found accounted for all the symptoms. The appendix was removed and the wound closed by the Bassini method. The patient made an uneventful recovery.

It has never been my fortune to meet with hernia of the bladder, though constantly on the watch for it. In most of these cases the condition has not been recognized until the bladder has been opened and urine discharged into the wound. The presence of what appears to be two sacs should always put one on his guard. When the bladder has been accidentally opened the best method of dealing with the complication seems
to be to close the bladder wound with sutures as well as possible, but to leave the superficial wound open, packed with gauze, in order that if leakage from the bladder occurs the urine may escape into the dressings and not infiltrate the tissues or pour into the abdominal cavity. The bladder should also be emptied often by catheter or a retention catheter be made use of for the first few days. If, after two or three days, no leakage into the wound occurs, it may be closed in the usual way.

Most of the cases in which liver, uterus, large intestines, etc., are found in the hernial sac are herniae following laparotomy wounds which have healed by granulation. In one case, on whom I performed abdominal section for ruptured tubal pregnancy in which infection had occurred, it was not deemed safe to close the wound, but a copious gauze drain was made use of. A sinus persisted for several months, when it finally closed. Now there is a broad diastasis of the recti muscles from umbilicus to pubes. When on her feet, and especially when she bears down, the fundus uteri pushes out between the separated recti. Should this lady become pregnant again before an operation for the cure of the hernia is done, she would present the interesting condition of the pregnant uterus in the hernial sac, which all of us have read of, but few have seen. Should labor occur with such a condition unrelieved it is likely to give rise to great embarrassment. It is questionable whether the labor pains would be effective in expelling the child without the use of firm pressure from without, perhaps best applied by means of a very snug and strong abdominal bandage.

In all cases where viscera such as the colon, stomach, spleen, kidney, or liver have become so loosened from their normal moorings as to occupy a hernial sac, it is questionable whether operations for the cure of hernia should be considered complete until the extruded viscera have been fastened by suture into their normal position. Unless this is done, a recurrence of the old hernia or the production of a new hernia at some other weak point, as in the case related, is likely to result.
Under the best conditions when the viscera are not anchored firmly they will remain very movable and many disagreeable symptoms are sure to be present.

Another fact which seems almost self-evident is that the longer a large hernia containing viscera not usually found in hernial sacs remains unoperated, the larger will it become, and the greater will be the distance of the prolapsed viscus from its normal position. Hence the greater will be its radius of motion when returned to the abdominal cavity. The obvious deduction from this is that all herniae should be operated before they attain great size.
A law, as it stands on the statute books, is defined as a rule of action prescribed or enacted by a legislative power, promulgated and recorded in writing, and is for the purpose of commanding or forbidding certain actions on the part of those who live as citizens under its government. But a law is really more than this. Each legislative enactment is the expression of the wishes of a certain number of the citizens for whom the legislative body is acting; and a law is not passed, or, if passed, will not be enforced by those in authority, unless a sufficient number of the people are persuaded that its enforcement is for their best interests. With this preface, let us consider the development and present status of medical legislation in Nebraska.

The first organization of physicians in the territory of Nebraska was effected early in the year 1855, and on March 2 its articles of incorporation were approved. The society was established with a view to the elevation and maintenance of the requirements for the practice of medicine in Nebraska, and by its articles was granted certain powers. Any candidate for membership was required to possess certain educational and civil qualifications before he could become a member of the society, and no person was permitted to engage in the practice of medicine without first attaining membership. The society had power also to expel, and deprive of the right to practice, any member who, after election, proved to be unworthy. One member was selected to act as an inspector of drugs, and any person proved to be dispensing spurious remedial agents was liable to a fine of a sum equal to four
times the value of his stock. The formation of local county organizations was encouraged, and a charter for such a society was granted on the application of four duly qualified physicians.

By an act of Feb. 11, 1857, articles of incorporation for a second Nebraska Medical Society were approved. This society was, in many respects, similar to the one established two years before, but its aims were more general and its powers more limited. To aid in the diffusion of professional knowledge, to encourage the elevation of educational standards, to hold an annual meeting at which papers should be read and discussed, and to promote professional fellowship, were features all specially provided for. This society also had the right to grant licenses admitting physicians to practice, and for just cause to refuse or revoke the same.

Drs. James H. Peabody and B. R. Livingston, early in 1868, were using their efforts to secure a meeting of the physicians of Nebraska, which had just one year before become a state, so that a state medical society might be organized. On May 11 a number of physicians met in the office of Dr. Peabody, in Omaha, and temporary officers and committees were selected to arrange for a permanent organization. This was accomplished on June 24, 1868. The society declared, first of all, for professional fraternity and for the elevation of the standards of medical education and requirements for practice. Dr. Gilbert C. Monell was made the first president and Dr. R. R. Livingston the first secretary.

A bill to establish a board of health was introduced in 1873, but this proved unsatisfactory, and a little later a new bill was cast and substituted for the other. This bill was considered in committee of the whole and its passage recommended, but was not again brought up for consideration during the session. A similar effort was made in 1875. The bill was introduced and, under suspension of the rules, immediately read a first and second time, and ordered printed. Subsequent to this, however, it was, like the other, never considered.
In a special session of the legislature in 1876, a bill to regulate the practice of medicine was introduced, and was referred to the committee on judiciary. At the time of the report of this committee the bill was made a special order for the afternoon of Feb. 6, 1877, and was considered on Feb. 9 in committee of the whole, which recommended that it should pass. Later, the same day, it was moved by Mr. Brown that the bill be indefinitely postponed. This motion lost by a narrow margin, but, when a final vote on the bill was taken the next day it failed to pass by a vote of 9 to 16. The bill introduced two years later, in 1879, was summarily dealt with, simply being referred to the special committee, who returned it to the senate without recommendation. So it was not considered at any time later.

A strenuous and more successful effort was made in 1881, when two bills were introduced. One of these was introduced by the regular physicians, and the other by the homeopathic and eclectic branches combined. Each was entitled “An Act to Regulate the Practice of Medicine and Surgery,” and both were reported on unfavorably by the special committee which had been appointed to receive such bills. At the final report of these bills, however, it was recommended that there should be substituted for them another bill, which was the result of a joint meeting of representatives of the regular profession and the homeopathic and eclectic branches. After several minor amendments this bill was finally passed on Feb. 22, 1881, by a vote of 22 to 3. Although this act was helpful, there were many ways in which its workings were a disappointment, and in 1883 an attempt was made to improve it. As finally passed, however, entitled, “An Act to Amend Section 4 of Chapter 55 of the Compiled Statutes,” which was the section referring to the qualifications for practice, only a very slight change was effected. As Dr. von Mansfelde, of the committee on legislation, reported to this society in 1883: “The efforts of the committee, though laborious, were not successful at the last session of the legislature, an amendment of the law covering the practice of medicine being the
Another attempt to establish a board of health was made in 1885. This bill was referred to the committee on legislation, who recommended it to be passed. After having been amended so that three regular, two homeopathic, and two eclectic physicians constituted the board of health, it was recommended in the report of the committee of the whole that it be passed. Mr. Snell moved, however, as an amendment to the report of the committee of the whole, that this bill be indefinitely postponed, and this motion was defeated only by the close vote of 15 to 17. There must have been other influences at work, however, for, after having gone as far as being correctly engrossed, the bill was dropped and received no further consideration during the session.

An attempt to secure a board of examiners in 1887 was promptly killed by the committee on legislation returning it to the senate without recommendation. An attempt to secure a board of health in 1889 met with more encouragement. The regular profession and the homeopathic and eclectic branches having again introduced separate bills, and then, when failure for both was imminent, having combined, the bill passed to the second reading and was made a special order. After a spirited debate it was defeated, but the defeat was said to be partially accidental, owing to the absence of certain members who had been counted on for support. Many of the physicians who had pledged themselves, at the state society meeting the year before, to assist in every way possible in the passing of this bill, were either apathetic or actually opposed the passage of the bill. One section which contributed largely to its defeat was that making an appropriation of $5,000 to pay the expenses of the board. The form of the bill was very nearly like the one presented, in 1885, to the state medical society by Dr. von Mansfelde. Drafts of two bills were that year presented for the consideration of the state medical society. The first was drawn up by Dr. von Mansfelde, and provided for the establishment of a state board of health.
The second was the same one sent that year to all state societies by the American Medical Association, and contained specifications for a state board of examiners. The latter was of such a character that it could not be made operative under the state laws as they then existed, and it was accordingly discarded. The first, however, was well adapted to the needs at that time, and would certainly have passed, if not in 1887, at least in 1889, except for the reasons before mentioned. A bill containing many of the suggestions in that presented to the society in 1885 finally became a law, however, in 1891. Dr. Milroy, in 1890, addressing this society, dwelt at length on the reasons for the failure to pass bills in 1887 and 1889. He read a letter from Dr. H. B. Baker, of Michigan, in which the suggestions were made that other states had had the same difficulty in securing laws for the creation of a board of health and for regulating the practice of medicine. He said that the board of health should, if possible, be secured first and put in working order, and that later an attempt to secure the passage of an act regulating the practice of medicine could probably be made to better advantage. The importance of personal work with legislators, both before leaving their homes and during the legislative session, was emphasized.

In the year following (1891) an act to create a board of health and to regulate the practice of medicine was passed. By the provisions of this act, the board of health consisted of the governor, attorney-general, and the superintendent of public instruction, who appointed four secretaries, of whom two were to be regular physicians, and one each of the eclectic and homeopathic schools. It was the duty of the secretaries to summon witnesses and take testimony and submit their findings to the board of health, while the board was to enforce the provisions of the act, and prosecute violations of the same. The act defined the qualifications for practice, the requirements for a medical college in good standing, and specified the manner of application for and the issuance of certificates. Physicians engaged in the practice of medicine at the time of the passage of the act were required to present their diplomas or
to make affidavit that they had previously been qualified to practice under the act of 1881. The power to refuse or revoke certificates for unprofessional conduct was given to the board, and a penalty for practicing medicine without authority was specified. Contrary to the general impression, a person practicing medicine is clearly defined as one "who shall operate on, profess to heal, or prescribe for, or otherwise treat any physical or mental ailment of another."

Since 1891 the changes in the law have been of minor importance. A bill for the creation and government of a board of examiners was presented to the legislature of 1895 but was not passed. In 1897 two more bills were introduced. The first had to do with the elevation of the standard of medical education in the state, but a motion that it be indefinitely postponed prevailed. A little later another bill, which proposed a few slight changes in the board of health, and also included a section looking to the elevation of educational standards, was successfully passed and became a part of the law. No marked change was effected, however, in the law by this amendment.

The next legislative session was not lacking in consideration, at least, for suggestions tending toward the improvement of the medical law. In 1899 three bills of a medical character were introduced. The first was a bill to legalize the practice of osteopathy and was promptly shelved by the report of the committee, without recommendation; another bill was to regulate the practice of midwifery; and the third, to create a board of examiners. All these bills failed to pass, as the first two justly deserved, while the people were not ready for the third.

With this brief review before us of the attempts to secure legislation, protective at once to the people and ourselves, there are a number of possible conclusions. We have, in many respects, a good medical law, but so far as protection is concerned it is practically a failure, for illegitimate practitioners have not now as many hindrances to their disreputable and dangerous methods as they would have had
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in 1855. One of the principal reasons for this is the fact
that quackery in nearly all its forms has the support—all
fully paid for—of the press. On the other hand, the mem­
bers of the regular medical profession have always withheld
from the glare of publicity that illumines the lay journals.
For many reasons it is right that the physician’s methods
and doings should not be exploited in the pages of our public
prints, and the framers of our code of ethics were probably
not less wise in their dispensation with regard to advertising
by members of the medical profession than in the other
formulations of the code.

In another sense, however, it seems to me that the profes­
sion’s aloofness from the newspapers and lay magazines has
been the means of working us much harm. To a good many
members of the reading American public, any statement, how­
ever lacking in a reasonable basis or accompanying proof, if
seen on the printed page, carries conviction with it. Because
a large part of the popular reading matter has been made
interesting and profitable, the art of printing has provided
the past century with educational facilities and a progress
of civilization never before equaled in the world’s history.
In the matter of education the medical student is not behind
his fellow-professional students, and yet if we examine the
daily press, where all the finer points of law, religion, or
higher literary education are freely and intelligently dis­
cussed, we find medical topics discussed only by those who
have borrowed from regular medicine some feature which they
exploit as a cure-all, or medical truths presented only to be
denied by some man with a patent remedy to sell. Votaries
of the religio-medical sects, or self-advertisers, occupy plenty
of space, and there are not wanting those who will fill columns
with regard to a failure of vaccination to prevent smallpox,
or to direct attention to some real or imaginary abuse of medi­
cal privileges. A report of a genuine scientific procedure or
discovery, if attempted, is usually full of such blunders as to
make the profession seem ridiculous in the eyes of educated
people. In the meantime the glorious facts of modern scien­
tific medicine are ably discussed in journals that the people never see, or important and convincing truths spoken in addresses that the people do not hear. The law we are hoping for, which is to disqualify for practice those who daily promise the people so much, and to restrict the practice of medicine to those of whom and of whose work the people know so little, will be long in coming if we wait for them to learn by experience how empty are all these promises—"The American people dearly love to be humbugged."

It behooves us, therefore, to take the people a little more fully into our confidence—by the newspapers, if necessary—to make a few statements and deny a few other statements ourselves and put what we say where it will be seen. It is early to attempt to suggest, now, the details for doing this, but I do suggest the method, and feel sure that the time is not far off when it will be found that an intelligent and ethical use can be made of the entire lay press which will assist greatly in the advancement of medical scientific knowledge among the people, and, with that, a better appreciation of what legitimate physicians have done and are doing for them.

Among the more immediate reasons for the inefficiency of the law as it stands at present is the fact that the final decision in regard to the entrance of a candidate to practice, or his right to retain a license, lies not with those who are competent to judge, but with a political board, which is superior to the medical board of health. A case, then, appealed from the decision of the medical board is passed upon with reference to its political or personal significance and decided accordingly, so that the applicant may be passed contrary to the adverse decision of those best fitted to know of the merits of the case. Of course, those applicants justly excluded by the medical board, and who have neither the influence nor the desire to make a fight, are barred so that the law does not entirely fail of its purpose. The feature of the constitution which makes this law inoperative will have a similar bearing also on future enactments along the same line, so we should
It is quite desirable, also, that we have corrective legislation on several other topics. Although the definition of that which constitutes the practice of medicine seems quite clear to one who is not a lawyer, the courts refuse to sustain indictments against several varieties of our present-day quacks. This definition should be remedied so that even a lawyer can not misunderstand it.

Some time, not too far in the future, we should be able to secure an examining board, many now believing that an examination which should cover only the so-called elementary branches of medicine—anatomy, physiology, chemistry, surgery, obstetrics, toxicology, etc.—would be one to which no branch of medicine could reasonably object, and from the decision of which there would be no appeal. If any man can pass a thorough examination in these branches, he could at least be trusted to make a better decision than many who are now practicing, as to whether he would treat his patient with or without drugs.

In the contemplation of new legislation, however, there are several points to consider. New laws, if passed, might on the surface appear quite beneficial and yet carry with them the repeal of sections or whole chapters of the law as it now stands in our statutes. It was by such a subterfuge as this that the osteopaths sought at the last legislature to gain recognition; and, except for the watchfulness of some of our professional brethren in the legislative body, they might have been successful.

Another duty as plain as that of securing improvement in our medical laws is that of enforcing the laws we have at present. There is only one way in which this may be done, and that is by a judicious expenditure of energy and funds. Of both of these we have plenty in the state, so the problem resolves itself into the question of centralizing and utilizing them. With the State Medical League already so well started there is evidence that, with a sufficiently active executive
council, much could be accomplished. The plan of the work as outlined at present may be incomplete, but might be so perfected as to accomplish great things. With a strong and small, easily-managed executive body, and a good lawyer in its employ, there could be work done to infinitely better advantage than under the present régime. When physicians undertake to go it alone through legislatures and prosecutions in court, they are trying to beat another man at his own game—and there is only one form of ending for such play.

All that is necessary to the securing of the necessary funds is an efficient and complete organization. The League has accomplished some things already, but it can accomplish much more. In looking to and working for organization, however, we must not forget the importance and necessity of individual effort. The election of another legislature is at hand. Your own personal influence with the candidate from your district may be sufficient to elicit from him, before election time, an iron-clad agreement to stand by the interests of legitimate medicine during his term. Then, when he has taken his seat, it is your further duty to remind him several times, especially at the critical times, of his promise. It is thus that legislative victories are won, and legislative defeats secured. If each will do his individual duty and unite also with his neighbors, that we may do our duty as an organization, we may live to realize that truth, in medicine as in law, is mighty and will prevail.

1 Senate File 116.
2 Ibid., 71.
3 Ibid., 62.
4 Ibid., 106.
5 Ibid., 47 and 67.
6 Ibid., 94.
7 Ibid., 30.
8 Ibid., 162.
9 Ibid., 189.
10 House Roll 176.
11 Senate File 116.
12 Ibid., 236.
13 Ibid., 292.
14 One of the most successful features of the present board-of-health-law is that it deters many inefficient men from making formal applications. The response of the board to their informal applications in itself serves to exclude them.
MEDICAL REGISTRATION.

DR. B. F. CRUMMER, OMAHA.

I have no paper to read on this subject, and I am glad that I have not, after listening to the thorough discussion of this subject by Dr. Orr; and while I do not expect to say anything about the matter of public health or hygiene, yet as the chairman of the committee of which I am a member has failed to report, I will call attention to this fact: As compared with the states around us, Nebraska, by the expenditure of the small sum that was appropriated two years ago for this work, has had excellent success in checking a threatened epidemic of smallpox, which is the only disease our board has had anything to do with in this state. A large portion of the fund was necessarily used last winter, perhaps seven or eight hundred dollars of the fifteen hundred, and a large portion of that at Nebraska City. Now during the past winter we have had, I think, twelve or fifteen local implantations of smallpox in this state, every one of which has been quickly checked. In all these instances, Dr. Towne, who has been appointed health inspector by the legal board, has made trips to the country, distributed a large number of pamphlets, etc., and by his personal advice and assistance has stamped these epidemics out without any special loss. There have been two or three deaths in the state during the year from smallpox; one of them a physician, and a most astounding statement comes from that locality.

The physician was called to the south part of the state to examine a case of smallpox. Himself unprotected, he contracted the disease. There was only one other physician in the town where he lived, and the citizens in that town gave the other man notice that if he called on this physician he would have no practice there himself, and even threatened
bodily harm, and it is a positive fact that this doctor lay in his bed and died of smallpox without any medical attendance, except two or three visits from his associate made in the middle of the night when no one could see him. The doctor's name was R. McColm, and he was a graduate of the Creighton Medical College.

As compared to Kansas and Iowa, the number of cases in Nebraska is considerably less. The statement made a month ago shows that Kansas has had four hundred cases during the year. I do not know the exact number in Iowa, but it is nearly as many as in Kansas. Here, in our own state, I think there have been perhaps fifty cases, including those in Omaha, but I suppose the epidemic is at this time mostly stamped out. As a matter of fact, the history that Dr. Orr read of the futile efforts of the physicians in this state during all the years passed to get a satisfactory law, a sanitary law, is proof that the state desires no protection from the medical profession. The numerous attempts the profession has made in this state have invariably been turned down.

Very frequently thousands of dollars have been appropriated in this state for the protection of live stock, but never a dollar for the protection of the people until this $1500 was appropriated two years ago, and after this is gone we have no means to protect ourselves whatever.

Regarding a few points about the work of the board of health in regard to registration. I do not know just what to say; I think, perhaps, that Dr. Orr underrates to a certain extent the benefit the law has been to the people of this state, and the proportion of the illiterate and undesirable practitioners that are kept out of the state. The record will show that during the past two or three years about 15 per cent. of the applicants have been refused certificates; another 20 or 25 per cent. of the total applicants who write to the board of health of this state never make a formal application because of the fact that they can not comply with the demands of our statute. In that way we keep out perhaps not so many recent graduates, but a great horde of old graduates, quacks with
diplomas, who write a letter that gives them away at once or when they make their application. By constant practice the board has learned to detect an undesirable man, sometimes by the school of which he is a graduate, and sometimes by his orthography, letter-heads, and so on. Investigation nearly always shows these men to be traveling quacks. In the past year we have been attacked by some criticisms from our own men; in fact, one prominent physician of Lincoln stated that the board is getting a little too smart in that regard, but we have not heard anything about our trying to increase the board's income by indiscriminate admissions.

Another question that comes up is the matter of foreign diplomas. We have had some bad luck. In one case we admitted a man to practice on a forged diploma from a college in Sweden. It was afterward ascertained that this man was not a graduate of this college. Our legal adviser, the attorney-general, takes the stand that notwithstanding that this man made a false statement, under oath, that is not "unprofessional and dishonorable conduct" under the law, and that we must get the proof that this man is not competent, and it will delay the matter for two or three months, but I think there is every disposition on the part of the board to see that justice is done in the case in the end. And I will say this, that while there has been some little misunderstanding between the board and secretaries, my impression is that on the whole the board expects to stand by the secretaries in every case in the end. And it is a fact that in certain instances of very flagrant misconduct on the part of a physician coming to the knowledge of the governor, he has voluntarily ordered an investigation by the secretaries, and our finding has been sustained.

Some reference has been made to new rules established during the past three or four years. One of the requirements is the letters of recommendation. It keeps out all men who know that they can not give us letters of recommendation, and that is the way we shut out a lot of poor stuff from Missouri, and some other surrounding states.
Another point we have come to in the past five or six months. We do not deliver a certificate until the man has secured a residence in the state. Formerly we sent some out, and often found that these men were veritable quacks. We have revoked some of these certificates.

One man appealed from our decision to the courts, and the case is tied up at Lincoln. I think the legal fraternity at Lincoln ought to give our medical board a vote of thanks for the amount of business we bring them.

The change in the law which Dr. Orr thinks is immaterial, viz., the change made in 1897, to raise the requirement from a three to a four years' course, is a good thing. To my certain knowledge it has kept out fifteen or twenty men in the last year who could not comply with this requirement.

The question as to what change we had better ask for in the future is an important one. I believe, in so far as the midwife question is concerned, our law has kept out a large number of them who would otherwise come here, and wherever the midwives have been complained of to the board, they have been notified that within the meaning of the law they are practicing medicine, and must quit. How many have quit, I do not know.

There are some changes that should be made in the law to assist in prosecutions. In other states the law says that when a man signs himself as "Dr.," or "M.D.," or holds himself out, or puts out his sign as a doctor, it is a violation of the law, while here, when we attempt a prosecution to prove what was the matter with the patient, and what the doctor gave him, the courts hold us down in the most arbitrary way. Evidence must be secured by detective work, and there is almost no weight given to a detective's evidence. I think the statute should be changed in a way to make prosecutions and convictions easier.

The question of an examining law should come up in the near future, and this matter of a uniform law throughout the states is a living issue and will have to be decided soon. There is a very strong move on that line on foot in the
eastern states. In my opinion, when we get a law it should leave out all examination on methods of treatment. I think it would be absolutely safe to do so. Require an applicant for license to know what is the common property of the world regarding the human system in health and disease, and then license him to practice, no matter what method of treatment he may adopt. To my mind, this is the only theory on which may be founded a medical examination law that will disarm all honest criticism from the laity, and forever silence the ignorant aspersions of those who now keep factional and sectarian questions of medical treatment before the public and our law-making bodies.

DISCUSSION OF SYMPOSIUM ON MEDICAL LEGISLATION.

DR. VON MANSFELDE: It is very proper that I should rise once more, because I was one of the committee that tried to get some legislation that will do the people some good. I have never been so impressed with the truth of the saying that we are doing a great deal of charity work that we will never get any credit for as I have been to-night when I noted the remarks of Drs. Orr and Crummer. I do not believe the medical profession could spend half its time devoted to a true people without compensation, and I do believe that if the information were thrown out to-night, and the people were made to know that they must do something for themselves if they expected us to do something for them, it would do a great amount of good. In other words, I do not believe in sprees as a general thing, but I do think it would be very wise for the medical profession to kind of go on a spree for awhile. I do believe that if the people would try to protect themselves a little more, and not depend on us to take care of them and protect them from the quacks, they would be better off.

In regard to a medical league, I interested myself some time ago in Nebraska in regard to the financial part of that, and I said that we ought not to spend our money in trying to hire lawyers to protect our interests, but we ought to make the county attorneys in the different counties do their duty. Of course, it would take money, and take a good pile of money to look after these parties. Now, my suggestion is that the money be obtained in this wise: That this society start out and suggest that we do something in the way of assistance to the Medical Review, which, by the way, is getting to be quite a respectable paper, and one every physician in the state of Nebraska ought to read; get every physician in the state. if it can, to subscribe for the paper and have a department of public health and medical legislation in it, and then set aside some of the money collected for
that purpose and pay it to an able attorney, who, under the direction of the advisory board, shall prosecute any officer—the county attorneys who do not do their duty in behalf of the medical law. Now, I do not care of whom this board shall be composed—I would suggest the state board, the four secretaries. Let them decide what cases should be presented to this attorney, and then let him do the prosecuting of the officers in the respective counties, and I believe we will accomplish something, but the present method will accomplish nothing. I have always contended that the law on the statute books is not a dead letter by any means. It is not apparent to many of you what that law has done, and Dr. Crummer, perhaps, could have been a little more specific if he cared to take the time to show you how much good it has done. It has not only deprived a few men from practicing, but it has kept a goodly number from coming here. The law is good in some respects and should not be touched or put in danger in the legislature unless something else better can surely be passed. That has been the danger for several years: the moment anything is introduced as a substitute there has been danger of overthrowing the old one.

DR. CRUMMER: Do you not think it would be a good idea to make a new law entirely when we start?

DR. VON MANSFELDE: Yes, write a new law; do not try to amend the old law, because you are liable to get it wiped out entirely.

DR. WATSON: Would the old one not have to be repealed before we can pass a new one?

DR. VON MANSFELDE: Not necessarily. If you pass a measure which provides that a physician shall be a person who shall have certain qualifications you will gain a point that is valuable, because if you get a law that will force an examination in the scientific department of medicine, and he knows he has to stand a scientific examination, that man will go a step farther and try to be a gentleman. Do you not know that some of the best physicians we have today are men and women whose parents made a living farming and working by the day, and then they sent their boys out in the world to study medicine——

DR. WATSON: But can we make a new law until the old one is repealed?

DR. VON MANSFELDE: We do not have to repeal anything if it is not germane to the question; if we make it germane to the old statutory provision it has to be repealed. But it should not be done that way. Drs. Crummer and Orr have laid the basis for everything reasonable that this society should do. There never has been read on the floor of this society a paper more complete on that subject than those that were read by Drs. Orr and Crummer. I have worked very hard for the past twenty-five years and tried to pass medical legislation for the people and the profession, and how many have assisted me in doing so; how many in this room? Hold up your hands. There you are. If you go at it just as you suggest here and help a
little it will only take a short time. About twenty years ago I went to every member who was elected to the legislature and asked him if he did not believe in a law that all women and children should be protected, and when they stated that the State University was trying to get a hypo for hogs, and to have them give a whole lot of money, I wondered how much money had been appropriated in the state of Nebraska for a hypo for women. Every once in a while let the committee appointed by this society put a squib in some paper and tell the other people how much we are doing for the people, and then you will find out the fact, sooner or later, that it will do some good. I have done it; and if you will do a little of this also you will be surprised at the result.

Dr. Anderson: I would like to say a word in regard to the matter reported by Dr. Crummer. I have thought of it a great many times since it occurred, but never without some feeling of reflection. I live in the neighborhood where the Doctor referred to as having died unattended; practiced medicine—nine miles from his place. There are three regular physicians in my town, two living in the adjoining town, and any of these physicians would have attended him or visited him if they had been called upon. I make this remark because some of you may not understand the matter as it really was. Dr. McColm was undoubtedly neglected, not because he was a physician, but because of the inherent selfishness of the people. They would have neglected anyone else just the same, unless a physician has the stamina to go in spite of the people. I had a report over the telephone almost every day from the physician whom I supposed was Dr. McColm's attendant, and he reported to me on Saturday that Dr. McColm was getting along nicely and would soon be convalescent. I heard the same report the next day. On Monday I did not hear. On Tuesday or Wednesday I heard that he was quite low; on Thursday he died, and the day he died Dr. Wilson, who is here to-day, was sent for, but arrived right after his death. To show the feeling in that vicinity, a son of Dr. McColm was taken sick a few days after that with smallpox, and not one of the physicians would attend him because the people would not allow it; I tried to get one of the physicians there to look after the boy, and he said he could not do so because if he did he would be entirely shut off from his business, and he had to live. A few days after the boy was taken sick I was sent for, and I said over the telephone I would go to see the boy if one of the physicians there would meet me at the house and attend to the case afterwards, but I would go and see the boy if they deemed it necessary for a consultation. They refused to go, but I went and saw the boy. He got along very well, but at my request—they were nine miles from us, and the roads were very bad; it was in the winter and it was cold—the county commissioners secured a physician from Tecumseh and paid his fee continuously until the child recovered.

It does seem strange that the people would allow a man to lie there without attention, which they knew he was in need of. I
thought, and expected, until the last day, that Dr. McColm would recover. It was stated that the doctor did not see him, except through a window, and, of course, it was a case of neglect on the part of the people; but they were frightened. They were appealed to by myself and by Dr. Wilson in regard to the matter, but still that had no effect on them whatever. I do not know what you will do with people when they have that kind of a feeling; I do not know what people would expect if they would get sick themselves in similar circumstances after they have treated their family physician in that way; how they would expect to secure any assistance or attendance. What are you going to do with the people in such cases? I think the doctors are to blame for not going and the people for not allowing them to go.

Dr. von Mansfelde: Had Dr. McColm a family?

Dr. Anderson: Yes, sir.

Dr. von Mansfelde: Why did they not sue that county for damages? That is the way.

Dr. Anderson: Dr. McColm left a family. I waited on his wife in confinement about a month after his death. He has several children.

Dr. Butler: I only want to say a word. I live at Harvard, Clay County. A good many years ago, after this medical law first came into effect, I went to Omaha occasionally, and the noted expert specialists of Omaha would come out to our town and clean up the people for two or three hundred dollars a head. Eight or ten of them came out there and placarded the town. I wrote to the state board of health and got a letter back and published the letter in one of our papers. They got the county attorney to prosecute us for slander. And so I wrote to the state board of health, requesting them to come out there and we would fight the thing to a finish and I would bear half the expense of the trial, hotel bills, rigs, etc. Clay Center, the county seat, was nine miles from Harvard, and they came out there and the case was put off two or three times, but finally it came up for a final hearing. We employed the best attorney we could find and did not care anything about the cost, but intended to fight it to a finish when the case came up. We went to Clay Center and tried it. It lasted four days and nights. I said all the time that the case would resolve itself into this: If a person is a law-abiding citizen, he is, and if not, then not, and is amenable. They held no certificate from the board. They brought people from all over the country, even from Omaha, to prove that they were good citizens, but finally the case was decided against them, and it cost them seven or eight hundred dollars. They left the state and never returned. Since that, so far as I know, all the quacks have given our town a wide berth.

Recently a paper came out from the great metropolis along the Missouri River, a Sunday daily, and in it were a great many pictures, and here was Mr. Weltmer up on a stage, and a lot of people,
a very large attendance, that were imbued with the wondrous and marvelous things that could be accomplished in a few days, and some of these fledglings came out there for business. In the meantime we had a county attorney that was elected, and it so happened to be my province to know the county attorney before he was elected to the office. I sent over to Clay Center and he came to our town and remained there two or three days. They said, We are not practicing in Harvard; we are doing business in Hamilton County, over the line. The word got out that the city was looking up evidence against them. It was necessary to have evidence that they were treating some one for some disease, and charging them; we needed evidence that they received money from some one. We could not get that kind of evidence; it seemed next to impossible to get a credible witness to swear to the real facts in the case. However, they scurried all over the country, and finally they left there entirely.

In the town where Dr. Roberts, who has just spoken, lives there was an osteopath who came down to Harvard a time or two. I told the police judge one day that there was an osteopath at the hotel, and asked if he had not better send a man over there and get his occupation tax. The osteopath was interviewed by the marshal, and he left and has not been around since. If we physicians do our whole duty in selecting legislators and county attorneys, all unite and stand by the state board and the medical law, quackery will receive its just doom.

Dr. Claude Watson: The experience of the gentleman on my left is very much better than the experience we have had in Nebraska City. We have found there, by ample experience, that it is not an easy matter to drive these men out. Some time last summer or fall a disciple of Weltmer, from Missouri, Professor Khoras, came to Nebraska City from Beatrice, opened up an office there and practiced for some time, and we could not get the physicians to take hold of it, but finally four or five of us got together and had the man arrested and taken into court, and we found it was just about as easy a matter to jump into court as to jump into a well, and just about as hard a matter to jump out as it is to get out of a well without getting wet. We had the man there and he had a pretty fair trial, and we had a pretty fair prosecutor—and, by the way, I want to take issue with Dr. Mansfelde about the prosecuting attorneys; they are usually young men, just out of school, and often their cases fail—but in this matter where our case failed we had a jury of intelligent men, but the lawyer for the defense was a very bright, intelligent man, and he simply had the advantage of the county attorney to such an extent that the case was decided against us. In that case four or five of us put up the money to prosecute this man, and the jury decided against us. We did not feel as though we could go ahead and take the case to the supreme court, as should have been done. That is where the medical league could have helped. We will never get rid of these cases and this work in this state until we get
money to prosecute. Our experience in Nebraska City has been rather bitter in this matter of going before the court. This lawyer of whom I speak as defending Mr. Khoras, in his argument, even compared him to the Savior of the world, and said the Savior had been persecuted in the same way that the old-school doctors were persecuting this man; that the old-school doctors at one time did not even recognize the eclectic or homeopath, but now they took them both in, and that is the kind of a speech he made to the jury. That is the kind of experience we have had there, and I believe it will be the same in other towns until you raise money to properly prosecute these cases. We will never be able to accomplish anything until we go down into our pockets, or get the state to appropriate money to prosecute them. This man got up and testified that he did not claim to use anything, did not claim to heal, or anything of that kind. Now what are you going to do with a case of that kind? He did not claim to give medicine, or, indeed, to do anything; yet the people flocked to him for a time.

**Dr. W. H. Wilson:** I do not think it behooves any man who is a doctor to shirk from doing his duty, but in this instance the community threatened to cut off the doctor's bread and butter by refusing to patronize him if he went in and treated his brother physician, as they were so fearful the disease would be carried into their homes, and the doctor had a family depending on him for support. Dr. Anderson has given the facts as I understand them. I was called to see Dr. McColm the day he died, and had talked over the telephone to Du Bois several times during his sickness, and was informed at the start that the physician was not permitted to go in to see him, and I cautioned against such a course, urging them to have the doctor go right into the sick room; they said he was a physician and it was not necessary, and that he was not very sick, anyway, not having the disease very bad. I called them over the telephone every day or two, making inquiry as to how he was getting along, until I got the report that he was convalescent, then I did not hear again for two or three days. Before that I had made arrangements to supply them with nurses in case they needed them, and when I heard he was convalescent I went to Lincoln a couple of days, and when I got home found they had sent to our town for a nurse and one had gone down. I was called there the next morning, and learned that the doctor was in a dying condition, and he was dead when I got there. I think, perhaps, the Du Bois physicians were about as much to blame as the people, because they did not have the nerve to hold the people down and go right in to see the doctor. The people had the impression, I think, that the doctor was not seriously ill, until it was too late. When I got there and found the condition of things, I told them very plainly what I thought of them for their conduct in the case, and, while they seemed to take what I said kindly at the time, yet, after a few days they became angry and gave me some free advertising in the papers.
THIRTY-SECOND ANNUAL SESSION.

DR. ANDERSON: I want to say one word in explanation, in regard to the two physicians that were there. Neither of them has ever been a member of this society. One of them is an eclectic and the other one is from Missouri.

DR. ROBERTS, Hastings: I do not want to seem forward among the members of this society, but this matter of medical legislation is one in which I am deeply interested. I am the sole member present from Hastings, where we have been almost overrun with this pestiferous class of quacks called “magnetic healers” in the last few months. I went to the older physicians and asked them about it and they said the state board did not seem to take any interest in it; that they report cases to them, but they had done nothing. The physicians said they had no time to take the matter up, and that the “healers” were not hurting them any personally. Some of them seemed to be afraid that they might get an undesirable reputation among the people. So I went after the matter myself, and wrote the state board. They said the best thing to do was to bring the matter before our county attorney. I then notified five of these individuals that if they did not leave town in five days I would file charges against them and cause their arrest immediately. The result was that those five left. In the meantime I realized what an important factor the newspapers are. I went to one daily paper and attempted to get it to take the matter up, and they said, “No; we depend on advertising here to make our bread and butter, and there are a lot of people here who believe in that whom we cannot afford to offend.” I finally found one paper there that would take it up, and the last issue had a red-hot editorial on the “magnetic healer.” That paper is going to keep it going. What attracted my attention to this is the fact that in one of our large Omaha Sunday papers there recently appeared a whole page advertisement singing the praises of one of these “magnetic healers.” That goes into thousands of homes, and in many such homes it is taken as authority on news, on society, on government, and on politics especially, and these same people place confidence in it on medical questions and affairs of that kind, and I could not help thinking of the effect that it would have on these people into whose homes it was carried. I do not think it is necessary to give oneself any great amount of notoriety if one goes to the editor and tries to get him to expose them in the proper light.

I had a great many of these people pop up and show fight, and say they would prosecute to the bitter end, but when it came to a showdown they were not there.

DR. R. McCONAUGHY: This is a large subject and will bear a good deal of discussion. I want to say to the members from outside of Lincoln and Omaha that you will find it an easy matter to get rid of these people if you go after them. We have no trouble in York County any more; we simply go after them as they come in. Now, this man who has created so much trouble in Lincoln, Dr. Little, came up there, but we notified the sheriff and he skipped out. This

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man who advertises so largely in the State Journal, Dr. Seymour, sent a man down to York, and we sent the sheriff after him soon after he came there, and he simply got a telegram that some of his family were sick and he had to go back. I think if you get your county authorities to take steps, immediately after these people come into your town, and notify them that they must leave at once or they will be prosecuted, as they are not wanted there, you will have little or no trouble.

Dr. Roberts: I do not want to be understood as casting any reflection on the state board. I only mentioned that to show what little interest physicians are taking personally in the matter. I think it is their duty to take as much interest in this as they can.

Dr. Philbrick: I would like to state that the testimonials of two or three members of the State Medical Society have appeared in handbills throughout Lincoln, testifying as to the experience of Dr. Seymour, and I would like to ask if such testimonials are forgeries or not, or if it is in accordance with ethics?

A Member: Who are they?

Dr. Philbrick: I have forgotten some of them, but one is Dr. McGlanahan, and we all respect him.

Dr. J. P. Lord: I wish to state something about this man Seymour. I took occasion to speak of this matter in the Western Medical Review some time ago. I came across a paper in which Seymour had used my name, and when I came to investigate it I found he was using the names of several men and they were absolutely unauthorized. It all grew out of the fact that one morning I was driving across the town, as I had an errand to perform. It was a very bright, snowy morning, and I bought a pair of colored glasses of this man Seymour when he was in that block down by Penfold's, and on the strength of that he advertises me as one of his patients who would vouch for him. I wrote a very voluminous letter to Dr. Seymour and threatened to injure his physiogomy if he did anything of the kind again, and I presume Dr. McGlanahan, or any other member of this society whose name has appeared on his handbills, would do the same if his name were obtained as mine was.

Dr. Andrews: I wrote and asked the advice of the board as to what should be done with a certain fellow, one of these kind of people. I told them I did not want any help, only advice. My letter in reply was to "lick the stuffing out of him." I think it would be a pretty good idea.

Dr. Pollard: One of the disciples of Professor Weltmer—who got his diploma for a carload of hogs, I believe—was down at Union. He treated a woman for puerperal convulsions in pregnancy, with the usual result, and has gone out of business. He is not practicing now.

Dr. H. Winnett Orr: Last night my attention was called to the fact that I had not been given an opportunity to participate in the closing discussion of the papers then before the meeting. Drs. von
Mansfeide and Lord then asked that I present a plan for completing the organization of the state league, and to provide funds for furthering its work. The plan in brief is as follows: To secure the co-operation of those book and drug manufacturing firms who operate in this state in such a way that their representatives shall solicit from physicians memberships in the league, and shall carry blanks for that purpose, by signing which each physician should agree to honor a sight draft for $2.00 drawn by the *Western Medical Review*, $1.00 of each $2.00 thus paid to be devoted to payment of subscription to the *Review*, the other $1.00 being paid into the treasury of the league.

In consideration of this plan the *Review* is to devote a definite part of the paper to the publication of the progress and a discussion of legislative matters of interest to the profession, and to devote a sufficient space in its advertising pages to pay the commission of the men who solicit the subscriptions, the treasury of the league to be subject to the order of the executive committee, chosen by the board of trustees, which should consist of the officers of the Nebraska State Medical Society and the homeopathic and eclectic societies and the executive board, consisting of representatives of the various branches of the profession in the same proportion as that in which they exist on the state board of health—that is, two members of the regular profession and one each from the homeopathic and eclectic branches.
LACERATIONS OF THE PERINEUM.

CHAS. ROSEWATER, M.D., OMAHA.

Lacerations of the perineum are occasionally due to injuries sustained through other means than those connected with childbirth, but as these occur comparatively seldom, and as by far the great majority of perineal lacerations are due to the passage of the fetal parts in childbirth, it is to this phase of the subject that attention will be directed.

Before considering the subject proper, however, it might be well to direct attention briefly to the anatomy and physiology of the perineum, for upon the accurate knowledge of these will depend the correct applications of the principles underlying the prevention and management of perineal lacerations.

The vagina in its lower half curves forward, while the rectum at the corresponding point curves slightly backward, thus leaving a triangular space between the lower vaginal and rectal walls. This space is enclosed below by integument extending from the lower vaginal orifice to the orifice of the anus, and the triangular structure thus described, the lower expansion of the recto-vaginal wall, is known as the perineum. It contains connective and elastic tissue, a venous plexus and lymphatics, and is traversed by several muscles, some of which act directly upon the perineum, while others simply pass through and act upon the contiguous apertures of the vagina and anus. Upon the intact condition of these muscular structures depends their functional usefulness, and any accident resulting in injury to the perineal body would lead to an impairment of the utility of the muscles contained within it or passing through it.

The perineum being the lower expansion of the rectovaginal
wall, is the main support of the latter, and through this, to
the structures which it helps to support, namely, the vagina,
uterus and appendages. In the healthy state the anterior and
posterior vaginal walls lie in direct apposition when at rest,
consequently the anterior rests upon the posterior, which is
beneath it, and the bladder rests upon them also, so that when
the support to the posterior vaginal wall is gone the anterior
also loses its support. Thus, descent and prolapse of the
rectovaginal and vesicovaginal walls occur, followed or ac­
companied by descent and prolapse of the bladder and uterus,
with flexions and versions of the latter, and in their wake a
large number of the derangements of the pelvic viscera com­
monly met with, such as subinvoluted uterus, prolapsed ovary,
chronic salpingitis or oöphoritis, hemorrhoids and the numer­
ous reflex neuroses. Indeed, the field of usefulness of the
gynecologist would be materially curtailed were the perineal
lacerations and their consequences eliminated from the cate­
gory of diseases treated.

The immediate dangers of a lacerated perineum are, be­
side the hemorrhage following it, the laying open of a raw
surface rich with lymphatics, where infection may very read­
ily occur, and, in the severer forms of laceration, the suspen­
sion of the use of the sphincters, with its attendant evils. I
have already stated that laceration of the perineum is due in
a large majority of cases to strain and stress of childbirth.
How and when does this happen?

The rigid perineum, of which so much has been written,
and which nearly every practitioner of obstetrics encounters,
is due either to a primary lack of elasticity of the tissues them­
selves, such as is most frequently found in primipare advanced
in years, or it is due to a weakening and insufficiency of the
expulsive force of the uterine pains, which may be either
primarily weak or become so from exhaustion on account of
the unusual resistance met with through some malposition or
other abnormality in labor.

These conditions may be combined so that in one and the
same case we find deficient elasticity of the perineum and
weak pains. Occasionally severe tears occur where labor is precipitate and the pains have been violent and almost without intermission. It is wonderful, however, how few of these precipitate labors result in severe lacerations.

When, during the expulsion of the fetus, the head has passed the pelvic cavity, it next meets with resistance from the perineum at the pelvic outlet. In some multiparae this resistance is so slight that with good uterine action one or two pains suffice to cause the fetus to pass the perineum and be born. In primiparae, however, when the perineum has never been distended, the passage of the head meets with resistance, the force of the pains only stretching the perineum a little each time, while between the pains the presenting part recedes and the vaginal secretions lubricate and soften the perineal tissues. After a longer or shorter duration of this process, the perineum has finally reached such a degree of distensibility that it is stretched sufficiently during the next pain for the head to pass out of the vulvar orifice and be born. Sometimes the resistance of the perineum is gradually overcome by its increased distensibility, at others by a sudden giving away of the tissues and a laceration results. Sometimes this laceration does not occur until the shoulders pass.

The degree of laceration depends on several factors. Slight lacerations of the frenulum are almost universal in all primiparous births, while complex lacerations through the entire perineum from the vagina to the rectum, severing the sphincters and all, are fortunately rare, yet not so rare but that they occur at some time or other in the practice of all who do much obstetric work. Between these two degrees of laceration there are numerous grades of variation, both in extent and character of the tear. For convenience of consideration they may be classified as follows:

1. Slightest, where only the fourchette and superficial layer of the posterior vulvar commissure is torn.

2. Where the tear extends through the skin and perineal tissues down to but not through the sphincters.
3. When the laceration extends through the entire perineum, involving skin, mucous membrane and sphincters.

4. When the sphincters are torn but the skin and mucous membrane remain intact—what is known as a concealed perineal rupture.

Lacerations classified under the first heading are of little significance, gynecologically, but occur in nearly all primiparous births. They do not absolutely necessitate stitching, but as the open gaping wound offers a much more favorable soil for the septic infection than the closed tear, a stitch or two may be good to reduce the danger of infection. This additional danger of infection of an open wound, over which the lochia are constantly flowing, justifies the resort to immediate suturing of all perineal lacerations, unless other weighty reasons counterindicate this course. Such suturing, done under strict antiseptic precautions with aseptic materials, need not add any new element of danger.

The last three classes of lacerations spoken of require careful suturing, care being taken that the torn ends of the muscular structures are included and brought together well, so that when the wound has healed the muscular apparatus is in good condition and the perineal body regains the firmness and strength so necessary for the performance of its function. In sewing up these lacerations, the sutures should be passed under the guidance of a finger in the rectum so that they go sufficiently deep to bring the torn surfaces well together. Care should also be taken that the entire wound is well closed, leaving no pockets in which the lochia might stagnate and cause infection. With strict asepsis and antisepsis previous to, during and after the operation, done as soon after labor is completed as possible, the wound will heal promptly in the large majority of cases and the patient be saved the annoyance and suffering of a late perineorrhaphy.

To insure preservation of the perineum, labor should be normal, the presentation ideal—occipito-anterior if possible—and the second stage not too precipitate nor yet too prolonged. Faulty presentations and positions should be rectified
wherever possible and the physical forces sustained. The more the course of labor deviates from the normal, the greater the likelihood of lacerations. Therefore the best means of preservation of the perineum would include all measures tending to make labor as nearly ideal as possible. Warm sitz baths taken daily during the last month of pregnancy have a very favorable influence upon the elasticity and distensibility of the perineum, while they certainly are a good means of keeping the parts clean. The preservation of the bag of waters intact as long as possible is another measure calculated to make the birth less tedious and the danger of laceration of both cervix and perineum less. Frequent douching of the vagina during labor is not a good practice, as thereby the natural vaginal secretions lubricating the birth canal are washed away and the parts exposed to greater friction during the birth. A vaginal antiseptic douche is indicated when operative procedures are to be undertaken or where an attendant with doubtful antiseptic proclivities has examined the patient.

During the passage of the head over the perineum, the latter should be drawn forward by the finger introduced into the rectum while the other finger or thumb retards the passage of the head by direct pressure upon the latter. During this stage it is well to frequently lubricate the edge of the perineum with an aseptic or antiseptic ointment.

In the cases of dry birth where, owing to the slow, tedious course of labor and the prolonged pressure of the presenting part, the vagina and the perineum become hot and dry, benefit may be derived by the constant application to the perineum of a moist antiseptic pad—absorbent cotton wrung out of a tepid solution of mercuric chlorid 1 in 1000. A large proportion of the cases of lacerated cervix and perineum is furnished by these dry births.

Where the forceps is used, care should be taken that the natural rotation of the head, so essential to natural safe delivery, is not prevented. The tractions should be intermittent and made during the pains while the head is passing through the pelvic canal, but not so during its delivery over the
perineum, when they should rather be made between the pains, the object being to deliver the head at a period when the perineum would not be put on the stretch too much.

Another expedient for the prevention of general lacerations is the use of chloroform as an anesthetic toward the close of the second stage of labor, i.e., at the time of the passage of the head over the perineum. By relaxing the perineum to a certain extent, it diminishes the resistance to the expellent forces and consequently does not delay labor, while rendering it much more comfortable to the patient.

When the perineum is so distended and yet so resistant that laceration is inevitable, the two lateral incisions will frequently prevent a tear through the center—one which might be a source of much trouble. The wounds created by the lateral incisions can more easily be kept clean and are not in such great danger of infection.

DISCUSSION.

DR. VON MANSFELDE: I most emphatically object to saying that whenever there is a tear stitches should be taken. I think the Doctor is just a little bit off in saying that a few stitches more or less do not hurt them. It is all right to take stitches in some cases, but not always. Of course fat women tear more frequently than others, and whenever you have a case of a young woman who is very fat you must get your needles ready, for the chances are you will have a rupture.

DR. BAER: I agree with Dr. Mansfelde. While I do not criticize the paper, I would say if you make an incision in the perineum you don't know how far it is going to tear, and whenever it tears there it is bad enough, and tearing there by making an incision, I do not think advisable.

DR. ROBERTS: I wish to take Dr. Rosewater's part in this matter of light laceration. I think that if there is no stretching of the perineum, incision should be made. I think a small bottle of solution of cocain can be carried and an injection of that would overcome absolutely all pain connected with the minor tears referred to by the Doctor. I think that would be a very good plan. In my own brief experience I have always kept that.

DR. PHILBRICK: It seems to me that the discussions in our medical society should certainly tend toward further ideal practice in obstetrics. I think the matter of taking stitches is a very minor matter. In regard to the advantages to be obtained I find very few
patients who will not gladly undergo the slight pain they would have in taking the stitches.

Dr. Greene: I want to present an experience I have had, not a case; in all the lacerations of the perineum that have fallen to my lot, with the exception of one, I am sure they have been made by the shoulders and not by the head. Now I usually have an ocular inspection of the delivery of the head, and on a few occasions I have had great difficulty in delivering the shoulders, and in those cases I have had lacerations. The question has occurred to me whether I know how to deliver shoulders or not. Several years ago I had a patient that came into my hands, and I found a complete laceration of the perineum that had existed for eight years. It had been torn into the rectum. Nothing had been done for it, and I got Dr. McKinnon to make a repair operation which was perfect, but within three weeks I must deliver this woman again. Now, what shall I do? Stand by and see that scar torn open, or shall I make a lateral incision on both sides and try and save the perineal body. I want to do right about this matter, and I confess I am at a loss to know what I should do. I know there is no room there to get a ten pound baby through without a tear.
EXTRAUTERINE PREGNANCY.

W. O. HENRY, M.D., OMAHA.

Recently, in less than three months' time, I have seen five cases of extrauterine pregnancy, and, this, with some former experiences, leads me to believe the trouble a far more common one than we are wont to admit, and one which should be as far as possible understood by all physicians, so that the diagnosis may be made early, and the patients given the benefit of the best treatment which that knowledge can suggest.

This affection has been recognized for many years, but until recently was thought to be of great rarity. The work of Tait demonstrated it to be of more frequent occurrence than it had ever been believed to be. A wider experience by many competent observers has shown it to be all too common, and has thus pressed home upon the profession the great importance of giving the subject closer and more careful attention than it has hitherto received. Hence, along with the advances made in other departments of medicine during recent years, much has been done to make it possible for the wide-awake and progressive practitioner to arrive at a correct diagnosis and suggest the proper treatment.

It is with a desire to crystallize our knowledge and state what I believe to be the important things for us to look for in making our diagnosis, and what can and ought to be done in the way of treatment, that I write this brief essay.

As to the varieties of extrauterine pregnancy, there are usually said to be four: 1, interstitial, that is, implantation and growth of the ovum in the tube as it is contained in the uterine wall; 2, tubal, that is, implantation and growth of the ovum in the tube anywhere from the place it leaves the
uterus to its fimbriated extremity; 3, ovarian, that is, implantation and growth of the ovum upon the ovary; 4, abdominal, that is, implantation and growth of the ovum at any place within the peritoneal cavity.

Of all these varieties, the tubal is most common. Ovarian pregnancy has been many times denied, but several well-authenticated cases have been reported, until now most observers admit its existence. The following case recently reported by Tussenbroeck is so much like one that I reported about two years ago that I thought best to give it here.

"A woman, 31 years old, mother of five children, who had always been well, suddenly became ill, and showed pronounced symptoms of internal hemorrhage. She had not menstruated for six weeks; otherwise she had no symptoms of pregnancy. Diagnosis, ruptured ectopic gestation; indication, immediate laparotomy. Upon opening the abdomen, large quantities of fluid and coagulated blood were found. The patient was placed in the Trendelenburg position, whereupon the following conditions were noted: uterus soft, somewhat enlarged; left adnexa normal, right tube normal; right ovary capped by a tumor about the size of a walnut, and covered with coagulated blood. The tumor was not adherent to the tube or other organs. The right tube and ovary were removed. She made a good recovery. The specimen was hardened in alcohol; it consists of the right tube and ovary. The tube is normal, although the fimbriae are slightly adherent, its lumen open. Pathological adhesions between tube and ovary were not found. As mentioned before, upon the upper surface of the ovary is situated a small tumor, in the center of which an opening with fringe-like projections. Transverse section of ovary and tumor shows that the tumor represents a cavity containing a small embryo, with a relatively thick cord to the wall of the sac. This observation proves conclusively that this case is a primary ovarian pregnancy, the product of pregnancy being situated within a Graafian follicle. The fetal placental structures are identical with the normal intruterine placenta. The villi have the irregular form of early preg-
nancy, and are covered with two epithelial layers of cells. The fact that the synctium was typical proves that this structure is of fetal origin, and not formed from the tubal or uterine epithelium."

When we come to speak of the causes for these abnormal and dangerous conditions, we are as yet obliged to confess that we are in the dark, and can not account satisfactorily for their occurrence. The theory that possibly a diverticulum in the tube, of congenital origin prevents the fecundated ovule from passing along the tube into the uterus, by deflecting it into this blind channel, whence it cannot emerge, and so begins to develop there, seems to be quite untenable for several reasons, but chiefly for the reason that many of the patients are mothers of a number of children, and it seems hardly likely that they could have gone so many times safely through pregnancy if this little diverticulum of such dangerous possibilities had been constantly present.

The theory that appeals to me most strongly is that some obstruction has occurred in the tube from previous disease, and that, while the spermatozoa may with difficulty pass through it, on account of its small size and because of its own motive power, yet when the ovum, a larger body, and without the power of motion, attempts to traverse this narrow way, it finds itself arrested, and must needs develop where it is. Now, this obstruction may be a flexure in the tube, a thickening of its mucous membrane, or possibly the complete removal of the epithelium, with its ciliated processes, upon which in part the ovum must depend for its locomotion.

After all, however, we must admit that no one knows why these accidents occur, and it will be extremely difficult in the very nature of the case to ever demonstrate the cause.

As to the symptoms, they are the ordinary ones of pregnancy, until rupture takes place, which may occur any time after the fifth week, up to the fourth month. Very rarely is the physician called to see and examine one of these cases before rupture, and hence I will not take time to describe the
physical signs which might be found if examination were made then.

Patients have usually gone over their period six or eight days or three or four weeks, and may or may not suspect that they are pregnant, when suddenly, without warning, they are seized with a severe griping pain in one or the other ovarian region and lower abdomen. They feel faint or sick, must lie down, and get something for relief. They may sweat rather freely, a cold, clammy sweat breaking out over the body. There may be some pressure and "bearing down," as they will express it. A digital examination at this first attack will reveal a soft cervix, a tumor, large or small, at one side or other of the uterus, with free pulsations of a uterine artery, a fluctuating mass of greater or less size in Douglas' pouch, and tenderness upon the side of the tumor. The pulse will be more rapid and weaker than natural. A rectal examination may demonstrate more clearly the tumor and the fluctuation.

Within twelve or twenty-four hours a very dark, bloody discharge flows from the uterus, and later possibly a characteristic membranous formation, the decidua. If the pregnancy is not far advanced, these symptoms subside, pain becomes relieved, soreness gets better, but the bloody discharge continues. After a few days, these severe symptoms are repeated in a more or less violent manner. Unless the hemorrhage is quite profuse into the pelvic and abdominal cavities, the patient again rallies in a few days, to have later a still more serious attack; when finally she dies from a profuse internal hemorrhage and only a moderate uterine flow, or she develops a peritonitis, or a pelvic abscess which evacuates itself or is relieved by the surgeon.

It is sometimes said that these accidents occur in women who have known themselves to have suffered for years with some pelvic trouble. But I wish to call attention to the fact that, while this is probably true in the majority of cases, still it will not do to depend too much on this statement, for at least two of these five recent cases did not suspect that they
had any female trouble whatever. Again, it is sometimes urged, and generally, I think, wisely, that these cases occur in women who have borne children, and then without any known cause have gone several years without becoming pregnant. But two of the five cases were in women with babes at the breast less than a year old.

One symptom that I have noticed, and that, so far as I know, has not been mentioned, is that peculiar dark color of the discharge which comes from the uterus. This has appeared to me to be almost characteristic. At least, so prominent has it become in my estimation that, if a woman gives a history of having gone a few days or few weeks over her time, and is suddenly taken with severe and unusual pain in one ovarian region, I do not hesitate to pronounce the case one of ruptured tubal pregnancy. The other symptoms and physical signs have so far also been readily discovered associated with these, and the treatment has demonstrated the correctness of the diagnosis.

I am convinced, therefore, that every physician should be on the alert for these three cardinal symptoms, and they will guide him to a proper interpretation of other evidences in the case, even though he be not an expert in determining pelvic conditions by digital explorations. This I deem to be of very great importance, for at times neither the fluctuations nor the pelvic tumor are palpable to the ordinary finger; and, unless we can give some more simple rules for diagnosis than are generally given in our text-books, the vast majority of cases will be overlooked.

If, then, a physician meets with a case where these three cardinal symptoms are present, I believe he is in duty bound to treat it as one of ruptured tubal pregnancy. Of course, other symptoms are nearly always present which will tend to confirm such a diagnosis; but, if not, these alone are a safe guide, and should lead at once to active treatment accordingly. Of course, it is always well to remember that we can settle the diagnosis positively by a simple operation, namely, vaginal
section, which will disclose the blood-clots, fluid blood, and membranes, or demonstrate their absence.

In Case 4 of this series, the patient was nursing her babe, and did not suspect pregnancy; had gone only ten days over her period; had never suffered from any female or pelvic trouble; nor was any tumor palpable; neither could fluctuation be detected; but there had been the passing of one period a few days, the sudden severe griping pain, the bloody discharge, but no decidua so far as known.

The diagnosis was made and a vaginal incision confirmed it. In many cases the symptoms are so numerous, so pronounced, and so plain that any one at all familiar with their history can easily arrive at a satisfactory and correct opinion; but I am now speaking for an early and certain diagnosis in those obscure cases, so that every practitioner may be able to make a safe prediction.

When we come to speak of the treatment of these cases, there are, of course, differences of opinion; but I think we should not tie ourselves down to any ironclad rules from which we will not swerve, but should treat each case according to its particular merits. If the hemorrhage is in abeyance, or, if the case has developed a fever with temperature over 100, I prefer to make a free vaginal incision, turn out the blood, clots, and debris, wash out thoroughly and drain, much as I would a pelvic abscess.

However, I am persuaded that a man should not do this in any case, unless he has prepared his patient, and is himself prepared to quickly open the abdomen and treat the conditions which may unexpectedly arise. On the other hand, if the hemorrhage is still progressing, unless the operator be peculiarly expert in vaginal work, he will do better to at once open the abdomen and control the bleeding-point. Having made an abdominal section, and controlled the bleeding, the diseased tube and ovary should be removed, and the other side dealt with according to its deserts. Then, all blood-clots and debris should be quickly removed, and the entire cavity wiped dry and clean with gauze sponges, and possibly drain-
age established through the vagina; after which the abdominal
wound may be carefully closed in the usual manner. If there
has been great shock or loss of much blood, the patient should
receive before leaving the table a quart of normal salt solution
underneath the breasts. This should be repeated in the thighs
and abdomen every two to four hours, until the patient has
fully rallied.

I would like at this point to emphasize the value of the salt
solution, not only given once or twice, but four or five times
in a given case, for I have seen marked benefit and, in fact,
I think the saving of some cases after severe operative meas­
ures by the fourth and even the fifth hypodermic injection
of this solution.
FLAT PELVIS.

F. A. BUTLER, A.M., M.D., HARVARD.

In writing a paper on this subject it shall be my aim to confine this article more especially to the simple flat pelvis, only making mention of the other so-called abnormalities of the pelvis. According to the authorities whom I have consulted, this condition is divided and subdivided into a number of headings. It is not my purpose to discuss in this paper the so-called large pelvis, since it does not occasion, as a rule, any very serious trouble in obstetric practice. The deviation from the normal pelvis may be by excess or by defect, and by the authorities these defects are divided into a number of classes that it is not our aim to discuss in detail here. Before going further it might be well said that there is no agreement among the authors, either in this country or abroad, as to the frequency of flat or contracted pelves. Some of the foreign writers give its frequency at 5 per cent., and some of our home writers class them as frequently as 25 per cent. One thing is certain, and that is this: Their frequency has been greatly underestimated or overlooked, for no one who practices obstetrics can fail to note a certain number of cases. It might be possible for flat or contracted pelves to be met with more frequently in one country than another, and also in different parts of the same country. In consequence of this possibility the tables of the different countries, and in different parts or cities of the same country, do not agree as to its frequency.

My idea of a contracted pelvis is when one or more of its diameters is so shortened as to lead to an abnormality in the mechanism of labor without necessarily retarding the birth
of the child. I would refer every member of this society to a paper written by Dr. Williams, of Johns Hopkins Hospital, Baltimore, Md., May, 1899, as a concise and complete consideration of this subject; but as it is our province in the main to consider more minutely the flat pelvis, some of the other classes of contracted pelves must of necessity be passed by.

The flat pelvis is usually found in women who present no anomaly of form that would have a tendency to awaken any suspicion of its presence. They are usually of normal size, and so far as general appearance is concerned, seem to be perfect in development. There is no history of any disease of the bones in infancy or childhood, or of any injury to the spine or lower limbs. In view of the foregoing history regarding appearance, deceptive so to speak, one can ask the question that can not be answered: How often has this anomaly led to a deplorable result in childbirth? Physicians who practice obstetrics meet, in my opinion, based on my own practical experience, with this anomaly more often than any other, and according to Hirst, and in his words, "forewarned ought to be forearmed." There seems to be some difficulty in ascertaining the cause, at least, of the deformity, as no very definite conclusion is reached by the writers on this subject. The deformity consists in an approximation of the sacral promontory to the anterior pelvic wall, and this so-called sinking of the sacrum has been attributed to walking too early, to sitting too long a time in infancy, and also to the weight of the body, and probably not the least among the enumerated causes is carrying of heavy weights in childhood; and yet it also exists among women who during childhood were never subjected to any severe toil. This would render the conclusion that the simple weight of the body may cause the deformity. According to Flint and others, the descent of the sacrum is without any rotation upon its transverse axis, and the approximation of this bone to the pubic bones and the shortening involve only the antero-posterior diameter of the inlet, or if those of the cavity and outlet are lessened, the
diminution is very slight. The descent involves strong tension on the iliosacral ligaments, which would cause a separation of the iliac bones, if it were not for the resistance of the pubic joints. The result is that the transverse diameter undergoes slight increase, and the pubic joint is in consequence brought near the sacrum. Schneider states that in very rare cases a flattened pelvis is also narrowed in the transverse diameter of the outlet; this, indeed, is an important complication of the flattened pelvis. The diagnosis of the flattened, non-rachitic pelvis is readily made by measuring. The transverse measurements are nominal or slightly increased, the circumference is normal or slightly decreased, but the two sides of the upper pelvis are symmetrical; the external conjugate is diminished, as a rule, and by this diminution, combined with that of the diagonal conjugate, the true conjugate is formed, which is less than normal, and is said to be, in the great majority of cases at least, eight centimeters—three and one-tenth inches.

Space will not permit a discussion of the flat rachitic pelvis, so we will proceed to consider the mechanism of labor in the simple flat pelvis, so often met with, and, in my opinion, still more often overlooked. Since the pelvic inlet is narrowed in the conjugate, the head of the fetus does not enter the pelvic cavity, as is the rule in the last weeks of pregnancy in primigravidae, but is turned aside at the brim, and hence the proposition of transverse presentation is increased. Another factor in causing such malposition of the fetus is found in multigravidae in relaxed abdominal wall, which presents anterior displacement of the uterus. Supposing the head to be at the inlet when labor begins, this takes a transverse position. that is, the sagittal suture, instead of being oblique, lies directly from one side toward the other of the pelvis. Resistance of the occiput compels a partial deflection, and the anterior and posterior fontanel are in about the same pelvic place, thus the transverse diameter of the fetal head is in the pelvic conjugate and the occipitofrontal in the pelvic transverse; but in this accommodation the anterior parietal is somewhat
in advance of the posterior, and therefore the sagittal suture approaches the sacral promontory. Our review here of the anatomical and physiological relations of this class of cases must be limited, but suffice it to say that after the head has passed the inlet, the subsequent mechanism is the same as in ordinary normal labors, and often then the delivery is more rapid, from the ampler space furnished by the cavity, and especially by the outlet in the flattened pelvis.

What percentage of American women are affected with the anomaly of flattened pelvis is not definitely known. Authorities do not agree, and the writers who have gathered together a large number of cases from which their statistics have been based, by the use of the pelvimeter, do not arrive at any definite conclusion as to its frequency. One author claims, from a large number of cases, that one white American woman out of four is affected with this condition, either to a small or greater degree, and one woman out of every three colored women, in the same ratio. Other authors and writers do not claim nearly so large a percentage. Some give, indeed, a small percentage of the cases in average. But when taking into consideration the tedious hours of waiting and watching these cases, as we have all done who engage in this branch of practice, hoping, praying that nature would come to our rescue and lead to a favorable termination, and as a last resort having to rescue our patient from the very jaws of death, so to speak, with art and mechanical means, are we not led to believe that 25 per cent., or one out of every four on an average, of labor cases, to a slight or large extent, is not an overdrawn picture? Diagnosis of an abnormally flat pelvis can be made by pelvimetry, palpation and vaginal examination. It is not the question of the absolute size of the pelvis, but more particularly the disproportion between the child and the pelvis. We should take into account whether this particular child can be born through this particular pelvis, and this can best be determined by palpation. If necessary, an anesthetic can be given, and particular attention paid to the presenting parts. In a good many severely flattened, con-
tracted pelves, successful premature labor can be induced, at the eighth month, by assisting nature, if the woman is young and healthy, by the force of the contraction of the abdominal and uterine muscles, bringing on premature delivery. In describing briefly how to manage a case in the so-called flat pelvis, the complications in this class of cases are transverse presentations, prolapse of the umbilical cord, which of course must receive attention at the time of its occurrence. Another complication that has made wrinkles on more than one brow among my hearers to-day is failure of active uterine contraction, for it must be remembered that the struggle is continuous during all the passage of the head through the bony pelvis. Should the presentation be favorable, the child of small size, and uterine action vigorous, the result may be hopeful. My observations, based on experience at the bedside, never to be forgotten, show that difficulty in delivery in this class of cases has been increased by women who have given birth to children. As an explanation for this increased difficulty, in subsequent labors after the first child has been born, might be offered greater size of the child, and also the lessened vigor of the uterine muscles. Several years ago I was called to assist in a confinement in a markedly flattened pelvis, labor said to have been going on for two days, with two other practitioners in attendance. After considerable waiting, dosing and manipulating, the woman, who was well developed every other way, so far as appearances were concerned, was delivered by forceps of a very small child, weighing between three and four pounds. I gave it as my opinion at the time that if she ever became enciente again, craniotomy or some other procedure would have to be carried out in order to save the woman's life. She moved from that part of the country to South Dakota, became pregnant, which was permitted to pursue the even tenor of its way until labor at full time. After two or three days and nights' suffering, death came as the final concluding act in the scene. Craniotomy properly done, or an abortion in the early months of pregnancy, would undoubtedly have saved the life of this useful,
educated, accomplished young woman. It is possible that in this case the sagittal suture was placed so near the pubic or sacral wall of the inlet as to make what is termed a parietal presentation, and this not being rectified, delivery would be impossible, without surgical procedure.

In reviewing labor cases in an active general and obstetric practice of over twenty years, one can not call to mind how many long nights and sometimes days of waiting have been spent at the bedside of cases not altogether unlike the one described. April 1 of this year I was called to attend a German woman who had always had a long-protracted labor, this being the thirteenth child, eight of whom had been sacrificed at labor or died shortly after. She resided in the country, a few miles from town. I was called in the morning, and she had been sick with slight pains since the day previous. As labor had made very little if any progress, I went away, to return at noon. I went again, to return at 5 p.m., with the intention of making an all-night job of it. The patient had a flattened pelvis, so, anticipating trouble, everything presumably necessary was brought in a surgeon's emergency case. Pains were irregular, far apart, and did not seem to accomplish much. The child's head was presenting too high to use forceps, so the only thing left to do was to follow the old rule, "learn to labor and to wait." One particular feature was quite noticeable, and that was that the patient had a very pendulous abdomen, quite a common feature in this class of cases. A time-honored binder was put on as snugly as could be fastened with a darning needle and twine thread, no safety-pins being nearer than town. The patient complained of difficult breathing and suffocation. Nevertheless the binder was left on, which extended from the bust to the hips, and which to appearance reduced the pendulous abdomen about one-half, and instead of the pains forcing a bulging up in front, were more forcing down in character, and as soon as possible a long pair of forceps grasped the presenting head—preparations having been made to perform craniotomy if an attempt at forceps delivery failed. However, the forceps suc-
ceeded, and delivery was completed, the woman making a hasty and complete recovery, after forty-eight hours' suffering. The child lived three days and died. Saw the woman the day after confinement, but did not see the child after that day. Thus we see this strong, active, hardworking German woman suffering in confinement two days and nights, in whom, to all appearance, everything would be natural and normal.

In March of this year I was called to assist another doctor in a confinement case in an adjoining county. The patient was a common flat-pelvis woman, in confinement all the day and night previous, third child, and history of the other two confinements showed that the first child, which was small, was born after a tedious labor; the second child, larger, after considerable manipulating and delay, was delivered by forceps. The doctor had been called that morning. I reached the place about noon. The entire family were in a panic. The head was presenting so far up that it could scarcely be reached with the index finger; all pains had stopped; patient was breathing regular, and pulse was fair. Having been a hardworking woman, and having labored on the farm with her husband, vitality and endurance were of the best. She was put to rest with a large hypodermic of morphia, and we waited two and one-half hours for nature to become restored and to assert itself. I also made preparations to perform craniotomy if forceps failed in the delivery. The patient had a large pendulous abdomen, so a binder was put on from the bust to the hips. After she had slept a little over two hours she roused up and pains came on again, expulsive in character. After about one hour and a half the time had come that something must be done to save the patient. She was chloroformed, a long pair of forceps were used, and succeeded in the delivery of a large, well-formed boy. The patient was able to assist her husband in doing the chores about the farm in the course of about ten days or two weeks. The attending physician saw the patient once after confinement.

Dec. 5, 1896. I was called to attend a lady in confinement,
refined, educated, perfectly formed, so far as appearance was concerned, of medium size, 34 years of age, primipara, flat pelvis, medium degree. She had always been in perfect health; had never been sick. Labor, as it always is in these cases, was slow and tedious, lasting about two days and nights. The mother exhibited a wonderful degree of vitality, was uncomplaining, cheerful and hopeful through it all, which is, according to my experience, quite out of the ordinary. The patient managed everything herself and talked cheerfully through the entire trying ordeal. She did not want to take chloroform, yet was ready to consent to it if necessary. She did not want instruments used only as a dernier ressort. In fact, her entire thought, so to speak, was to save the baby. She said she could endure the pain until next day before consenting to anything being done that might have a tendency or liability to injure the child. She slept between pains. I did not leave the house during the confinement, only for an hour or so at a time. Labor was finally completed, with what assistance I could give nature and nature’s methods, after forty-eight hours. She gave birth to a male child of fair size, but having no signs of life. Artificial methods were used for exciting respiration, which succeeded after about twenty minutes’ hard work. As there was a slight pulsation in the cord, this was not severed until the child breathed regularly and cried lustily. In this case to-day a bright little boy, 3 years old, is the joy of one of the most beautiful homes in our little city.

CONCLUSIONS.

1. Horn describes the disadvantage in these cases of Cesarean section: symphyseotomy, perforation and induction of premature labor. A proper dietary system, carried out carefully in time, might be of great advantage toward reaching a favorable termination.

2. As it is shown by the authorities and late writers that quite a certain percentage of women possess a flat or contracted pelvis, pelvimetry should become a routine practice, a Martin pelvimeter answering well the purpose.
3. It seems quite evident from a philosophical reasoning that a daughter of a woman who has a flat, contracted pelvis will also have, to a greater or less degree, the same kind of pelvis.

4. In the second and third cases described in this paper where a very snug-fitting binder was used to reduce the pendulous abdomen and change the character of the expulsive effort, it is my opinion if this had not been resorted to the life, in both cases, of either the mother or child, or both mother and child, would have been sacrificed.

5. In the fourth and last case reported, if the cord had been ligated and severed before breathing had become thoroughly established, the child would have died.

Authors consulted: Hirst, Williams, Dobbins, Crossen, Reynolds, Flint, Leopold, and others.
THIRTY-SECOND ANNUAL SESSION.

SOME PRACTICAL THOUGHTS IN OBSTETRICS.

A. J. CLARK, M.D., ALBION.

When one has been in practice a number of years, if he has been observant and thoughtful, his experience will certainly suggest something new as to methods in treating his obstetrical cases. He will learn to do something a little different from what he was taught while a student at college. Well do I remember my first difficult cases in obstetrics. I remember the instructions given at school, when the labor was slow and tedious, when the presenting part was not favorably inclined or when the so-called nature was not accomplishing much. I was instructed to wait, to not interfere, to leave “nature” alone. “Let nature do all she can before you interfere.”

Those words were made so emphatic and the impression so great on my mind that I felt that the practice of midwifery was largely a farce.

If I could do nothing but to express a little sympathy, it was evident to me that I might as well be at home. Sympathy expresses kindness, but it does not make unfavorable conditions favorable, nor a hard labor easy. To pull upon an arm or push on a knee may give an appearance of doing something, but that is about all. Perhaps there is no place in the practice of medicine where we meet as much nonsense and so many foolish notions as in the lying-in room.

It is our duty as well as our privilege to teach proper methods, that many of the old fad notions may be overcome. We who are pioneers and make long rides into the country, where many of our calls are in houses poorly kept, work to a disadvantage. Even in the poorly-kept houses we not infre-
quently find people willing to be instructed. People know more about germ infection to-day than they did ten years ago. They know more about antiseptics and surgical cleanliness to-day than ten years ago. We must teach cleanliness and neatness in our obstetrical work. You need not go to the most rural districts to find carelessness in this respect. I am satisfied many good physicians seldom or never boil their obstetrical forceps, and never carry a finger-brush or a gown. We can not expect the neatness in many houses that we would in a hospital. Then we should be all the more particular and set a good example by being neat ourselves.

Every physician attending a case of confinement should carry with him everything he desires to cleanse himself—a full toilet set. In a neat grip he should have surgeon’s soap, finger-brush, a well-laundered gown, rubber gloves, etc. With plenty of hot water and soap and a free use of the brush, followed by an antiseptic solution, one can make his hands quite clean in a reasonable length of time. Frequently we have not much time to prepare our toilet, but with facilities at hand we can do a good deal in cleansing ourselves in a short time. While washing we can dictate as to the preparation of our patient. See that the bed is properly made, etc.

I am now speaking of places where we have no trained nurses, and have to depend on such help as may be present. After having washed and put on a clean gown, your neat appearance will favorably impress your patient and assistants. The bed should be made as convenient and as comfortable as circumstances will admit. Plenty of boiled water should be in readiness. I ask for two wash basins. In one I have warm water for cleansing my hands when necessary, in the other I keep an antiseptic solution. I prefer bichlorid, as it is easily made by putting a tablet or two into the basin of water. Before each examination I rinse my hands in the bichlorid; after each examination I wash with warm water.

How often should we make examinations? This depends on circumstances and conditions. There should be no set rule. All women in labor are anxious to know if the pres-
entation is all right, and as time passes she frequently wants to know if there is any progress. This calls for frequent examinations. We all have learned, by experience, that by passing the examining finger around the os we can stimulate a sluggish uterus into action, or by two fingers inserted into the os, with gentle pressure, favor dilatation. If we find the presenting part unfavorably inclined, we should make frequent examination and endeavor to convert an unfavorable into a favorable presentation. Some might say this was meddlesome midwifery, and that we should leave nature alone and let her accomplish this herself if she can. If labor is progressing favorably and the patient is not impatient, our examinations may not be too frequent. My experience is after labor is well established that my patient expects and should have my undivided attention. After assisting nature as best we can by helping her to convert an unfavorable presentation, if any, into a favorable one, we can not do much more until the presenting part is well down into the pelvis. After the presenting part is well down, pressing in the bones, advancement slow and painful, shall we wait until nature completes labor, or our patient becomes tired and has exhausted all her forces, or shall we apply the forceps and deliver at once. To wait seems hazardous. Nature may be able to complete labor finally, but it may take hours to do so. There is no just reason why the patient should suffer unnecessarily long. It is not a matter of time, but of conditions, as to when forceps should be used. When the parts are well dilated, head pressed against the pubes and labor pains have but little expulsive power and instruments can be applied, I do not hesitate, but put on the forceps and deliver at once; it matters not whether she has been in labor a long or short time. If there are ever bad results following the use of forceps it is when they have been withheld and not used until the patient was exhausted and worn out. Time cuts no figure. If we can save hours of suffering we are morally bound to do so. This may be meddlesome midwifery. It is poor excuse to say you waited until nature failed to complete labor before
you interfered. It is the long and tedious labors that debilitate the patient.

If we would impress our patients with the fact that forceps were not instruments of torture, but only helps in labor, and by proper use they shorten labor and thereby save much suffering, we could remove much of the fear and horror that is naturally associated with the term “instrumental delivery.”

Chloroform is another great help in labor. At the last stage of expulsion, when the pains are the most severe and the patient almost frantic, I think it is good practice to give chloroform. It is a great satisfaction to the woman to awaken from a comfortable sleep and know that her labor is ended and that she was unconscious of the fact. Perhaps this is meddlesome midwifery, but we consider it good practice.

As soon as the placenta is delivered the patient should be made comfortable. She should be washed, everything soiled removed, a comfortable bed given, a pad of absorbent cotton or muslin applied to the parts and a T-bandage applied to keep it in place. It is my custom to require the patient to turn on her side rather than lie on her back, as in this position drainage is more favorable. When lying on her back the natural position of the vagina is such that it is unfavorable for the discharges to be expelled. The uterus now being large and heavy, the fundus naturally falls backward and, if the patient is compelled to remain on her back for a number of days, as often is the case, the fundus is liable to become adherent to adjacent parts, causing retroflexions or retroversion, and backache and bearing-down distress, that so many complain of after they get up. These adhesions frequently are not broken up, even after the patient gets up and around. The uterus becomes fixed in an abnormal position, causing much distress and pain during the rest of her life. With the patient on her side this condition is prevented, as the fundus gravitates forward in its natural position. The patient is allowed to change her position in bed first on one side then on the other, in fact, in any position that is comfortable to her.

It requires exercise to stimulate and strengthen muscles
and tendons. She may sit up in bed at an early date. Get her into a natural way of living gradually. Don't keep her confined in one position for nine or ten days and cause her to believe she is then able to get up and attend to her household affairs. The radical change from a stationary position in bed, to going about the house doing even light work is not reasonable nor justifiable. A mild laxative should be given night and morning directly following delivery rather than to wait three or five days and then give a cathartic. My custom is to get the bowels to move with mild laxatives as soon as I can. It is favorable for the comfort of the patient.

It was not the intention of the writer to say how an abnormal or difficult presentation might be converted into a favorable one. Many of us might differ in the method of conducting these rare cases, but we should not differ in the following essentials:

We should be sympathetic in this, the most trying hour of our better sex. We should be neat and orderly, composed and surgically clean. We should endeavor to make the labor as easy and short as possible by giving the patient our best attention and rendering all the assistance possible.
SOME OBSTETRICAL EXPERIENCES.

A. B. ANDERSON, M.D., PAWNEE CITY.

I want to say by way of a prelude that this paper is not intended to be a scientific discussion upon any phase of the obstetric art, but rather as you will observe, a narration of some of my experiences in the practice of this branch during the past twenty-two years. If there is any one branch of the practice of medicine that I dislike more than another that branch is obstetrics. And as I grow older and the sleeping hours are more and more precious, and the waste of energy and caloric is more slowly renewed, I more and more dislike to respond to these midnight hurry-up calls. And, yet, it is my belief that in no branch of practice can a man more certainly and more frequently say, "I have saved a life." Exigencies occur which must be met at once by the right remedy or the life goes out. There is a satisfaction in successfully combating these difficulties and restoring a child to a mother's arms or a mother to her family, which is worth very much in compensation for the many thankless and disagreeable features about the practice of obstetrics.

As nearly as I can tell without actually counting noses I have attended about five hundred cases of obstetrics. In but one of these was delivery unaccomplished. This woman, who had a chronic cardiac lesion, died in an eclamptic seizure before anything could be done to relieve the enormous general edema that everywhere prevailed. Of eclampsia I have had in my own practice five cases, with three recoveries and two deaths; in consultation two cases, both fatal. It is a matter of interest that the greater part of this experience was in my early practice, and that the cases were not seen by me until labor began. I am sure that active prophylactic measures have
prevented a number of cases from maturing since that time. In none of these cases was blood-letting employed, but should have been in nearly all if not in all of them.

My experience with postpartum hemorrhage has been so extensive that I have often wondered if it was in line with the experience of others. I have never been so unfortunate as to lose a case from this cause, but my hair has stood on end a good many times.

In a series of cases I administered ergot as a routine practice, but without any good effects. The reason is obvious. Ergot given by the mouth is so slow in its action that it will generally fail to prevent hemorrhage if given after the close of the third stage of labor. I think it not good practice to give ergot prior to this period. A hypodermic injection of 1-40th to 1-30th grain of strychnia is more certain to contract a relaxed uterus than is ergot. However, there is no objection to the use of both if the case is urgent. Only twice in my experience has severe flooding occurred after I had left the patient. In each of these I was fortunately within easy call, and succeeded in checking the flooding by prompt measures. One of the most difficult cases of flooding to control occurred in a woman one week after a normal confinement. She got up on the fourth day, and on the seventh did a small washing. She lived in the country, and flowed enormously before I reached her. The hemorrhage was checked only by the closest kind of tampon packing.

As to the causes of this complication, various reasons have been given. However, in many cases it occurs most unexpectedly and without apparent cause. Multiple pregnancy, an overdistended uterus, one pregnancy following another in rapid succession, and mental anxiety all have been noted as inducing causes. As a rule, it takes us by surprise.

On a bitter cold night in the month of January, 1884, I was called twelve miles in the country to attend a woman in confinement. On arrival some aunty was washing the baby by the light of a dismal lamp; inquiry as to the welfare of the mother brought the reply that she was in an adjoining
room and all right. As I heard some suspicious moanings I did not wait to thoroughly warm my chilled body, but at once repaired to the room indicated. The woman was pallid and had a look of distress; the still large abdomen and the rapid pulse at once indicated an undelivered placenta, and a uterus filled with blood-clots. The blood had soaked entirely through the bed and was making a little red rivulet across the uncarpeted floor. There was no time to lose. The uterus was kneaded, the placenta was removed, the blood-clots scraped out, and a dose of ergot given to maintain contraction. At this juncture, mentally congratulating myself on the success of my lifesaving effort, I seated myself on the edge of the bed for a bit of rest. There were no chairs in the room—when, lo, the two ends of the frail bedstead went thither and yon, and the woman and the blood and the bed and the young doctor went down together. I have never seen that woman nor the bed since that night. But she did not die; she was not the kind that die for trifles.

A recent case is as follows: Was called to attend Mrs. M., wife of a physician, in her fourth confinement. Her health was good, except for a condition of nervousness induced by her passing through a most trying ordeal—the death of her husband from smallpox—and the anxiety due to the illness of a child from the same disease. She was confined about seven weeks after her husband's death and about five weeks after the sickness of her child with variola, she and two children escaping the disease.

I found her in the care of a physician, who was giving her chloroform liberally. After waiting some two hours and no material progress being made in the labor, we put her in position across the bed and I applied the forceps and delivered her of a good-sized female child. Perhaps five or eight minutes was consumed in separating the cord and putting the child aside. I then put my hand over the abdomen and found the uterus completely relaxed. I began kneading the organ, and in a few minutes was rewarded by a vigorous contraction that sent about a quart of blood and clots three or four feet
from the bed, entirely over a tub that was placed beside the bed and sadly disfiguring my person and the carpet. A hypodermic of strychnin was immediately given by the assistant and also by mouth a dose of ergot. There was no fainting or great pallor, as we sometimes see, but the pulse quickly ran up to 125 and remained high during the remainder of the day. In this case chloroform was given pretty freely, and may have had something to do with the condition that followed.

I am inclined, however, to credit the relaxation more to the mental anxiety and anguish of mind through which this patient had passed during the previous few weeks.

CASES OF PLACENTA PREVIA.

This complication has occurred only once in my practice. I have been called upon twice to assist neighbor physicians in controlling this serious condition. In my own case the implantation was central and the child was born through the placenta. The woman died on the fourth day, from sepsis added to the exhaustion. In the first case that occurred in consultation, the placenta was pushed aside, forceps applied to the head and the woman speedily delivered. The pulse was very rapid—120 per minute—and the prostration intense, but she rallied and recovered without any untoward results. This woman afterward succumbed to the same complication while in the care of another physician. I have not spoken of the injection of normal salt solution, for the reason that these cases occurred before this practice was in vogue.

It is not surprising that such rare occurrences as extrauterine gestation should be encountered only once in a general practice of twenty-two years, representing five or six hundred cases of pregnancy. As the diagnosis of this case was not fully concurred in by the attending physician, I will report the main features of the case:

A young woman, healthy and regular, was married on Thanksgiving day. Her next menstruation, which was due in a few days, did not appear. About the last days of December she was taken violently ill with great pain referred to the
left side, great prostration and rapid pulse. I saw her with the attending physician on January 3. At this time the pulse was accelerating, the pain intense and the temperature 102. The pain had been so severe that morphia had been used for some days. Digital bimanual examination revealed a tumor as large as the two fists to the left of and behind the uterus. There had been a slight discharge of blood from the uterus. My diagnosis was tubal or abdominal pregnancy, with rupture and inflammation following. As there was evidently no hemorrhage in the free peritoneal cavity, I advised an operation, through the vagina. Accordingly, the patient was chloroformed and an incision made into the tumor. Quite a large quantity of black grumous blood was discharged. She gradually progressed to a complete recovery.

**INDUCED LABOR OR ACCOUCHEMENT FORCE.**

This I have done, or assisted in doing, several times. Among my early experiences I assisted in a case of this character. I do not remember how far this pregnancy had progressed, but the complication was ascites. Paracentesis was done once, but without relief. Labor was induced by the use of the catheter in the uterus. There was twin pregnancy, but the product was not viable. The mother got along well and is now living. Another case, supposed to be eight months along, had anuria. After exhausting all ordinary measures, labor was induced by a forcible dilatation. The child was viable, but the cord was tied in a complete knot. The child lived two days; the mother made a normal recovery. The third case was one of hydramnion, which presented the largest distended abdomen I have ever seen. The pressure-symptoms were distressing and had already seriously affected her general health. Chloroform was given and forcible dilatation of the cervix accomplished. There must have been three or more gallons of water. The child was large and deformed. This woman was near the end of the eighth month of pregnancy. Doubtless the great distension and pressure would have brought on labor before another month. The physician in charge certainly did a wise thing in advising rapid dilatation
and delivery at this period, for had it occurred spontaneously in the absence of the attendant, postpartum hemorrhage would have certainly followed and might have been fatal. As it was, the dilatation was effected by a gradual pressure of the hand and the escaping waters controlled to a certain extent. Pressure on the uterus by both hands of the assistant, following it down gradually and continuously, and even with this, hypodermics of strychnia and ergot were necessary to maintain contraction.

For dilating the uterus the hand is preferred to Barnes bags, in cases well advanced. For earlier cases I would use the steel dilator as in ordinary operations on the uterus.

In 1886 I attended my youngest case. She had been married less than a year, was less than 15 years old, and gave birth to twins. If she regretted her youthful experience she never said so, but bore her sufferings with much courage. In 1899 I attended a primi gravida, 44 years of age, who had lived with her husband for nineteen long years preceding the happy event. This labor, while somewhat protracted and requiring the use of instruments, was no more difficult than many who are in their twenties.

In a country practice here in the west I apprehend that dystocia from a contracted or deformed pelvis is exceedingly rare. For my own part I have not seen a case, and hence my observations will not be along this line. I have, however, witnessed the successful issue of a number of cases of whom it had been said, “she could never have a living child.” Doubtless others have had the same experience. I can not too severely criticise this adverse judgment rendered by the physician without just cause. Doctors are supposed, by some people, to know everything, and when this fiat goes forth and pregnancy again occurs the poor woman, frightened by the prospect before her, does the abortion act, or if too conscientious for that suffers untold mental anguish till her time is accomplished. About two years ago I was called to an adjoining town to see a woman five months pregnant upon whom this woe had been pronounced. About two years prior to my visit
she had been instrumentally delivered, with great difficulty, of a still-born child, after being two days in labor. The attending physician told her that because of a flattened pelvis she could not have a child at term and live. As a consequence of this pronouncement this most estimable woman, as soon as she found that she was again pregnant, without malice aforethought, endeavored, by mechanical means and by the free use of ergot, to rid herself of this death-warrant. As she flowed freely, like many others, she supposed her efforts successful. With chagrin and distress she recognized the continued enlargement of pregnancy and, at the proper time, quickening. A physician was consulted and concurred in the statement of the former attendant and advised the induction of labor at the eighth month. An examination by me at five months showed a well-developed, muscular woman, with broad back, and broad pelvis; vagina and pelvic organs normal. Examination with the pelvimeter showed all measurements up to and some over the average. I assured her that there was nothing in her present condition that precluded a safe and happy delivery. At the accouchement I was called at about 10 a.m. The child was born at 3 p.m., without assistance. This leads to the question why some apparently normal cases are so tedious and actually demand instrumental assistance for the safety of the child, and for the integrity of the maternal parts, when perhaps the next labor in the same patient will be accomplished before the doctor can get his pants on. I am a firm believer in the preparatory treatment—hygienic and medicinal—of the pregnant woman. For this reason every pregnant woman should have her medical adviser long before she enters the lying-in chamber. Moral—Don’t tell a woman who has a normal pelvis that she can not have a living child, or that she can not have a child and live, because it always leads to mental torture and may lead to measures that are at once dangerous to herself and destructive to her child.

On a cold winter morning I was called to see a domestic in a family, the matron being somewhat of an invalid. The
head of the family, who came for me, said the girl had the
colic. I found that she had, but that it was uterine, and
that it would every now and again remit. The woman of
the house seemed to believe that the girl was going to have
some malignant fever on the premises, and went into hys­
terics when I told her that the disease was not catching, and
that there was simply going to be a little business for the
census taker. The mistress declared that I must get her
away from there, as it would certainly disgrace them. On
examination I found the os considerably dilated and the
pains were vigorous. I told the man of the house that if he
would hustle and get a team and sled and plenty of wraps
and straw in the sled that I would do the rest. He hustled.
Between pains, at sunrise in the morning—mercury below
zero—we got her into the sled and sped way over the snow
to the outskirts of the city, where her mother lived, and in
about thirty minutes the baby was born, all doing well except
the father, who could not be found. I suppose we ran some
risk, but we saved the reputation of that family, and while
it was risky, everybody seemed to be willing to take the
chances, that is everybody who was consulted. Of course, in
this case, like in many others, one of the most interested
parties was not consulted.
THE EXPERIENCE OF A GENERAL PRACTITIONER
IN THE FIELD OF OBSTETRICS.

M. A. HOOVER, M.D., KEARNEY.

The following is taken from the March number of the Alkaloidal Clinic:

“Midwifery is perhaps the most easily understood of any branch of medicine, so much so that a great many midwives—who never saw a medical college or read a work on obstetrics—make quite a reputation in that art. At the same time there are a great many who practice obstetrics weekly and sometimes almost daily who have not even a vague idea of the mechanism of labor.” In my judgment, from a practice covering nearly twenty years, this is farther from the truth than any article I ever read, and even the writer of the above says in the next sentence: “In order to be a successful obstetrician one must know what to do and when to do it if we expect to assist our patient in the parturient act of process.”

Of all work in the general practice I have never had anything that calls for quicker action, clearer judgment and an immediate demand of the intelligence than an obstetrical case. You can never tell whether your patient will survive the ordeal, for complications of the most serious nature may arise at any moment, calling for prompt action. One, two or three minutes’ delay may result seriously to the patient.

It has been my misfortune to have had three cases—in the early 80’s—requiring craniotomy; one proved fatal to the mother. This was a woman, past forty years of age, healthy in every respect, in her thirteenth confinement. Labor came on naturally and everything seemed favorable to a speedy delivery for the first six hours, then there was a halt.
In the examination I discovered an enormously large head presenting, and was satisfied that the forceps would have to be used. As it is my habit never to administer an anesthetic and use forceps alone, I sent for assistance. After vainly endeavoring for some time to apply the forceps, we sent for another physician. After exhausting all means of delivery by forceps, we agreed that nothing short of craniotomy would give the mother a chance. We perforated and crushed the skull, and then failed to deliver. Finally, after much severe labor, we succeeded in disarticulating and removing one arm at the shoulder, after which we delivered the child. The mother survived the removal of the child one and one-half hours. The child was weighed and the scales registered twenty pounds strong. All her previous confinements were normal and comparatively speedy. There was nothing abnormal as to parents, both being of average build and in good health. The mother had good health all through her period of pregnancy, being up and doing her work as usual, which was always heavy, as she lived on the farm.

One of the other cases was a child of normal size, but a flat pelvis was the necessity for the operation, having failed to deliver by means of the forceps.

The third and last case was an abnormally large head—hydrocephalus—and could not be delivered with forceps.

I had one case of complete rupture of the uterus—I was called in consultation in this case—the attending doctor giving me the following history: A young woman, about 20 years of age, primipara, head presentation, labor normal, only slow and tedious, had been in labor about fourteen hours. The os uteri was rigid but dilated gradually, perineum rigid, bowels and bladder had been emptied, no nausea; no anesthetic had been given. Immediately on expulsion of the child the mother fainted and the extremities grew rapidly cold, circulation being only perceptible over the heart. He had tied the cord, removed the child, and immediately placed the woman in hot pack and administered stimulants, had made no effort to remove the placenta, and was not positive of the
cause of her condition, but, owing to the absence of external hemorrhage, feared rupture.

After giving me this history, he requested that I remove the placenta and ascertain the cause of her syncope. On introducing my hand, it came in contact with a coil of intestine, the placenta having become detached and dropped into the abdominal cavity. I experienced no difficulty in removing it, then reintroduced my hand and found the laceration complete. The patient lived about half an hour. The important question in this case is, would the administration of an anesthetic have prevented this accident? If so, what physical condition would have called for it earlier in the labor, everything being normal, only labor being slow?

I have had almost all forms of presentations, both in single and twin pregnancies. I have had four cases of postpartum hemorrhage, two of placenta previa, all degrees of adherent placenta, as well as retained. (In all my cases of retained placenta, midwives had been in attendance, with one exception.) In several the cord had been detached from the membrane by too much pulling, they not being acquainted with the mode of expulsion of same. I will give a sketch of one case:

I was called twenty miles in the country in September, 1888, to assist a midwife in removing a placenta, she having pulled the cord loose, and not knowing what else to do, became frightened and wanted help.

As there was considerable hemorrhage, owing to a partially adherent membrane, she attempted to control same by plugging the vagina with the sleeve of a dirty old soldier blouse; she wanted cotton batting, and not having any, said woolen cloth would do.

When I arrived I found the room in semidarkness and cold, the bed covered with blood clots. The husband kindly told me I was too late, that his wife had just died. The midwife had left for home just a few minutes before. Having procured a light, I was curious to see what was the cause that led to her death. Placing my hand over her heart I detected
a slight motion, and immediately proceeded to revive the patient. I removed the coat sleeve, detached the afterbirth, applied the necessary remedies, and after a couple of hours had the satisfaction of seeing the patient conscious and in a comfortable condition, and I learned afterward that she rapidly recovered and was in the enjoyment of good health.

Query in the case for unbelievers in rubber gloves and asepsis.

I wish to say a few words relative to the use of forceps. I have not averaged more than three cases in a year of forceps delivery. I can recall only four cases when I used the long forceps, in all the others the head was engaged on perineum, where short instruments were more convenient. I have never attempted instrumental delivery in a breech presentation, as I have succeeded in turning the child. Contrary to the results of most obstetricians, I invariably have had slight lacerations of perineum, with only one exception, and have had but one case where lacerations extended through the sphincter ani. This was one of the cases where the long forceps were used. I was successful in the repair and healing of the wound. I have never had any serious injuries to the child following instrumental delivery. On several occasions I have succeeded in rotating or relieving a slightly impacted head by using one blade of the forceps as a vectis. I placed my patient crosswise of the bed and had the nurse support the knees, holding them widely apart, with buttock resting on the edge of the bed, thus giving me plenty of light and room for my work. I deprecate the use of forceps in every case, as practiced by some obstetricians simply to lessen the time naturally required for completing labor—and for the additional fee of five dollars.

I have seen a few cases where an anesthetic was given early in the first stage of labor, when the pains would cease for a number of hours, and this was repeated each time on return of pain until labor was prolonged much beyond the time that would naturally have been required to complete the same. The danger from hemorrhage is much greater
when the system is thus relaxed, beside the very frequent cases that suffer from nausea, vomiting and sick headache, thus producing a condition of the stomach which prohibits the administering of nourishment for a number of hours. Thus my observations teach me that much more harm than good results from the too frequent use of the obstetrical forceps.

There are two conditions in the lying-in room that I have never encountered: hour-glass contraction of the uterus and puerperal convulsion.

The following rules have been adopted by me in my obstetrical work for the last ten years:

1. To attend no case in which I have not been engaged at least one week prior to expected period of confinement.
2. To visit my patient once or twice prior to confinement and make a thorough examination relating to the condition of the digestive organs, action of the kidneys, etc.
3. Never to administer an anesthetic and deliver with forceps without the assistance of another practitioner.
4. To use no anesthetic except when instrumental delivery is required.
5. To repair at once all injuries to the perineum where required.
6. To visit all cases for three days following confinement.

By observing these rules I seldom have a rise of temperature over two-fifths of a degree in the three days. I can attend to the action of the bowels, the emptying of the bladder, the rest and comfort of my patient, exclude all meddlesome visitors and see that she has the proper nourishment and sleep.

My uniform method is to administer a full dram of Squibb's fluid extract of ergot within ten minutes after delivery of the placenta, then fifteen drops every twenty minutes until three doses are given.

A favorite prescription of mine as an antifebrifuge is:

B. Codein sulph. ........................................... 016
   Quinin sulph. ........................................... 129
   Antikamnia ........................................... 064

M. Ft. capsule No. i. Sig. One every four hours for four days.
For relief of afternoon pains I prescribe:

B. Papine .......................................................... 1
Hayden's viburnum compound........................... 4

M. Sig. At one dose in hot water as often as case requires.

The second day I require the nurse to use a vaginal douche of from three to four quarts of hot water with from ten to fifteen drops of carbolic acid, and to continue the use once a day till the patient is able to be up. On the third or fourth day, according to the condition, if bowels have not moved, give a rectal injection of warm water and glycerin followed each day by magnesia sulphate to keep the bowels open.

The folder or bandage I recommend left off till the patient is able to sit up, then apply the same with a heavy pad placed just above the pubes, drawn very snug at the lower border and gradually looser at the upper, thus aiding to retain the uterus in its normal position.

I am satisfied that when the bandage is used earlier it produces, or rather is a cause of, prolapsus, as I have seen several cases within two months after parturition, and no other cause could be found to produce it.

DISCUSSION ON PAPERS OF DRS. CLARK, ANDERSON AND HOOVER.

Dr. Merriam: It may be that some of us older ones don't keep up with the times, but I do not agree with all the doctor has said in his paper. He spoke about using a binder by placing it around the abdomen. Now, if there is any value to be attached to a binder it is only in the first twenty-four hours after the child has been born, and it should be placed around the hips. I think one of the most important things in childbirth is to force the uterus down into a hard ball and hold it there for an hour or so, or until it stays there, and that will avoid many of these troubles.

Dr. von Mansfelde: I object to the statement of the writer: "I never go to a case, unless I have been notified a week before." You don't mean that do you, Dr. Hoover?

Dr. Hoover: I mean it exactly.

Dr. von Mansfelde: You don't mean that if a woman needed immediate attention and could not get another physician you would not go. You don't mean that, do you? I want to ask Dr. Hoover to strike out of his paper one sentence, and that is, that physicians use the forceps to get an additional fee. I hope he will strike that out. I don't think that such an expression as that should be permitted on this floor. There is not a physician, who is worthy of the name, who will use a pair of forceps on a woman for the ad-
ditional fee of five dollars. He is not a man, and if he is, I pity him for his chances in the other world.

Dr. Baer: There is one other question. He says he never uses chloroform. Does the Doctor mean that, under no circumstances unless instrumental interference is necessary? I would like to have him strike that out of his paper also.

Dr. Rosewater: I want it distinctly understood that I think the post-partum binder is necessary for certain purposes. I would like to see the surgeon who, with a case of ascites, where there was suddenly removed two or three gallons of fluid, would neglect putting a binder there. The binder answers the purpose, and I don't think there would be nearly as many bad results if there were more binders put on. The fact that the binder has been put on wrong is no argument against the binder itself. There should not be such pressure by the binder that the uterus could be displaced. It should simply hold the abdominal walls comfortably so that they do not sag. That is one of the objects, I think, it accomplishes.

Dr. von Mansfelde: Do you mean to say that with a tense abdominal wall the binder is necessary?

Dr. Rosewater: I would like to see a tense abdominal wall after confinement at full term unless in a very fat woman.

There is one thing that I want to refer to, and that is the too frequent use of the forceps. I think too many physicians make that mistake. There are other means at our command to expedite labor without using forceps, and they should not be used until after all other reasonable means have been exhausted. The other means I refer to are, in the first place, the assistance of the patient's strength. If you do not starve her during confinement, but allow her nourishment, and perhaps occasionally a little strychnia, it will strengthen her and help her to keep up. I have sometimes given quinin. It stimulates the uterus greatly. The application of the forceps I shall speak of later in the course of our meeting.

I spoke in my paper against the use of the postpartum douche. After the labor is over, I believe the parts should be thoroughly washed off, but I don't believe in the douche after labor unless there has been instrumental interference.

Dr. Andrews: I see there is one man from the country that has the courage to say a word, and I don't know but that I might say the same thing, but when I come to think about obstetrical work I find it is something that interests me greatly. My mother was a woman, and that is the reason I am here to-day, and there is not a greater privilege accredited to the medical profession than attending a woman in confinement. If there is anything in the world that teaches us that we have done something for somebody and somebody knows you have done something for them, it is to deliver a woman in confinement, and I find this in the country, that if we follow the rule laid down by Dr. Hoover many a woman would be buried on account of our neglect. I say that no man who has an
"M.D." attached to his name has any right whatsoever to refuse to go in a case of confinement unless he can send some one else to take care of the case, or unless he has come in contact with some infectious disease, like smallpox, etc., where he knows he would subject that family to a greater danger in going than in staying away. That is the only case in which a man would be justifiable. I say this for the reason that there is no place in the world where help is needed more than in such cases. When complications set in something must be done right away if you expect to save the life, and not only one life, but two lives, and if the life is not saved it is probable that the home will be broken up and it leaves the husband and the children who are left to go out in the world, and the man that stays away on account of that neglect is guilty of the murder of that child and that mother. I oftentimes think we probably are too liable to find fault with some one else in their work, and this little stanza of poetry would be very proper in this case:

Let no mean jealousy pervert your mind,
A blemish in another's praise to find;
Be thankful for what yourself possess,
Nor think another's merits make yours less.

I don't think anything I say can detract from the merits of Dr. Hoover, but I think the rule he has laid down is absolutely wrong in every respect, and I believe if that man stayed away unnecessarily, and complications came up that resulted in loss of a life, he would be guilty of the murder of those parties, if by his professional assistance he could have saved those lives. I think if the Doctor himself sits down and thinks about it, he would not follow those rules.

I remember going a short time ago to a neighbor where I knew there would not be a cent in it; they could not buy flour. Complications had come on after labor. They had a German lady there to take care of her in confinement, and in attempting to remove the afterbirth she had broken the cord close up, and it could not be detached and the woman was bleeding to death. They came after me in a great hurry. I was in bed, sick, had been unable for over a week to go out; my wife was lying at the point of death, and yet I got out of bed and went and delivered the afterbirth, and when he got his money from Germany and came and asked me how much I charged him I told him twenty dollars, and he kicked about it, and I said, "I will give you a receipt for it in full if you don't want to pay me the twenty dollars. I consider I have done that much for charity and humanity in saving the woman."

Dr. Philbrick: I certainly think the statement that anesthetics should not be employed except in instrumental cases is very pernicious. I have found in my own work that it is well to give a good dose of strychnin where it is necessary, and the use of chloroform any time is approved in a great many cases. But I put a great deal of reliance in strychnin.
Dr. Pollard: I would like to inquire of some of these city practitioners how they would keep control of their cases if they were in the country. Now four out of five of my cases I never know anything about until some one comes up with a horse and buggy to get me to go and attend some woman in confinement, and in some cases I am not there in time to remove the placenta. Under these circumstances what are you going to do? You city doctors have a chance to control your cases, but we poor devils in the country have to practice the best we can.

Dr. Gibbs: I believe a man has a right to refuse to go and, under ordinary circumstances, to make a set of rules. The old saying is that "all rules have their exceptions," and, of course, he has a right to his exceptions. I think I would have gone just as quickly as my friend went under the circumstances, and probably would not have charged any more, and would give it back if I had to. The only objection I have to Dr. Hoover’s paper is this, and may be it was objected to before, but for fear it was not, I will object. I think he is the man that said he always gave them so much this and so much that, and he always gave them that for a fever. I want to know why he wants to give a person anything for a fever when they have no fever to start with. The more I practice medicine the less I see in giving a man medicine for something he has not got. Confinement cases are the most simple cases to handle unless there are some complications. Of course, if a tree is growing, and you run against one of the limbs and it is crooked, it will grow crooked, and I presume a fetus is the same way, but because a confinement case is physiological I cannot see any reason for giving them anything on earth. I, of course, hate to stay four or five hours when I can get through in five minutes with forceps. If the patient does not get through in five or six hours, then I would deliver her anyway, and if we use our forceps, if we know how, and of course we do, then we can’t hurt our women.

Dr. von Mansfeld: What about the baby?

Dr. Gibbs: The baby is all right. I never made a scar on a baby in my life. Of course I have seen a professor in a college who would not deliver a baby with the forceps, but he did not understand how to use them. And one of them spoke about holding the uterus down for three hours, squeezing it. If I had squeezed a uterus as he does I would have pleaded a criminal act. Dr. Merriam is off on squeezing the uterus. Do not get nervous about it.

Dr. Charles Inches: I have nothing very much to deliver at this time; I would just like to present an idea, or rather a suggestion right to the point. I think these papers warrant nearly anything from Dan to Beersheba. These gentlemen will excuse me if I am a little too harsh, and I do not want to criticise anyone here. I would merely say that after listening to the papers—I shall not mention any particular one—there is a great deal of material to be delivered in cases of this kind. But I want to say that the active
man or woman physician, for the best part of their life, if spent rightly, has been at the bedside of suffering women. There is very much of that. You must do this and you must do that. Some one wrote a work some years ago—Shelton—on experience. The gentleman said he would rather not go to attend a case of obstetrics. I won't say it is heaven for me to go and attend a case of obstetrics, but I will say that that practice has been nearer heaven than anything else. Now, the point I want to impress upon you is this: You should recognize, gentlemen, that you are dealing with the human body, and first of all you should approach these women as an inspiration of the human soul, and if there is that breeding and culture in you, it should be there more than in any other calling in life, and if you approach a woman in all the manifestations of childbirth, you don't want to be rough and erratic.

Dr. Cramer: I want to say a word or two about these papers. I believe that I must differ with some of these gentlemen. I do not think so much in criticizing these people, and I am thoroughly satisfied from hearing Dr. Clark's paper that he is excellent in these cases, and I am very glad that he has given us some of his thoughts and experiences. I do not think Dr. Hoover means to say that he would not go. I believe a man should know about his confinement cases months before, and not only have an examination, but know the condition of the uterus weeks and months before; he ought to know that, and if he is ready to take any kind of a risk, he will. I know it is the fact in Omaha that physicians have refused cases in which they have not been engaged; I know I do it, and I know other doctors do it. There is a great deal of risk run. I believe there is more responsibility in confinement cases than in any other abdominal or sexual trouble, and it is from the appreciation of that fact that I hesitate to take such cases on the spur of the moment; it is simply because a man learns the gravity of the situation.

As a matter of fact, you are not paid for your obstetrics. The farmer that pays you $10 to go out in the country and attend his wife in confinement pays a lawyer $50 for five minutes' service. I have not much of it, and I do not want much of it.

Dr. A. J. Clark: Perhaps I have not made this clear. I do not advocate the use of instruments in every case, but I do say that when you find nature needs help, I say use them if you can consistently, that is the idea, and I am more convinced than I was before that you should use them frequently. Now you say you have bad results sometimes in the use of instruments. Did you ever know of any bad results when you did not use them? Do you not know of a case where the instruments were not used until late in the labor, until the patient has been exhausted, and you had bad results? Do you attribute it to the use of instruments, or to the delay? You will find in a good many cases that nature is hardly able to accomplish what she desires, and why not help her, and why not do that with the instruments? As to chloroform, I am just in the same place. I use
chloroform frequently; more than I used to. Just at the last stage, when the woman becomes nervous and frantic, and the pains are certainly severe, the parts are contracted, and if you want to separate the perineum, do not depend on your hand so much, but give her some chloroform and you will have less pain, and do not wait to send a messenger down for a physician to assist you, but give chloroform. If you do, your child will be born probably before you get your help. Very frequently when you send for help you lack self-confidence. If you know it is time to use chloroform, use it. And you can use instruments before you have time to send to town, or, if you are in town, before you can get help, and you will save that person minutes, if not hours, of pain.

Regarding the perineum pad, I spoke of putting that on up around the parts to hold them in place. Some one has stated that it should be worn later, after the person gets up. If your patient exercises herself in bed before getting up you will find you have less use for the pad after she gets up; the muscles will become exercised, and how you are going to hold them or support the uterus with the pad I have not yet learned.

Why put a bandage around the hip? The supposition is that by putting a bandage around the hip you draw the parts together tight. If you can do it, I do not understand the anatomy of the hip. Now, will some one explain that? I came here to learn something. If you put a bandage around the hips to hold the parts together, in place, I do not understand the anatomy of the hips. If you put a bandage above the hips, you are doing something I do not want to do.

Now, in conclusion, I will merely say, let us try to make our patient comfortable, let us deliver her with as little pain as possible and make the labor as short as possible. Do not let her lie there in agony for hours merely for appearance.

Dr. A. B. Anderson: I do not believe I have anything more to offer on the subject; the ground has been pretty well gone over. If I should talk it would be simply to agree with a number of statements that have been made, and disagree with a number of statements already made, so I will not take up your time.

Dr. Maurice A. Hoover: My paper seems to have been like the shaking of a red flag before an infuriated ox, and the shots and shells thrown out have punctured, but not reached any vital parts. We are all of the same idea we were before the paper was read. I have listened closely to the speeches, and it crops out very plainly that he or she have their particular hobby that they follow and a regular routine just the same as I have outlined in the paper. I did not say it was infallible; I said it was the method I pursued.

Now, in regard to the first remark that was made by Dr. von Mansfeld, in regard to the fee; I do not think he understands the sentence. I said the doctor should use instrumental delivery for the purpose of hastening the delivery, or for the additional fee of $5. I do not think I shall cut that out; I shall leave it as it is.
Then, in regard to refusing calls, there is not a rule that is infallible. Each one present to-day has proved that mathematics are incorrect. Most of us have been able to take two from one and leave three. In this case I have certain reservations. For instance, families I have doctored off and on for ten or fifteen years; I know their condition and do not need to ask, but strangers come, and it makes no difference whether they are millionaires or multimillionaires, or paupers, that makes no difference, but I do say that a person coming to you comes to a doctor to attend a case; the doctor should have the privilege of knowing something about the case before labor sets in. I have two telephones in my house and can reach almost anyone in the state, and they know where to find me.

In regard to the administration of chloroform, that is simply my own method. I do not give it, as I said in the paper.

Now, in regard to Dr. Merriam's criticism of the binder. He simply follows his idea, as I do mine. I have no doubt they would not use it in the college, and I do not give it for the purpose of controlling hemorrhage.

Dr. Crummer has been answered.

Dr. Gibbs criticizes me for the administration of medicine for the prevention of fever or sickness, stating that the whole case is one of the most simple cases and does not need any interference; that anybody can attend an obstetrical case. I do not agree with him. I will tell you that my experience is that it calls for the best talent, for the clearest judgment and for the most matured action that can possibly be put forth in any case. As stated by one of the speakers, two lives are at stake, not only one, and possibly the entire family in doctoring that one particular case. I suppose from the Doctor's remarks that he never eats until he gets hungry. I do; I eat to prevent getting hungry, and I give medicine in these cases to prevent trouble. I believe I have met most of the criticisms offered against the paper, and if I have done nothing more, I have given you something to talk about.
THE CONTRACTED PELVIS.

EMMA WARNER DEMARRE, M.D., ROCA.

The time has passed when a physician who has had opportunity to measure the pelvis of a pregnant woman before the end of the seventh month can place upon Providence, or elsewhere, save on him or herself, the blame for the death of mother or child, or both, because of contracted pelvis. Such shifting of responsibility may still be possible with the people, because in most communities there is no general understanding of the fact that such fatalities are preventable; but an enlightened profession knows better, even though it is far from living up to its knowledge.

This fact, that we do not live up to what knowledge we have, and fail to possess ourselves of all that we might, is sufficient excuse for bringing the subject before this society.

We all know that many physicians who practice obstetrics own no pelvimeter, and some of us who own one have been in the habit of using it only with primiparas or with women who give a history of especially difficult labors.

George W. Dobbin, resident obstetrician of the Johns Hopkins Hospital, says: “Even in large obstetrical clinics, by no means as much importance is attached to pelvimetry as there should be. Reports show that it is their custom to measure only the operative cases, and take no account of the condition of the pelvis in normal labors and premature births; and we see in these reports pelves spoken of as ‘contracted’ or ‘contracted antero-posteriorly’ without any mention as to the variety or degree of deformity.”

When we consider the comparative shortness of the time since anatomical researches began, and the still shorter time
within which the life and well-being of womankind has been considered of sufficient importance to call forth the best efforts of students and investigators; the belief which until quite recently has been prevalent, that contracted pelvis is rare in this country, and the reluctance with which many of us accept teachings which add materially to the work expected of us, it is, perhaps, not surprising that the profession as a whole is not, even to-day, as alive as it should be to the importance of the subject.

Hirst says that “until the appearance of Michaelis’ work, in 1851, there had been no satisfactory and comprehensive knowledge of deformities of the pelvis.” In very early times difficult labors from mechanical obstruction by maternal bones were regarded as due to “failure of the pelvic bones to expand,” or “failure of the pelvic joints to separate.” Not until the middle of the sixteenth century was there any good anatomical description of the pelvis; nor is there any evidence that before that time the contracted pelvis was known as a cause of dystocia. Even then the study was not vigorously prosecuted, or, if it was, the results were not recorded.

Early in the eighteenth century Von Deventer laid the foundation of our present knowledge of the pelvis and its anomalies, and in 1751 Smellie exhaustively described it and first gave its correct measurements, considered from an obstetrical point of view.

The form recognized by Von Deventer was the simple flat pelvis. Naegele, after having had three cases of obliquely contracted pelvis, in all of which both mother and child died, made a study of the subject and wrote comprehensively, in 1834, on that form of contraction which has since borne his name.

Since that time much study has been given to the subject, and the many forms have been described and classified, so that there is now no lack of sources of information, as far as anatomical features are concerned.

As to frequency, there has been some recent discussion in
this country, and the few observers who have practiced routine pelvimetry and reported their work give much higher percentages than have been given before, the figures indicating that in our larger cities contracted pelves are nearly, if not quite, as frequent as on the continent.

In reports given by representatives of different nationalities at the international gynecological congress, in Geneva, in 1896, the percentages of contracted pelvis in the different countries varied greatly. Doubtless much of the variation was due to lack of uniformity in standards and methods of measurement and to failure of some of the observers to measure all cases. Later reports and estimates give percentages more uniform and approaching the higher figures given at that congress.

Michaelis finds 131 and Leitzman 149 contracted pelves in 1,000 parturients. Winckel, while giving lower percentages for Rostock, Dresden and Munich, believes that 10 to 15 per cent. of child-bearing women have contracted pelves. Kaltenback believes the percentage to be 14 to 20, giving 20.3 per cent. for Marburg, 22 per cent. for Göttingen, 16 per cent. for Prague. Shauta’s estimate is 20 per cent.; Broomall’s, 13 to 15 per cent. Hirst finds it difficult to estimate the frequency in America, because the inmates of lying-in hospitals are chiefly European immigrants and negresses, but has found in his private and consulting practice that “contracted pelves are not rare among native-born women in the densely populated centers of the Eastern States.”

Austin Flint, Jr., summarized records of 6,000 cases of pregnancy. Contraction was noted in 10.9 per cent., and in 86.08 per cent. of these, delivery was spontaneous. Lusk and Reynolds place the percentage quite low.

Obviously, only with the use of uniform standards and methods of measurement and routine pelvimetry can correct results be obtained and comparisons made.

At Johns Hopkins the oblique conjugate is taken as the standard and the limit placed at 11 cm. for flat and 11.5 cm.
for generally contracted pelves. Dobbin, of Johns Hopkins, reports the result of the routine measurement of 350 cases, of which 11.45 per cent. were found to have contracted pelves, 4 per cent. justo minor, 4 per cent. flat rachitic, 2.6 per cent. simple flat, and .85 per cent. irregular forms. Williams, also of Johns Hopkins, gives the result of the examination of 1,000 patients, of whom 460 were negroes. He found pelvic contraction in 13.1 per cent., it being 2.77 times more frequent in negro than in white women.

Davis, of Philadelphia, takes as the average measurements of the pelvis: anterior superior spines, 24 to 26.5 cm.; crests, 28.5 cm.; trochanters, 32 cm.; right oblique diameter, 22.5 cm.; left oblique diameter, 21 to 22.5 cm.; external conjugate, 20.5 cm.; internal conjugate, 11.5 cm.; circumference, 85 to 90 cm., and considers as contracted a pelvis in which there is a reduction of 2 cm. in the anteroposterior diameter, or of 2 cm. in any other two diameters. Using this standard, 1,224 patients were examined, with the result that 25 per cent. were found to have contracted pelves. In 80 per cent. of these, delivery was spontaneous and 20 per cent. required operative assistance.

While the figures given by different authors indicating the average measurements of the pelvis differ considerably, there seems to be practical agreement that when the true conjugate falls below 9 cm. the case is one that can not be safely left to nature.

Joulin says that "in all human pelves the transverse diameter is greater than the conjugate, while the reverse is found in lower animals, even the highest simiae." While there seem to be no characteristics sufficiently marked to refer any given pelvis to a particular race, yet some marked racial peculiarities have been noted.

According to Schroeder, "in Bushwomen and Malays the conjugate is usually as large as, and only rarely larger than, the transverse diameter. Pelves of the aborigines of America and Australia are almost round at the inlet." Dr. Manuel
Guiterrez, in a paper read before the Pan-American Medical Congress, at Washington, D. C., September, 1893, says that "the Mexican pelvis is characterized by a general reduction in its diameters, the more remarkable as they approach the perineal floor; by the great elevation of the symphysis pubis; by the great inclination of the excavation and of the straits; by the great extension of the perineum, and by the straightness and directness of the vulva.

The pelves of the Arabs are said to be notably smaller than those of Europeans, the transverse diameter at the superior strait being but slightly larger than the antero-posterior. The Caucasian pelvis is large, especially in the transverse diameter, and English women are said to furnish the best examples of it.

It seems to be true that with advancing civilization and the larger heads which are necessitated by the increased capacity for brain development, there is an increase also in the size of the pelves through which these larger heads must pass. Whether or not this increase is commensurate with that of the heads may be a question. According to Spencer: "At a certain stage of evolution the brain begins to change much more than the body," and that may be our present status, but I do not believe it to be true that "the woman's pelvis is," on the whole, "becoming smaller and more compact." Spencer says: "The survival of the fittest must nearly always further the production of modifications which produce fitness; whether they be modifications that have arisen incidentally, or modifications that have been caused by direct adaptation."

There is no doubt whatever that the heads of civilized peoples are larger than the heads of savages, nor that those of Europeans of to-day are larger than those of Europeans of the twelfth and thirteenth centuries, and there is, perhaps, not sufficient evidence that the change in the pelvis has kept pace with that of the head, but, to a large extent at least, it has been adapted to the changed conditions.
The mixture of races which has taken place in civilized countries, while it has not produced contracted pelves, has produced discrepancies between the size and shape of the fetal head and the size and shape of the pelvis of the mother, which discrepancies cause difficulties identical with those encountered in pelves where the contraction is absolute rather than relative. Englemann says that “among primitive peoples deformities of the pelvis are comparatively unknown, as they are due in the main to diseases which result from the crowding of civilization; a disproportion between the fetal head and the maternal pelvis is rare, as the intermingling of races, and even of tribes, is almost unknown, and hence the formation of the head corresponds to that of the pelvis. The dangers which result from miscegenation are so well known to the natives wherever an intermarriage with whites takes place, as it does upon the borders of civilization, that the confinement of a native mother with a child by a white father is looked upon invariably as dangerous, if not necessarily fatal, as among the Indians on the Pacific coast, the African negroes who are in contact with settlers, and the natives of the oceanic islands; hence abortion in the early months of pregnancy is often resorted to.”

Possibly the better correlation of the fetal cranium and the maternal pelvis among savages may be accounted for, in part at least, by the fact that natural selection weeds out the deformed pelves or abnormally large heads, the mother dying in labor, while with us the advance of obstetrical science makes possible the survival of a very large percentage of both mothers and children, thus increasing the number of abnormalities. In the causation of contracted pelvis, heredity plays a large part and the preservation of abnormal types, through the use of operations effective toward that end, must add materially to the total number in civilized countries.

The maintenance of the erect posture has been cited as a reason for progressively contracting pelvis. While it accounts for differences between the human pelvis and that of
quadrupeds, it can hardly do so for changes now going on in the human pelvis.

Our savage ancestors maintained the upright position, and, so far as we can learn, had smaller pelves, as well as smaller heads, than have we. The laws of adaptation seem to hold here as elsewhere in the evolution of the race.

In considering the causes of contracted pelvis, I wish to notice chiefly those which should be borne in mind in our care of pregnant women and in our practice among children. While, for many of the forms the causes are such as to be beyond our control, for those forms which are most common, a list of the causes shows that much may be done by way of prevention, where the physician has oversight of the mother during pregnancy and of girls from birth to puberty.

As causes of the simple flat pelvis, which Hirst considers one of the most frequent forms in this country, besides heredity and infantile paralysis, we have, lack of development; premature union of individual bones; the carrying of heavy weights; arrested rachitis; premature attempts at walking or sitting; failure to walk and exercise sufficiently.

As causes for the justo minor, another common form, Hirst gives: arrested development from unfavorable hygiene surroundings; deteriorated stock; unfavorable intrauterine conditions.

The wearing of corsets, by increasing the pressure of the viscera upon the pelvis, tends toward pelvic deformity.

In an article on "Harmful Effects of the Bicycle on the Girl's Pelvis," in the American Journal of Obstetrics, April 1896, Dr. Thomas R. Evans quotes Playfair as follows: "Until after the period of puberty the pelvic bones readily yield to mechanical influences," and Dr. Evans concludes, "Therefore, there is much probability that the bicycle will, at the yielding period, tend to push the ischial tuberosities inward and upward, and the younger the girl the greater the distortion. Then, in addition to a narrowed lateral outlet, as the coccyx comes lower down and extends farther backward
in woman, it may be ankylosed by pressure and jars.” He further concludes that, “if the simple weight of the body may cause the flattened pelvis, the slightly forward inclination of a girl on a bicycle may further tend to the production of such anomaly. Whether these fears are well founded or not, it will require time and further investigation to determine. In the meantime we may safely advise that young girls use the bicycle with moderation.

Most mothers understand that it is not wise to allow an infant to make too early efforts to walk, and they have, as a rule, some appreciation of the fact that girls should not lift heavy weights nor carry burdens, although too many mothers are ignorant as to the full extent of the injury that may thus be wrought, and are, therefore, less careful than they would otherwise be. As to proper food for mother and child, there is not only lack of information, but much misinformation. From the reading of alleged medical literature, many women have been led to believe that they may so regulate the diet during pregnancy as to furnish to the fetus less than the usual amount of material for bone formation, and thereby lessen the pains of labor without harming the child. Fortunately these plans frequently misfire and the fetus is supplied with nutriment for the osseous system in spite of efforts to the contrary. In some instances, however, there is a lack of intrauterine osseous development and the condition of the bones and epiphyses at birth is such as to predispose to contraction of the pelvis through deformities of the spinal column or femora, if not through primary deformity of the pelvic bones.

Since rickets “is often initiated during the last three months of intrauterine life,” and since rachitic forms of contracted pelvis constitute a large percentage of all cases, proper supervision of pregnant women should lessen the increase in number of cases of deformity from this cause.

If mothers can be taught that, in addition to the other evils that may follow in the train of corset-wearing, for their
daughters, there may be contracted pelves that will add materially to the difficulties of child-bearing; that improper food, lack of fresh air and exercise, excessive exercise, incorrect posture, overwork and the lifting of heavy weights all tend in the same direction, future generations will have less use for the obstetric operations which the contracted pelvis demands. If, in addition to this, women will learn to consult a physician in the early months of pregnancy, and if obstetricians will learn to consider pelvimetry an essential part of their duty toward such patients, the mortality resulting from contracted pelvis will become exceedingly small.

By the induction of labor at a suitable time, most cases can be terminated with safety to both mother and child, and there will remain for symphyseotomy and Caesarean section only those cases in which the degree of contraction is too great to admit of the passage of a viable child, even with the aid of forceps.

For embryotomy there is no place in these days of aseptic surgery, except the fetus be dead, or the condition of the mother be such as to preclude the possibility of operation.
THE INDUCTION OF PREMATURE LABOR FOR CONTRACTED PELVIS.

INEZ C. PHILBRICK, M.D., LINCOLN.

The operation of the induction of premature labor for contracted pelvis constitutes a part of the considerable treasure of the remote past, won in recent time from the oblivion of intervening centuries, Hippocrates having written of its performance at the seventh or eighth month.

It were of little practical result, though of great interest, to trace the hidden steps by which, from an initial idea awakened in the brain of thinker or thinkers observant of Nature’s method, has been evolved the scientific operation of to-day. Such inquiry would, in the words of Cazeaux, carry us “back through the gropings which characterize all human works, to the maneuvers of an Aspasia, the forced dilatation of the os uteri by Louise Bourgeois and J. Guillemeau or the more gradual procedure of Puzos.”

Although laity and profession have been slow to accept the dictum that, “It is better to prevent difficulty than to have to treat it,” the idea of prevention is to-day dominant in many of the affairs of men, and even, in part unconsciously, receives abundant confirmation. Most modern movements for the amelioration of social conditions look toward prevention. The criminologist labors for the prevention of crime, not primarily the perfecting of judicial procedure, nor the ameliorating of prison conditions. The philanthropist would eliminate pauperism, not nurse it into lusty growth in the lap of indulgence. More and more is the idea of prevention dominating effort toward establishment of temperance and social continence.
Medicine is not exceptional in embodying this all-pervasive spirit. The possibilities of surgery, that branch of medical practice whose achievements in recent years have gained most of plaudit and have largely dominated professional ambition, are born of preventive medicine—the maintenance of germ-free conditions. The institution of quarantine against infectious disease; the dissemination of knowledge of avenues and modes of infection; the promulgation of laws of heredity, resultant in attempted and sometimes achieved legislation; the chemical examination of foods; the testing of herds; the regulation of the milk-supply of our large cities all witness the pre-eminence of preventive medicine.

One at all conversant with the history of medicine in its practice might postulate that in the practice of obstetrics would the claims of preventive medicine last receive recognition; for, unquestionably, the practice of no other branch of medicine is so indifferent and dallying; so subservient to the traditions of an ignorant public; in short, so essentially unscientific. The fact that in New York City, the metropolis of that state whose medical law is most nearly in accord with advanced medical sentiment, thirty-seven hundred midwives practice their vocation (Trans. N. Y. Co. Med. Soc., 1894,) is of compelling import.

For the inadequacies of obstetric practice the profession stands responsible. That physician who takes no pelvic measurements, makes no uranalyses, repairs no lacerations, makes but one visit subsequent to delivery, and does not at least request an examination late in the puerperium—and there are such—is, if not the sole author, certainly the most potent promoter, of that sentiment which relegates to divine providence or blind chance, as you will, the lives of mother and child; which justifies the attendance of midwives on all obstetrical cases not presenting anomalies demanding skilled assistance; and, hence, often condemns the physician to an emergency struggle against, it may be, overwhelming odds.
To the avower of such sentiment the induction of premature labor for contracted pelvis holds naught of appeal or of commendation. Such sentiment precludes diagnosis; and, hence, the application of the appropriate remedy. The midwife stands at the dividing of the ways, where the laissez faire policy and scientific method part company. New times demand new remedies. A civilization which more strenuously than ever before avows the dignity and worth of human life—of life universal—the rights and duties of motherhood—evidenced, if inadequately, in mothers’ congresses and departments of child-study—demands not perfunctory, but arduously scientific methods in the lying-in chamber. The wise physician and the conscientious will adopt himself to the demands of an increasingly exacting public sentiment; and from the foolish and the conscienceless will be wrested, through stress of environment, recognition of its claim. Ultimately the fit survive.

As almost every scientific procedure, this operation has passed through various evolutionary stages—that of instinctive application; the speculative, when pondered and discussed; the experimental with uncertain technique and indifferent results; and the scientific, with thoroughly established indications and definite technique. The latter stage to-day obtains in the theory of recent text books and the practice of the foremost in the profession. That the operation has as yet received scant recognition from the profession as a whole is attested by the dearth of authoritative statement regarding it outside text-books on obstetrics, there having appeared but three full text articles on the subject in the American Journal of Obstetrics, since its beginning, in 1868. As illustrative of the obstetric method of best qualified practitioners, we may accept J. F. W. Ross’ tabulation of 6,777 cases of labor attended by his father, James Ross, of Toronto, between 1852 and 1892. Not one induction of premature labor for contracted pelvis is recorded, although the indication for such procedure in a number of the cases is clear. Of 491 forceps cases twelve showed pelvic contrac-
In fifty-five cases where the child was still-born, the forceps had been used. Pelvic contraction is noted in two cases of breech and one case of foot presentation. Four craniotomies and forty-five versions were performed. The infant mortality reached 16.5 per cent., and in eight cases pelvic contraction is noted as directly causative. Four maternal deaths may be justly attributed to lack of proportion between pelvis and fetal head; one, a neglected midwife case, death after thirty-six hours from exhaustion, craniotomy and version having been performed on a moribund patient; one, version in articulo mortis; one death from shock consequent upon a ruptured uterus, great force having been required to deliver the child; one, death after a very difficult forceps extraction of an impacted child.

Discussion relative to this operation has been long and spirited. Cazeaux, writing in 1878, avers that "No obstetric operation has ever been more warmly or profoundly criticised than this. In fact, it has been supported or condemned by the leading accoucheurs of all countries, and as a consequence of this disagreement among the masters of our art, no part of obstetric science has been studied with greater care." Inevitably, the basis of discussion has shifted with an advancing civilization. In the early days of its arraignment, discussion waged round the ethical status of this operation. Churchill writing in 1857, states that "the first consideration has always been, not the usefulness, but the morality of the operation," and quotes Denman as stating that, "a meeting of eminent obstetricians was held in London, in 1756, to consider the moral rectitude of, and the advantages which might be expected from, this practice." Baudelocque, representative of early French teaching regarding this operation, held it a crime, his view no doubt colored by the teaching of the Roman Catholic Church. Velpeau, in 1838, assumes a conciliatory though cautious attitude, averring that, "unless a very slight value is attributed to the life of the fetus, this recourse is then of small advantage; at least, previously to making a general precept of it, it deserves to be maturely con-
sidered by unprejudiced men and in "a more philosophical way than seems to have been done hitherto in England or in Germany." Ramsbotham writes, in 1865, "As to the morality—of the operation—there can be but one opinion. If the life of the child can probably be saved, and if much danger can be averted from the mother the morality in this surgical means of procuring a great benefit must be self-evident."

The words of Denman may be taken as voicing modern rationalism against medieval superstition, "with regard to the morality of the practice, the principle being commendable, that of making an effort to preserve the life of the child which must otherwise be lost, and nothing being done in the operation which would be injurious or dangerous to the mother, but, on the contrary, offering a probability of lessening both her danger and suffering, I apprehend if there be a reasonable prospect of success, no argument can be adduced against it which will not apply with equal force against any kind of assistance at the time of parturition . . . . in fact, against the interposition of human reason and faculties in all the affairs of life."

Discussion amongst more recent obstetricians centers largely about the indications for and the technique of the operation; although the greater opposition still encountered from the French obstetricians is, I think, indicative of a slight remnant of ecclesiastical bias, and testifies to the stress of a crying social problem—the diminishing population of France, a problem which demands and has obtained profound co-operative deliberation, and one which gives to the life of the fetus paramount significance.

The operation has still its opponents. Playfair, in 1886, held that it would be unnecessary to argue in its favor were it not for the opposition of certain eminent obstetricians, referring to Litzmann, Spiegelberg and Mathews Duncan, Charles P. Noble, in a paper before the American Gynecological Society, in 1894, champions the operation of symphysiotomy against that of the induction of premature labor.
in cases of contracted pelvis, and the sentiment evidenced by
the discussion seemed in accord with his view. Pinard, in re-
porting symphyseotomies performed at the Baudelocque clinic,
in 1894, announces the “abandonment of induction of prematu-
re labor.” One of the best qualified practitioners of our own
state characterizes the contracted pelvis as a “modern in-
tensity,” a view which, carried to its legitimate conclusion,
would relegate the treatment of dystocia to practitioners of
suggestion. However, despite opposition, on whatever
ground, the attitude of the foremost current writers on obstet-
rics indicates the favorable trend of professional sentiment.

We may accept the statement of Schroeder, that to the
English we are indebted for the introduction of the modern
operation, and to the Germans for the formation of its indi-
cations and the perfecting of its technique—another debt to
English initiative and German painstaking care of detail.
The—according to Denman—warm endorsement of the body
of English obstetricians who met, in 1756, to discuss the
moral rectitude and practical advantages of the operation,
effected, shortly afterward, a successful performance by Dr.
Macauley. Germany and America followed with operations
by Wenzel, in 1804, and Professor James, of the University
of Pennsylvania, in 1810. In France, professional sentiment
being profoundly influenced, if not controlled, by the teach-
ings of Baudelocque, it was not until 1831 that the operation
was first performed by Professor Stoltz, of Strassburg.

Diagnosis, the indispensable condition to the utilization
of this procedure, made at such time as renders the operation
available, is utterly revolutionary of present methods of prac-
tice, it implying the examination of the patient at a much
earlier date in the pregnancy than is customary; the pelvi-
meter as a part of the armamentarium of every physician
practicing obstetrics; and measurement of the pelvis of preg-
nant women as a routine procedure. There is a moral implica-
tion as well. Failure on the part of the physician to diagnosti-
cate typhoid intestinal ulceration and institute appropriate
treatment were considered criminal, even though symptoms
of perforation having arisen, he should score a brilliant surgical triumph—a recovery after abdominal section for perforative peritonitis. Is it any less criminal, opportunity presenting, to fail to diagnosticate noteworthy pelvic contraction, and, by election of the operation of choice, forestall major operation procedure undertaken of necessity? That noteworthy pelvic abnormalities are comparatively rare does not remove the obligation nor lessen the culpability.

It were fortunate if diagnosis were entirely a matter of measurement of pelvic diameters. Scientific exactitude would impose, as well, the measurement of the angle of pelvic inclination and of the inclination, height and thickness of the pelvic symphysis. An additional factor, coequal in significance to that of pelvic measurement, enters into the problem of diagnosis. The mechanical phenomena of labor are determined by the relation existing between container and contained; and the size of the fetal head is capable of estimation only, and that with more or less of difficulty and inaccuracy. The diagnostic method of Müller and Schatz—determination if the fetal head can be made to engage at the pelvic brim under manipulation, anesthesia being employed if required—reduces inaccuracy to the minimum, and precludes resort to the operation of induction of premature labor when such relative contraction exists as to expose the premature infant to the dangers of a difficult forceps extraction. In any event, given noteworthy pelvic contraction, even were the size of the fetal head for any reason impossible of accurate estimation, it were the part of wisdom to join hands with safety and induce labor at such time as the pelvic measurements would indicate.

The thesis established that the induction of premature labor is demanded by the interests of both mother and child in certain cases of contracted pelvis, there follows its application, it dividing with symphysiotomy and Cesarean section claims for employment. The determination of which of these three methods shall be employed in any given case is not always...
Hirst avers that “The selection of the best mode of delivery in contracted pelvis is one of the most difficult problems in obstetrics. Hence, naturally, unanimity as to the limitations of this operation does not obtain. Later obstetricians evince a disposition to define its limits more accurately and admit less aggravated degrees of contraction. Unquestionably much of failure and disaster accredited to this operation is justly attributable to its employment in the higher degrees of contraction where election lies between symphyseotomy and Cesarean section.

Among obstetricians by whom a conjugata vera of less than 7 cm. is not deemed a contra-indication to this operation are Charpentier, admitting its performance with a conjugata vera of 6 cm.; Playfair—after Kiwisch—and Byford, 6.25 cm.; Ritgen, 6.46 cm.; Winckel, 6.5 cm.; Schroeder, 6.75 cm.; Cameron and Noble, 6.88 cm., in flat pelves. Bar, Hirst and Parvin recognize the operation as justifiable with a conjugate vera of 7 cm.; Spiegelberg and Broomall, 7.5 cm.; Davis, 8.5 cm.; Beuttner, 8.6 cm. Tarnier would make 8 cm. the limit of division, employing the operation of the induction of premature labor above, and symphyseotomy, in appropriate cases, below this limit. The conservative limit of Hirst, between 7 and 9.5 cm., is suggestive of the fact that this operation, if it be employed to its greatest advantage, in cases where it offers the maximum of safety to mother and child, has narrowly defined limits.

The time of induction of premature labor is variously set, in consistence with the degree of pelvic contraction under which the operation is admitted, it being by some advised as early as the twenty-eighth and twenty-ninth weeks. Commendable practice would bar its employment prior to the thirtieth week—between the thirty-first and thirty-fifth being a safe limit.

Of methods, not less than a score have been advised, running the gamut of possible avenues of attack. There have been methods based on the evacuation of the liquor amnii;
on the use of oxytocic drugs; on excitation of uterine action reflexly through irritation of the mammae; on direct excitation of uterine action by friction, douche, vaginal tamponade or the introduction of carbon dioxide gas into the vagina; upon separation of the membranes by fluid, sound, catheter, bougie, gauze or finger; upon dilatation of the os uteri by tents, bags, steel dilators or hand. The current statement that the personal equation often so modifies the result of bad method as to mitigate if not abrogate condemnation, does not here obtain; as most of these methods are inherently bad, introducing into the operation manifold complications and dangers.

Evacuation of the liquor amnii, first recommended by a midwife, Justine Siegmundin, in induction of premature labor for placenta previa, was, naturally, the method employed by those obstetricians who earliest induced labor for contracted pelvis, and is mentioned only to condemn, it being far more irrational and reprehensible in its latter than in its former use, the complications of dry birth being therein far more serious factors.

A present therapeutic teaching and practice which abrogates the use of ergot to stimulate uterine action because of the dangers to mother and child consequent upon tetanic uterine contraction, finds in the practice of Ramsbotham and Burgiovanni administration of twenty-grain doses of powdered ergot each quarter hour until, perchance, thirty or forty doses had been administered, a horripilator worthy of contesting superiority with Hamlet's ghost. The huge dosage would confirm current therapeutic teaching that ergot can be depended upon to initiate uterine action. Fortunately the employment of oxytocic drugs as instigators of labor is obsolete within the pale of reputable practice.

Approaching the farthest confines of the impractical and grotesque may be noted the method of Scanzoni, the application of cups, blisters and sinapisms to the mammae.

Methods based on direct excitation of uterine action by injection of carbon dioxide gas into the vagina—used by Scan-
zoni and Simpson, and later, condemned by the latter—vaginal tamponade, recommended by Schöller, Huter and Braun; the use of the electric current proposed by Herder, in 1803, and first employed by Hörninger, in 1844, deserve only passing action. Their uncertainty disclaims reliance.

The method of Kiwisch—repeated vaginal irrigation with water at 106 F.—while not meriting entire dependence, is a most excellent initiatory, and is so recognized by leading operators. A method which well-nigh engrossed professional favor at the century’s noon, Cohen’s, consisting in the separation of the membranes by water injected between them and the uterine wall, while scoring many favorable results, was justly condemned by Professor Simpson and others because of numerous fatalities which followed in its train. Pelzer’s method, substituting glycerin, 5i-iv, as the provocative agent, for several years following its introduction in 1892, by Professor Pelzer, of Cologne, claimed most of the current journal references to the induction of premature labor. Because of numerous toxicities and fatalities reported, among others, by Pfannenstiel; Müller, of Winckel’s clinic; Hypes, of St. Louis, and Emden, this method has finally received that condemnation which attendance upon the words of Miekulicz, “glycerin can induce poisoning when introduced into absorbing tissues and cavities,” would have made initial. The discussion of this method, in the Centralblat für gynäkologie, 1894 (Nos. 4, 5 and 6; Rep. in Amer. Jour. of Obstet., vol. xxxi, p. 141), between Pelzer and Pfannenstiel is decisive. That glycerin, as employed in this method, is capable of decomposition of the red blood-corpuscles and of exciting glomerular and interstitial nephritis and interstitial hepatitis, has been abundantly demonstrated. Spinelli’s method, brought forward a year ago (Ital. arch., rep. in Amer. Jour. of Obstet. of April, 1899), substituting for the glycerin gauze impregnated with glycerin and ichthyol, introduced after dilatation of the cervix and separation of the membranes, falls by the same testimony.
While separation of the membranes by that "best of all instruments," the hand, after the method of Hamilton and Merriman is most rational in theory, its accomplishment is much more difficult than is separation by the bougie, about whose use best practice has crystallized, it having by reason of flexibility and capability of sterilization replaced the sound and catheter.

The advent of aseptic operation marks the passing of the sponge-tent as a uterine dilator. The rubber bag, next to claim the suffrage of the profession, is largely obsolete. While employed by Tarnier, and by Davis, as supplementary to the bougie, it is condemned by Hirst because of its unreliability and the danger that it may burst. The use of branched metallic dilators after the method of Edgar is not to be commended, they introducing a considerable element of danger to maternal tissues, and speed being not here an essential factor in the result. Reference to bougies from the size of a lead pencil to that of the forearm, after Hirst, partakes of the nature of the humorous. Manual dilatation of the os uteri, the best of all methods, constitutes the only worthy rival to separation of the membranes by the use of the bougie; and is by many employed as supplementary to Krause's method. By Dr. Anna Broomall, at the Woman's Hospital of Philadelphia, it is made the sole dependence after preparation of the tissues by the method of Kiwisch.

In contravention of that spirit which condemns statistics to the limbo of the untrue, men are always interested in and influenced by their showings. In discussing the statistics of this operation, various modifying factors must be considered. First, we must distinguish between the statistics of preantiseptic operations and those performed with due regard to asepsis. In the first period, sepsis constituted the chief element in maternal mortality: in the second, it is or should be eliminated. Davis avers, "In the hands of those practicing antiseptic operation, the induction of labor has no direct mortality for the mother." "My general results may be stated
to be no mortality and no morbidity for the mothers in all cases, both private and hospital.” Hirst states that he has never “had a fatal result in the mother.” Noble puts the maternal mortality at “1 per cent. in good hands.” Milne, as early as 1873, three years after the advent of the period of active antisepsis, writes: “The safety to the mother is a settled fact. If a single woman be killed by it, the fault must attach to the operator and not the operation.” (Ed. Ob. Soc., 1873.) The introduction of the couveuse and improved methods of infant-feeding have certainly, in recent years, somewhat modified infant mortality, especially in hospital practice. Hirst puts the infant mortality. “if the labor is induced not earlier than four weeks before term as no greater than the mortality of infants born at term.” Davis thinks a mortality-rate for children from 25 to 30 per cent. is not too high. Milne places it at 20 per cent. Noble writes, “It has been amply demonstrated that a large percentage (about 66.6 per cent.—Winckel) of premature children die within a few hours of birth. With the incubator the infant mortality was 18 per cent. in the Leipzig Maternity, and 30 per cent. in the Paris Maternité. In 991 early operations by a score of operators, collated by Churchill, about 610 children were saved. That, as indicated by these findings, improved methods have not more materially changed infant mortality is not difficult of explanation. The couveuse is found only in hospitals in the larger cities; and infant-feeding, while the fad of the few, is terra incognita to the many. Again, a distinction must be drawn between private and hospital statistics. In hospital practice the higher degrees of pelvic contraction and deformity, associated with vitiated physique. prevail. As a counterbalance, in hospitals conditions obtain difficult of attainment in private houses, although the operation being an elective one, control of conditions is much more full than in an emergency operation.

Of early operators, I find reported:
Spiegelberg and Litzmann give, respectively, 15 and 14.7 per cent. maternal mortality and 66.9 and 55.8 per cent. infant mortality for the operation, against 6.6 and 6.9 per cent. maternal and 28.7 and 20.3 per cent. infant mortality without interference. In the face of these percentages it is not difficult to account for their opposition to the operation.

Of late operators, Leopold and his assistants report for the Dresden clinic during four years, forty-five cases of induced labor, with one maternal death from sepsis. Wyder, of Berlin, in an analysis of 9,000 cases at the Charité, and 6,000 at the Polyclinic, records 306 cases of induction and premature labor, with a maternal mortality of 3.9 per cent.

Tarnier records 30 cases of operation in pelves with conjugate vera of 6.6 to 8.6 cm., with no maternal and 40 per cent. of infant mortality; 49 cases in pelves with conjugate vera of 8.6 to 9.6 cm., with no maternal and 20 per cent. of infant mortality; 17 cases in pelves with conjugate vera of 9.6 to 11 cm., with no maternal and 29.41 per cent. of infant mortality. In a later reference (La Presse Medical; American Jour. Med., vol. cx., p. 489), he gives, for pelves above 8 cm., the infant mortality as 24.72 per cent., and below 8 cm. as 57.14 per cent.

Hacklenbroich reports (Am. Jour. of Obstetrics, May 1899,) 60 cases of induced labor, 26 being for contracted pelves. Only 27 infants left the hospital alive.

Bar reports (Amer. Jour. of Obstetrics, Dec. 1899,) 86 living children out of 101 operations in 100 cases.

To conclude the operation of the induction of premature labor shares with symphyseotomy and Cesarean section the

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<th>Method</th>
<th>Cases</th>
<th>Maternal mortality</th>
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<tr>
<td>Cohen's</td>
<td>15</td>
<td>None</td>
<td>3</td>
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<tr>
<td>Krauss's</td>
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<td>Dohn.</td>
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<td>Milne</td>
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conduct of labor in contracted pelvis. Its limitations are capable of exact definition; and within them it has no legitimate competitor, it showing a maternal mortality nil and an infant mortality certainly less than that in cases of difficult forceps extraction and emergency symphyseotomy. As holds of all operative procedure, and, indeed, of the practice of obstetrics in general, the employment of the operation is not permissible to him who does not meet the requirements of aseptic technique. The increasing size of the fetal head and an ever greater estimate upon the worth of human life promise the operation a future of increasing demand and usefulness. It is consistent with the trend of modern thought—conservative, preventive.
THE ETHICS OF DESTRUCTIVE OPERATIONS UPON THE CHILD.

A. R. MITCHELL, M.D., LINCOLN.

Since history began, medical science has devoted itself to the preservation and the prolongation of human life—a nobler science surely than any devoted to devices intended simply to add to the luxuries provided by unaided nature. A much higher art than any which preserves by brush, by chisel or mechanical device the records of the past or the present, except it be for the purpose of preserving or prolonging life. While medical science is constantly devising new means in the direction of preventive medicine and life-saving methods, another group of equally zealous scientists is devising more and more ingenious methods of destruction. We direct the course of the helpless to the full strength of maturity. The other scientist, in the name of progress, cultivates the primal savage instincts and closes his short career in the glory of the modern paraphernalia of destruction. The state rarely intercedes in our behalf—but its treasure-house is open to that other body for the purpose of adding still further to destructive means. Were I to continue this line of logic it would lead to a recommendation of a more human embryonal destruction—but we must keep pace with the other body that the balance be maintained.

That destructive operations upon the unborn have been more numerous in the past than they are now or will be in the future goes without question. That scientists of the past have labored in the right direction with indifferent success was not the fault of incorrect methods, but of technique. The early history of Cesarean section and the later operation of
symphyseotomy found relatively small support because infective processes produced so large a maternal mortality. Modern aseptic methods have placed at our command means for the preservation of both maternal and fetal life which earlier practitioners did not have. It is for us to urge the adoption of modern methods and the abandonment of those mutilating processes which were the necessity of the past.

The first and most important point to be urged—a point which should be insisted on in all first pregnancies—is a careful examination of the pelvis. This precaution may save two lives. The trust-to-luck habit is too common among the—not younger, this time—but older members of the profession. Taking things for granted, because in years of practice you have never met a contracted pelvis, is a neglect so obvious as to merit condemnation in all cases. In a recent investigation made in the out-patient department of the Boston Lying-in Hospital, of American and foreign-born women, it was found that nearly two out of every hundred American-born women showed some sign of contraction, though it was usually slight, and was in every case of the juxtominor type, while among the foreign-born women of the clinic the percentage of deformity reached nearly 6 per cent. The large number of very difficult labors and the relative frequency of mutilating operations upon the child are sufficient argument in urging early pelvic examinations. The scales of pelvic measurements have been so carefully compiled that to repeat them would be mere iteration. Further, if I ever attain a fair competence—because much will not be needed—I am going to offer a prize for every member of this society who will annually get up and, from memory, give the correct pelvic measurements. With the unaided hand the practical physician can make a very accurate pelvic examination; if any doubt exists the usual instruments should be brought to his aid. If satisfied that a living child can not be born at term—unaided, or by means of forceps, version or symphyseotomy—a clear statement of the situation should be
made to all concerned. In slightly contracted pelves of the juxtominor type, where the head is of normal size, a safe forceps delivery is usually possible. In these cases the life-saving operation of symphyseotomy can be relied on to add space and aid in a safe delivery. While it is impossible to determine with absolute accuracy the relative proportions of the head and the pelvic diameters, a reasonably close estimate can be made. Where early examination has shown a general contraction, repeated examinations toward the close of pregnancy should determine the course to follow. Better induce labor at the seventh or eighth month with the hope of saving the child than wait for term and the horrors of craniotomy upon a living child. If called late and labor is already advanced, the child alive and a hope of delivery exists through symphyseotomy, it should be resorted to. In cases where there is little hope of delivery by forceps and symphyseotomy, where the contraction is great, and especially with a narrow conjugate, craniotomy, exenteration or Cesarean section is the operation left to us. My friend Jonas will tell all he knows about Cesarean section, for he has probably performed it more times than I have, my operations being limited to one assistance and to one post-mortem.

Modern obstetric surgeons look with more favor upon section than ever before. Modern technique certainly justifies the effort to save a living child if the operation can be made before efforts at delivery by the natural passages have been made or before the patient is exhausted by protracted labor. I believe the time is here when the chances for the mother in Cesarean section are equally safe with a craniotomy high up in a pelvis falling to 3 or 3¼ inches in the conjugate. I wish to repeat here that this diameter is not increased by symphyseotomy. There is another class of cases whose gravity is only too frequently recognized when it is too late; cases so rare in individual experience that the occasion seldom presents for a second regret. In cases of placenta-previa no question of ethics arises. The warning note of hemorrhage
without appreciable cause after the third month of pregnancy—that is after the formation of the placenta—should warn the alert counselor, as an alarm-bell, of approaching danger. Examination should be thorough; no hesitancy should permit introduction of the finger into the os to make certain your diagnosis. The percentage of maternal mortality is so great in these cases, and the probability of a dead child so sure that the chance should not be taken. Abortion is the only course. Another effort can be made later.

In these few remarks upon what is the best course to pursue to protect the life of the unborn, I have not touched on another phase of the subject—one as uninviting as it is popular. The paltry few whose lives are spared are but a handful to the hundreds, aye, thousands sacrificed each year by methods which are unjustifiable and criminal. I fear that even some of our great profession think to usurp a power not given us—to determine the right to life of unborn babes—it is not for us to destroy but to save life. If society is wrong, it is not our function to attempt to right it by the destruction of those who may some time have a hand and a voice in its shaping. If society permits its sons and its daughters to err, through error society will in time see the right. It is for us to advise; it is for us to protect, but the hand of fellowship should never be extended to him or her who attempts to right one wrong with another.

As broad-minded men, as conservators of the physical and moral health of the commonwealth in which we live, as shapers of ideas which take movement over the whole earth, it seems to me that we should turn from abstract science to other fields and enter solemn protest against the wanton destruction, whether for gain or glory of those we have helped to save at the bedside and in the cradle. We should cherish and proclaim the words of Him who said: "Peace on earth, good will toward men."
THE RELATION OF THE OBSTETRIC FORCEPS TO THE CONTRACTED PELVIS.*

CHARLES ROSEWATER, M.D., OMAHA.

Ordinarily the presence of a contracted pelvis is considered a contraindication to the use of obstetric forceps at full term. That delivery through a contracted pelvis occurs occasionally spontaneously is simply due to the accidental small size of the fetus. Delivery at term through a contracted pelvis is sometimes accomplished by the aid of the forceps, but such delivery very often results in greater injury to both mother and child than would have resulted from other obstetric measures at our command.

The physician who is engaged ahead for an obstetric case is inexcusable if, when labor sets in, he discovers a contracted pelvis which he has overlooked before. He then meets with difficulties and obstacles which are, to say the least, very embarrassing, and which he might, being forewarned, have prevented and forestalled. Here is where the necessity and utility of the careful examination of all prospective mothers, especially primigravida, become apparent. Where such a careful examination, not only of the physical construction of the patient, but also of the functional activity of all the vital organs, is made during or before the eighth month of pregnancy it will yield results justifying the resort to this procedure.

The majority of narrow pelves are, however, only recognized during delivery either because the physician has neglected his duty or because he has not been consulted previously. The physician who yields to the false modesty of his
young primiparous patient and postpones careful examination of her pelvis until he is called to attend her in labor is jeopardizing his patient's life and that of her child, and also his own reputation, for, though nothing may come of this neglect in case after case the time will come when he will be caught napping and find himself confronting a case of contracted pelvis at a period when he can accomplish less with his skill than he could have accomplished had he obtained this knowledge of the pelvis of his patient six weeks previously. There is no getting around this fact. Even the intelligent public is being educated up to it. I have yet to see the primipara, who, when the matter was clearly presented to her, with all the dangers attendant on lack of such knowledge, will refuse to submit to a careful examination, conducted under cover and without undue exposure. In ordinary practice the skilled obstetrician needs no other instrument for such an examination than the index finger alone, or supplemented by the ring finger. With one or two fingers carefully introduced under strict antiseptic and aseptic precautions, he can reach the promontory of the sacrum and, pressing upward with the knuckle of the index finger against the lower border of the pubic arch, mark where the latter comes in contact with the knuckle. This gives him approximately the diagonal conjugate from which one-half to three-quarters of an inch may be deducted to get the true conjugate or anteroposterior diameter of the pelvic inlet. A sweep of the fingers around the upper border of the pelvis, per vaginam, will give an approximate idea as to whether there is any contraction or obstruction at the pelvic inlet.

During the same examination the approximate dimensions and condition of the pelvic cavity and outlet may be obtained and now, if there is apparent any contraction of the pelvis, a careful pelvimetric examination may be made to ascertain the exact dimensions of that particular pelvis. In lying-in hospitals conducted on the most scientific and modern basis these dimensions are usually taken in all cases. Sta-
The minor degrees of contraction are not incompatible with the birth of a living child *per vias naturales*, but require for their successful delivery: primarily, a favorable presentation, a small, or not too large, head, good molding of the same, good pains, and sufficient vitality on the part of the patient. My rule in regard to such cases has been that of non-interference. Such births are long and tedious on account of the mechanical obstructions to be overcome, and I try to sustain the patient’s strength as much and as long as possible, see that the bladder and rectum are empty, place the patient in the most favorable position for the expulsion of the fetus, carry out strict asepsis and antisepsis, examine as seldom as is consistent with a clear knowledge of the progress of the case, and only interfere if the local conditions demand it.

What are the local conditions which would require such interference? If the position of the presenting part is not the most favorable, change it to the most favorable position to be obtained in the given case. In case version becomes necessary podalic version should be preferred, cephalic version being strongly contra-indicated by the existence of a contracted pelvis. If the fetal heart-sounds are becoming weaker or much more rapid, the life of the child is in danger, and in such cases the forceps should be applied if the head is presenting and has already passed the pelvic inlet or is well engaged therein. Otherwise, version will, in such a case, enable the physician to deliver more rapidly. The chances of survival of the child in all such cases, where either the forceps or version is resorted to in contracted pelvis, are doubtful, and the physician will save himself much undeserved censure if he will so inform one or both of the parents. Ordinarily, unless there is indication for haste in delivery on account of some sudden danger to either the mother or child, I would advise judicious watchful delay in a case of contracted pelvis as being calculated to offer the best prognosis for both mother and child.
Occasionally too great approximation of the tuberosities of the ischia forms a serious obstruction at the pelvic outlet. Here, if the approximation is great, symphyseotomy would be preferable to the use of the forceps, or if symphyseotomy does not offer good prospects of saving the child, owing to the extreme deformity of the pelvis, Cesarean section would be the better operation to resort to. Taken all in all, Cesarean section is to-day the cleaner, more favorable, more promising operation, holding out better prospects of successful delivery of the child with less permanent mutilation of the mother than symphyseotomy. Craniotomy should not be resorted to in those cases where the child is alive. Craniotomy on the dead child is, in the case of a contracted pelvis, frequently the most feasible method of prompt delivery.

There is, however, another line of action, which offers better prospects for the safe delivery of the child than either of those hitherto considered, but to take advantage of this it is necessary that the patient be examined sufficiently far ahead or that she be a multipara with a clear undoubted history of repeated obstructed labors with loss of children. The method to which I allude is the dietetic management of the pregnant woman in the last months of pregnancy, whereby when the child is born its cranial bones will be softer and more yielding and can consequently be molded to the shape of the pelvis better than those of a normally developed child.

A number of years ago Professor Prochowink, of Hamburg, outlined such a course of treatment, basing his conclusions on experience in several cases where women, in order to be delivered, had previously been compelled to submit to mutilating operations on their children—such as craniotomy. He instituted this treatment and had the gratification of being able to deliver the patients of living children which were living one year thereafter, when he lost track of them.

Prochowink's course of diet is as follows:

*Morning Meal.*—Small cup of coffee and six drams of hard-tack (Zwieback).

1. Centralblatt für Gynäkologie, 1899, No. 33.
Noon Meal—Any kind of meat, eggs and fish, with very little sauce; some green vegetables, with fat added; salad, cheese, butter as desired.

Evening Meal—As above, with addition of one and a half ounces of bread and as much butter as desired.

Fluids, per day, limited to 12 to 15 ounces. Also red or Moselle wine.

That when the head is soft and yielding and the other conditions favorable for the application of the forceps the latter may be applied with as great safety as in other cases, safeguarded, of course, by the usual precautions taken in the forceps operation, no one will dispute. In such cases the axis-traction forceps should be preferred, in that it favors the better molding of the head to the shape of the pelvis and does not allow of such a degree of compression as to be so dangerous to fetal survival, as in the case of the ordinary forceps.

I shall not take up your time with a detailed description of all the steps of the forceps operation, but will simply close with the reiteration of the initial statement of this paper, that under ordinary circumstances the presence of a contracted pelvis contra-indicates the use of the forceps, especially if the child be alive.
SYMPHYSEOTOMY AND CESAREAN SECTION.

A. F. Jonas, M.D., Omaha.

The operation known as Cesarean section is perhaps as old as any known obstetric procedure, so far as known; done first by the Greeks, after the death of the mother, for the purpose of saving the child. The Romans insisted that no pregnant woman should be interred until, through an abdominal section, the child had been delivered. All such children were named Cesar.

We find the first operation on a living woman to have been done successfully by Jaques Nufu, in 1500, on his own wife. The first treatise on this subject appeared in 1581, by Rousset. Like all capital operative procedures originating at this comparatively early date, Cesarean section met with much favor at some periods, and was almost forgotten at others, until the beginning of the nineteenth century, when speculation in medicine gave way to a rational science. The operation found its permanent place among obstetric operations with the advent of antiseptic surgery. From a mortality of 50 per cent. and more in the preantiseptic period, we have advanced to a recovery of 98 per cent. of mothers.

In 1768, Jean Rene Sigault, a French medical student, proposed to separate the pubic synchondrosis by a cutting operation, to increase the anteroposterior diameter in deformed pelves. His thesis, in 1773, at Angers, set forth his propositions. In 1777 he did his first operation on a living woman, a dwarf, three feet eight inches high, obtaining a living child. The pelvic conjugate measured 23½ inches. The success of this operation, which had been condemned by the Academy of Surgery nine years before, brought Dr. Sigault
a medal from the Faculty of Medicine, and a pension for himself and the patient from the Government. These marks of recognition created for Sigault a host of friends and many enemies. Then, as now, there were symphyseotomists and Cesareanists, each advocating one plan of delivery to the condemnation of the other. The merry war has continued to the present day, each operation gaining for a time, perhaps, an undue recognition, to the unjust disparagement of the other. To-day, while we view the conditions from which we seek relief in the clear light of recent observation, it would seem that the indications for the one or the other procedure, are plain. The fact that both operations have withstood the test of modern developments and experience attests the value of each; neither one can be employed to the exclusion of the other.

Until the recent revival of symphyseotomy the discussion was chiefly craniotomy vs. Cesarean section. Craniotomy, until we understood Listerism, was safer, so far as the mother was concerned. Antisepticism, more particularly asepticism, has made the Cesarean operation safer than the other, besides saving a larger proportion of children. While craniotomy still has a place under certain conditions, it may be left out of consideration when we have fair surroundings, moderate equipment and sufficient assistance.

Should we decide which operation is preferable from a technical standpoint, we would unhesitatingly elect symphyseotomy. A small incision over the pubes, a separation of the symphysis with a Gabiati knife, is a simple procedure compared with an operation which exposes the entire abdominal contents. Both these operations are done because the parturient canal has been modified to a point where the conjugata vera is less than 2 3-7 inches, by deformity or disease of the pelvis.

Cesarean section can be done on all cases, irrespective of the pelvic obstruction. Symphyseotomy is contraindicated in case of abdominal or pelvic tumors, or when the conjugate vera
is less than 2¾ inches (Garrigues.) In the latter operation we endeavor to increase the pelvic diameters so that the child may be born by way of the pelvic canal; in the former the pelvic diameters are not affected. In cases where the conjugate diameter in a flat pelvis is less than 3½ to 4 inches, the head of the child of normal size, and an absence of pelvic tumors or vaginal atresia, symphysisotomy is the operation of choice. It is simple. The pelvic canal becomes sufficiently large to admit of the passage of the child.

It is indeed strange to note, while reviewing the literature, particularly in reference to the room gained after pubic separation, that Crede and Scanzoni wrote that symphysisotomy was permissible only in women who had died, and the child's head wedged in the pelvic cavity. Speigelberg said but little increase in space is gained, and its fatality is another point against it. Schroeder, Fritch, A. Martin and Runge treated symphysisotomy with silent contempt. Zweifel and Winckel were outspoken in their condemnation. These were opinions expressed ten years ago.

Aside from the high mortality—32.4 per cent. in the pre-antiseptic period—the following objections were urged: Kehrer stated that, aside from the danger, permanent invalidism resulted. Winckel's objections were based on the observation of the occurrence of lacerations of the bladder, injury to the sacroiliac joints, and necrosis of the pelvic bones, and he said: “Let us hope that symphysisotomy is forever buried.” Zweifel gave exhaustive reasons why the operation is impracticable, and its restoration should not be attempted. Kleinwachter writes in a similar strain, and says, amongst others: “Italy should not be envied for the fame of being the only country advocating and performing the senseless operation.” Yet the Neapolitan school, under the leadership of Morisani, has continued to improve the technique of symphysisotomy, uninfluenced by all this severe criticism.

The chief objections to the operation lay in the belief that the space was not sufficiently augmented. Crede's objections
were based on the results of experimentation on the pelves of dead, non-pregnant women. He stated: The symphysis can not be separated beyond a distance of four centimeters without danger of injury to the sacroiliac synchondrosis.” Morisani. Pinard and others found that a much greater separation of the symphysis can be had and the sacroiliac joints still remain intact. This difference of opinion lies probably in the fact, that “under the influence of pregnancy, the pelvic joints undergo a change peculiar to the pregnant state. A softening and swelling of the cartilages and ligaments takes place. The articular synovial membranes become increased in size. Morisani states that in his experiments on dead women, he found much greater separation in puerperal pelves than in non-puerperal, amounting in the former, in young women, sometimes to 6 and 8 cm. On the dead woman, pressure on the iliac bones was necessary to obtain a space greater than 1 cm. On the living woman, counter-pressure on the trochanters is necessary to prevent too great separation of the bones.

It has been believed by many that the operation is difficult, on account of ossification of the bones, a condition that occurs only in old females. In 10 cases over 60 years old, examined by Morisani, ossification was not found. According to Luschka, “the symphysis pubis of the female is a perfectly developed joint, having articulating surfaces, synovial membranes and four strengthening ligaments.” The belief that the symphysis is frequently ossified lies in the fact that the joint is not always in the median line. Wehle examined 60 pelves; in only eight cases was the joint exactly in the median line; in 40 it was to the left, in 12 to the right of a line drawn through the center of the promontory. These observations will account for the necessity of using a saw in some cases, the operator failing to find the symphysis.

To disprove the statement that little additional space is obtained by separation of the symphyseal articulations,
Wehle's demonstrations on a contracted pelvis, removed forty-eight hours after death, are so conclusive that it may not be out of place to briefly outline them.¹

The pelvis, which had been preserved in Wickersheim fluid, was fastened with screws to a post; the inlet was placed in a horizontal position. Dividing the symphysis, the left innominate was immobilized, the right was abducted to 3 cm. on lateral pressure, the bone moved sidewise and downward. "The lateral separation of 3 cm. necessitated a descent of 2 cm." The iliosacral joints move on an oblique axis, running from above downward and from below inward; the anterior borders of the articulating surfaces separate, while the posterior part of the os innominatum, which projects beyond the articulating surface, approximates the sacrum. During the movement of the bone, two points remain immobile. The first is a small prominence on the posterior superior border of the superficies auricularis, the second is found on the posterior inferior border of the auricular surface. A line drawn between these two points constitutes the axis around which the motion between the sacrum and innominate bones takes place.²

By these movements it will be seen that an increase of 1.2 cm. in the conjugata vera by a separation of 6 cm., and 1.5 cm. by a separation of 7 cm. takes place. This diameter is further increased by the fetal head during the process of extraction. It will also be noted that the lateral and oblique diameters are increased. These experiments conclusively proved the unjustifiability of the claim that the space in the pelvis is not increased by symphyseotomy.

As to the other objection, that the ill after-effects condemn the operation, on investigation we find that necrosis of the pubic bones, incontinence of urine, vesicovaginal fistula, prolapsus uteri, imperfect symphyseal union, occurred in illy-selected and unfit cases; cases where the conjugate diameter

² Am. Jour. of Obstetrics, xxvii, p. 758, fig. 6.
was less than two inches, or where there was oblique deformity, or patients exhausted from prolonged labor; in cases where faulty technique or lack of proper antiseptic precautions were to blame. As Morisani puts it, "the failures are not the fault of the operation, but are due to the lack of skill of the operator."

The conditions which should be present for a successful symphyseotomy are:

1. The conjugata vera, according to Morisani, should not be less than 6.7 cm.—2 inches.
2. The patient should not be too exhausted from prolonged labor.
3. The woman must not be suffering from infection.
4. Extreme oblique contraction and pelvic ankylosis must be absent.
5. Fetal heart sounds should be good.
6. The child must not be of unusual size.

Multiparous subjects are more favorable subjects; the soft parts seem better prepared.

Given a case with the foregoing indications, and an operation decided on, we may proceed as follows: After a careful attention to aseptic details as applied to operating material, the patient should be placed on a table with the buttocks close to the edge, the legs semiflexed, resting on chairs, or, better, supported by assistants; the bladder is emptied, the abdomen, pubes and vulva shaved and carefully disinfected. The operator stands between the legs. A vertical incision is made down to and extending a finger's breadth above the pubes. The pyramidal muscles are divided. The bladder is separated from the posterior pubic surface. The left index finger is placed behind the joint to protect the bladder. A sound should be introduced into the urethra and pressed to one side. The joint is divided with a curved, probe-pointed bistoury or a Galbiati knife, from above and behind, forward. The ligamentum arcuatum may be divided, but not unless necessary. The operator should not forget that to find the
joint in the median line is the exception. The fetal head is now pressed into the pelvis. The child is extracted by version or forceps. Meanwhile, the assistants exert pressure on the trochanters. After delivery of the child, the usual precautions against hemorrhage are taken. The ossa innominata are now pressed together and the wound closed like any other wound. Wiring the pubic bones is not necessary. The usual hygroscopic, antiseptic dressing is applied.

Drawbarn has modified symphyseotomy in the following manner: The urethra being held well away by a sound or metallic catheter, the knife—a very strong, large, blunt-pointed bistoury—is inserted in the exact median line, and is carried up the groove at the front of the symphysis to its top. There a gentle sawing motion is begun, and is carried from top to bottom of the symphysis through its cartilage. The left forefinger, meanwhile inserted in the vagina, feels the blunt end of the knife at each oscillation, through the walls of the empty bladder.

A strong canvas bandage encircles the pelvis, fastened with strong laces. A broad band should be passed under the pelvis, and to this band are fastened several strong cords which are long enough to reach the ceiling, or are fastened to a frame above the bed to form a swing. This contrivance assists in pressing the pelvic bones together, at the same time making it more easy for the nurse to give the necessary attention to the genitals.

It is unnecessary to recite the technique of Cesarean section at this time. Its details are so well understood. No one will deny the fact, however, that the operation is a formidable one, compared with pubiotomy.

It has already been pointed out that pubiotomy can never displace sectio Cesarea. Each has its legitimate field, and each will stand the test of time. On theoretical considerations it may seem not so difficult to select the proper procedure. At the bedside the problem is often a perplexing
one. It is difficult to decide if it will be possible to extract a child through a moderately contracted pelvis. We must be Cesareanists as well as symphyseotomists.

In a general way we may say that: 1. Symphyseotomy may be done when the conjugata vera is not below $2\frac{3}{4}$ inches, providing the pelvis is free from neoplasms, atresia vaginae, and providing also that the head of the child is not abnormally large. 2. Where the conjugate diameter is below $2\frac{3}{4}$ inches, or where there are neoplasms and vaginal atresia, the sectio Cesarea should be done.

Aside from these recommendations other conditions must sometimes be taken into account. If a practitioner be alone with his case, a long distance from the city, and without assistance, and the patient be exhausted from long suffering, he may be justified in resorting to craniotomy. A rule applicable to the city, with proper surroundings and skilled assistants, can not be considered under opposite conditions.

The greatest difficulty in achieving ideal results from either symphyseotomy or Cesarean section is the fact that so many of these cases are found in the hands of unqualified midwives, who permit, oftentimes, most extreme exhaustion of the parturient woman to occur, before skilled aid is summoned. Deformed pelves, due to rachitis, osteomalacia, spondylolithiasis, kyphotic conditions, and sometimes fracture of the pelvic bones, unfortunately for the credit of either operation, are found in the improvident, the poor, often ill-housed and fed. Let us hope, however, that an advancing civilization, a wise philanthropy, or, better still, an improved social condition of the poor, may bring about such a condition that the etiological factors of pelvic deformities may disappear, and cause both operations to become practically obsolete.

DISCUSSION OF SYMPOSIUM ON OBSTETRICS.

DR. A. S. von MANSFELDE: I want to compliment the Chairman of the Section on the very excellent program she has prepared for us. It is simply impossible to add anything to the presentation of the papers here. There may be some differences of opinion, but that is always true in a body of men and women as large as this, especially
medical women. I want to call your attention particularly to these forceps (the Doctor here exhibited a pair of forceps), and that is simply to reverse these two hooks, and then you have the whole pair in that hand, and by putting your hands about here (indicating) it will be found to be an easy way to make the delivery.

DR. D. E. SEDGWICK: I want to make a remark or two. You know that down in Africa the insects that live on the leaves are mostly the color of the leaves, and I understand the reason of that is this law of selection; that it makes any insect that is not the color of the leaves so prominent that it is picked up by the birds, but where the insect is the color of the leaves it is not so apt to be molested. And this idea of selection is brought out by one of these papers I have heard. If the cavity of the pelvis of a woman would gradually be enlarged and the head become enlarged, in course of time by this process I suppose there would be no limit to it; the head would gradually grow until all would become of one size. Where it is certain that the pelvis is so contracted that a child cannot be born alive, I think it is the duty of a physician to have a talk with his patient, both the man and woman, and advise them that it is better not to have any more children. I had two or three cases of that kind, and after consultation with the husband and wife there has not been any necessity since for an operation of that kind. Of course we do not object to performing the operation, but I think it is the duty of a physician to insist on that in every case.

Do I understand Dr. Jonas to say that all operations should be performed on a table? Now I do not do that; perhaps the rest of you do.

These two ideas have suggested themselves to me. I have never raised a woman out of a bed and put her on a table and applied the forceps and then put her back again. That is the best way, and there are a great many things that we know are the best way that I never do.

DR. A. F. JONAS: I wish to say here that, if after a complete examination one has come to the conclusion that only such an operation will permit of the delivery of the child, we should state to the husband and wife that it is difficult for her to have children and that she would better be sterilized, and that three or four days after confinement. I would discuss it with the husband and with the wife. With reference to placing a woman on the table, I say it is the best way, but it is not always convenient. I have had to perform operations on dirty old beds sometimes, because that is all we could get. But the table is the best way, I think.
NERVOUS AND MENTAL DISEASES.

J. M. AIKIN, M.D., OMAHA.

A survey of the literature pertaining to neurology and mental disorders during the past year reveals evidence of much thought along these lines; "most of that which is true is not new, and most of that which is new is not true."

Microscopy has revealed much that is helpful, but the clinical study by careful observers who compare results has afforded practical physicians the most benefit.

The remarkable monography by Dr. Barker on the neuron theory brings this scientific investigator before the world as the bold advocate of a new histological structure of the central nervous system, which teachers of clinical neurology have not accepted as fully as anatomists and physiologists appear to have done.

It may be truthfully said, moreover, that this work of Dr. Barker is without a peer in the new or old world for original thinking in constructing a nervous system, the structure of which completely overthrows all old theories. As a working hypothesis it is most helpful, and, if true, it certainly is several years in advance of the average medical mind.

A little more than a year since Charles K. Mills issued a paper on his clinical conclusions, based on the study of the deep reflexes in the lower extremities. The essay was a compliment to the author, and gave impetus to many excellent papers during the past year by careful clinicians along special neurological lines.

D. S. Fairchild's paper, on the "Diagnostic Value of the Deep Reflexes of the Lower Extremities," read before the American Academy of Railway Surgeons, in this city last October, was a very instructive and practical contribution to
neurology. In final he says that “a consideration of the reflexes alone will be misleading in determining the nature of a spinal cord disease, or in distinguishing absolutely between an organic or functional affection of the nervous system, but when taken in connection with other symptoms, will be of considerable value in reaching a conclusion.”

These same conclusions were deduced, though not so clearly stated, in my paper, “The Reflexes as an Aid to Diagnosis,” read before this Society in May, 1899. One other valuable point noted by Fairchild is this: “On account of the considerable variation in the normal reflex, they must be studied with great care, or the examiner will be led into error regarding the value which may legitimately be attached to them.”

To the same assembly of physicians, and on the same date, J. T. Eskridge gave “Some Points on the Diagnosis of Traumatic Injuries of the Central Nervous System.” This latter paper was concise, complete, and so thoroughly logical in the presentation of clinical data, that I am sure every physician who heard the paper, or has read it in the journals, must appreciate its practical value in his daily experience with that rapidly increasing number of neurotic cases whose etiology is carefully enveloped in some alleged or actual personal injury sustained.

The time is here when the neurologist, surgeon, oculist, pathologist, microscopist, or student in any other department of medicine must together calmly and dispassionately review all the evidence. This interchange of thought is absolutely essential to enlarge our comprehension and apprehension of the truth that will enable us to discharge our duty to the patient.

The specialist who would diagnose every case through the stethoscope, microscope, speculum or mirror is no less responsible for the numerous medical fads now in vogue than is the man in general practice who, after having made diligent and complete inquiry, fails to discover tangible evidence for the complaint made, yet fails to deliver his patient to the oculist,
aurist, dermatologist or neurologist, who, by reason of special preparation and facilities for investigation, may discover causes and render excellent service to the patient. Yet some of our ethical practitioners, by so doing, are supplying patients for the various "pathies" who perform wonderful cures where the "old school" doctors couldn't even diagnose the case.

Scientific investigation along special lines is commendable, and should be pursued in private and hospital practice, taught in our colleges and enforced by legislation, yet we may specialize to our detriment. "They be the best physicians which, being learned, incline to the traditions of experience, or, being empirics, incline to the methods of learning," is even more applicable to-day than when uttered more than three centuries since. The medical men who mark progress in any one line of investigation are those who attend medical society meetings as attentive listeners, accurate observers, and truthful recorders of facts presented by others of equal or perhaps greater experience than they, though the theme may be on a department of medicine apart from their specialty.

The young physician of scientific attainments needs the older physician of practical clinical experience no less truly than does the specialist and the man in general practice need to maintain a co-partnership. The ethical duties incumbent in all such interchange of views and practice will be easy of solution if the participants are honorably disposed.

Bailey's recent work on "Accident and Injury" contains more clinical facts, plainly stated in the fewest words, than any recent work with which I am familiar. The author comprehends the situation, and brings the physician, surgeon and neurologist on a common ground of apprehension of present conditions, incident to modern modes of rapid surface transit.

Of late more attention has been given to the relationship of certain neural and mental manifestations due to some form of disturbance in the circulatory system. Attention to
that line of clinical study was indicated by my paper before the Elkhorn Valley Medical Society, in July of last year, and published in the *Journal of the American Medical Association*, in December, 1899. This thought is not original with me, but the scarcity of practical clinicians amidst a rapidly increasing proportion of microscopists and bacteriologists must suggest a falling off in clinical study. Convinced that these are facts of vital concern to every physician, it has been the constant desire and belief of your chairman that each paper presented in the section on neurology and mental diseases will evidence much careful observation along clinical lines.
OBSERVATIONS ON CORTICAL CEREBRAL LOCALIZATION.

F. E. COULTER, M.D., OMAHA.

One can scarcely take up a medical journal in the past few years without having attention called to the wonderful advancement that has recently been made in our profession. This fact is called to the attention perhaps more frequently in the field of surgery than medicine. Surgery is at all times more attractive and has more glitter and glare to it than sedate and quiet medicine. The field of medicine, let me assure you, however, has not by any means been inactive during the past decade. The etiology of many diseases and a rational treatment therefor have been discovered, and when the books are finally balanced I do not believe that modern medicine will be found far to the rear of modern surgery, so far as lives saved are concerned. We must not, if we are to be true benefactors of mankind, close our eyes to either of these fields of progressive investigation; we should be abreast of the times in both, and use both in an intelligent blending, if we would attain most nearly the ideal.

Let us not forget and become so absorbed in one field that we neglect the other. In no line of investigation do we find these two branches of medicine more dependent than in cerebral localization. Our present knowledge and our future additions will depend upon the maintaining of this harmonious relation; the neurologist and anatomist will locate and assist in describing the possible character of a lesion, and the surgeon will operate for its removal. Dr. J. T. Eskridge, of Denver, Col., has given us numerous examples of this happy and fruitful relationship between the surgeon and the neurologist.
The general practitioner of medicine to-day, with bread and butter to secure, has but little time for original investigation, hence this paper makes no pretensions to originality; but in it I simply wish to call attention to some points on the above subject that are now firmly established and that are of prime importance from a diagnostic standpoint to the general practitioner. It is not my purpose to go into questionable ground to any extent, to note the result of experimentation unverified, or enter into the discussion of points not yet well established.

As general practitioners we are all aware that there is much that is absolute about which we know too little. I need not call your attention to the importance of this subject for you all realize its consequence so far as some diseases at least of the nervous system are concerned and that it is most necessary.

The subject of cerebral localization was most fragmentary and indefinite until 1861. Previous to this time, while it was generally believed that the brain was the seat of the higher mental faculties, it was supposed that it acted as a whole and that these faculties were equally distributed throughout its substance. This was the theory of Flourens. Even after some cases of speech defects were reported and autopsies made, locating the trouble in the frontal area, this theory was not altered. In 1861, Broca began to report some of his autopsies where the lesion was located in the third frontal convolution and these cases all gave histories of forms of aphasia. Hughlings Jackson then began to add the results of his investigations on local convulsive motions. These observers were followed by Fritsch, Hitzig, Ferrier and Monk, and then the theory of Flourens was completely disproved and the foundation established for future scientific work.

The subject of cerebral localization may be divided into two great divisions: those centers located in the cortex and those located subcortically, or in areas other than the cortical. This paper has to do with the former class only.
We understand by cerebral localization the determination of certain cerebral areas that control the action of certain muscles or groups of muscles or have to do with the reception of certain impressions. It would be interesting to study the unfolding and development of this subject had we the time to follow it out in detail. In a general way, we can say that all knowledge acquired has been received by one of three methods:

1. By post-mortem examination made upon subjects which showed a lack of development of certain cerebral areas and with marked symptoms, and it has been of much importance that these have been made a matter of record.

2. The result of post-mortem examinations made upon subjects that have suffered from disease or injuries with well-marked clinical histories.

3. This, perhaps one of the most fruitful sources of information, has been the recording of experiments upon the lower animals, those nearest approaching man, of course, being the most profitable. This latter method, while possessing disadvantages that are pronounced, at the same time possesses some marked advantages that are apparent over the others enumerated. Let me urge upon the members of this society the importance of making and recording the results of post-mortem examination in all cases of this character. The use of the galvanic current in this class of experimentation was introduced by Fritsch and Hitzig, and it has proved a most valuable adjunct in the establishing of definite boundary lines. The determination of the cortical motor areas located on either border of the fissure of Rolando was a distinct step forward, and another distinct step was made when it was determined that muscular movements were controlled by areas from the opposite side of the cerebrum. The locating of centers of common sensation, sight, hearing, taste, smell, and speech followed, and nearly all are recognized now as definite and constant. Motor centers have been the subject of more extended investigation than those of sensation and consequently are now better established. The
motor area referred to has been divided and subdivided until we find many small centers that are now definitely and accurately known. The special centers are next best understood, while sensory centers are still more or less a question of some doubt. At the present time there seem to be two prevailing theories regarding the centers of sensation. One as advocated by Ferrier and his followers is that these centers are located in the cortex of the gyrus fornicatus and gyrus pypocampus. This theory seems to be substantiated by repeated experimentation on the lower animals only. Other investigators, headed by Mott, Horsley, Lauciani, Monk, etc., believe the sensory centers to be located in the cortex of the motor area, that is in the region bordering the fissure of Rolando. Horsley insists that sensation resides in the two outer layers of pyramidal cells in this region, that these cells are concerned in the tactile and muscular sense and that it is reserved only for the deeper cells to preside over motion.

Experimental results and clinical observations seem to coincide in locating in the prefrontal area intellectual and psychic faculties. We are indebted to Professor Bianchi for many results of experimentation on the lower animals in support of this statement; Dr. R. J. Williamson has collected about forty-five cases of lesions of the frontal areas in which loss of attention, mental hebetude, and loss of memory were marked features of the mental condition. In diseases of this area there is unusually slow cerebration, to which has been given the term "inhibition of thought," also in lesions of this area we may find present various psychic phenomena, entirely foreign to the normal condition of the individual.

Of all the centers to which reference has been made that of language is perhaps the most complicated. It would seem from numerous investigations that we receive our knowledge of language in one of three different centers and in order to be able to communicate with those around us it is necessary not only that these three avenues be in good working trim, but that two additional motor centers, those of articulation and those of writing, be also in a normal condition.
The five centers referred to may be divided into two classes: Those of the sensory division—being for the reception of language and consisting of three separate centers—and those of the motor division—being emissive and engaged in articulation and writing, and comprising two separate centers.

The first of this enumeration is the reception of the memories of spoken words. This center is located in the posterior half of the superior middle temporal convolutions, on the right side in left-handed people, and on the left side in right-handed. A lesion confined to this region is known as mind-deafness, or sensory aphasia. In this condition the hearing apparatus is not in any way involved, but the sound heard can not be intelligently interpreted.

The second form of sensory aphasia is the reception for the appearance of objects seen or written, and is located in the gyrus angulus, and upon the same conditions as the center above referred to, that is, on the right side in left-handed subjects and on the left side in right-handed individuals. A lesion of this region is known as alexia or word-blindness, or mind-blindness as it is sometimes termed. In this condition of alexia, the individual may appreciate that he sees something as letters or words written, but they fail to convey to his mind any intelligent impression, hence the meaning is lost.

The third center is for the reception of impressions gained through the sense of touch. This seems according to our present knowledge to be a distinct and separate center, yet up to this time not so fully investigated as the two centers to which previous reference has been made. However, a number of this class of cases seem to be reported in which there has been a disease of this particular center. It is located supposedly in the central convolutions, in the sensori-motor area.

The fourth center, which belongs to the emissive class, is one for the memory of muscular movements and is concerned in the act of writing. This motor center seems to be intimately united because of location with the center located in the third frontal convolution, and this explains why in many
cases in which we have a diseased condition of the one we have more or less affection of the other also. This center is located in the posterior extremity of the second frontal convolution. A lesion of this region results in agraphia, which may be present with motor aphasia or it may not, and the converse may be true, with agraphia we may have motor aphasia or we may not.

The fifth center referred to is one for the memory of muscular movements concerned in the function of speech. A diseased condition of this area results in true motor aphasia. This motor center is located in the posterior part of the third frontal convolution. It has been named Broca’s convolution or speech-center, in honor of the investigator who first reported a series of cases of this character. Since Broca’s report of 16 cases about forty years ago many hundreds have been added.

There are some very interesting points regarding this much studied center. One of the most important lessons is that if a lesion occur in early life the opposite side may, by proper training, to a great degree be made to do the work that was originally accomplished by the injured center. In adult life it is more of a task to train the opposite side and the more advanced in age, the greater the task. If any doubt this, I ask you to make a trial; of course, the intelligence and other conditions must be taken into account to prove the correctness of this statement. Sometimes we have accompanying this condition of motor aphasia a condition which stimulates it to a greater or less extent. I refer to a condition in which we have a paralysis of the muscles necessary to articulation. This is not a condition of aphasia proper, but is rather one of dysarthria. In true motor aphasia we have no muscular paralysis, although at times we have more or less of a paresis of a temporary nature at the commencement of the trouble, because of the location of the center involved, and it is therefore a fine question to differentiate whether you have aphasia, pure and simple, or whether you have aphasia accompanied by dysarthria, or whether you have dysarthria alone to deal
with. The condition is readily diagnosed from aphasia if we remember that the paralysis is absent in true motor aphasia, but it may accompany it because of the contiguity of the fibers in certain conditions. The following case is reported as bearing on the subject.

On Nov. 22, 1895, I was called to see Mrs. H. W., who gave the following history:

She was 35 years of age, a housewife, married, American, and had given birth to six children since marriage. Her weight was about 135 pounds and she was of a nervous temperament. Both parents were living; her father was suffering from chronic heart trouble; her mother was phlegmatic and nervous, and she gave a family history of nervous troubles. Up to November 6, the patient had been in good health and had attended to her usual household duties. Excepting an indistinct history of some cardiac trouble when in Colorado some years before, nothing of importance was elicited bearing on the case. November 6 she went to bed at the usual time, in good health, but about 10:45 p.m. her husband was awakened by loud and stertorous breathing. He, realizing that something was wrong, got up, and on examination found his wife unable to speak, but making unintelligible efforts in that direction. The face was drawn to the left side, the right arm was flexed and drawn backward, the right leg was also strongly flexed and for a time it seemed impossible to relieve this tonic spasm. She made an effort to arise but was unable to do so. Deglutition was impossible at this time, but improved later and at the time of my visit seemed almost normal. Mastication was not perfect until some time after I first saw the case. One week after November 6 she was able to speak the first intelligible word, but on November 22 could not say other words than “yes” or “no,” and could not pronounce these at will. She had made her wants known entirely by signs, but understood perfectly what was said to her and all conversation carried on in her presence. At the time of my first visit there was more or less motor paralysis in the region above referred to, but this gradually improved later, as the history of the case will indicate. She
gave a history of a discharge from the left ear for the past fourteen years, and from the right ear for a short time previous to the date of this attack. Examination by the ophthalmoscope revealed nothing. By means of sign language she described pains in the left occipital and parietal regions. Hearing, taste and smell did not seem to be affected, nor did any of the cranial nerves appear involved. Common sensation, temperature test, pain and muscular sense were not involved.

Diagnosis: Probably an embolism lodged in the third left frontal convolution, as she was right-handed, and because of the size and location of the embolism, involving other motor fibers that were connected to various regions implicated.

The following notes were recorded on the case later: Three weeks from November 22 her right leg was in a sufficiently normal condition to permit of her moving around the house without difficulty. About six weeks from November 22 the face had assumed a nearly normal appearance, and all difficulties attending deglutition and mastication had subsided. Three months from the same date the right hand and arm could be used at will, but were not at this time as strong as before the trouble, but became stronger later. On July 1, after the attack, she commenced to read newspaper head lines. Two years from the attack was able to write her own name but was never able to write but a few other words. Her speech improved with care and training until before her death she could be understood without using but little of the sign language, and outside of some dizzy sensations in the head and referable to the left side principally, she was not a sufferer so far as this cerebral trouble was concerned. She died Jan. 23, 1900, of ulcerative endocarditis. A post-mortem examination was held, and the correctness of our diagnosis was demonstrated so far as the lesion referred to was concerned. Dr. E. C. Henry, professor of anatomy in the Creighton Medical College, kindly made the dissections and has present at this meeting the pathological findings, which he will be pleased to demonstrate to any of you wishing to see them.
DR. AIKIN: The paper is certainly worthy a compliment. I have a word or two to say, and will limit my remarks to cases that bear directly on what the Doctor has been speaking about, the localization in the brain of certain conditions that produce symptoms aphasia, in which a male, aged 9 years, was brought to me, I think seen in our practice and which we are unable to account for by any extra-cerebral trouble. I remember one case with well-marked motor in 1895. He had a clear conception of everything that was said to him; for his age the mental development was good, he could appreciate everything that was said to him, but when he attempted to ask for something he was at a loss to command words to express himself. After reviewing the case carefully for a few days, and making a thorough examination to see that the muscles for articulation were in normal condition, I could not discover anything there that was abnormal, and with the diagnosis that the disturbance was in the center of motor control for that group of muscles, I dismissed the case without much medical treatment. One year later the child had greatly improved.

The other case was with reference to the sense of smell. It was the case of a woman, probably 45 years of age. She had spent all her living and suffered many things in order to be able to tell "whether the meat was burning in the frying-pan without looking at it." The sense of smell was entirely gone. She could not appreciate any odor whatever, and those who had given special attention to the treatment of cases of the nose and throat had treated her, but with negative results. Her case seems to be another just in line with what the Doctor has stated. She will probably never recover normal function of the olfactory center.

DR. COULTER: In regard to the case reported by Dr. Aikin, I certainly wish to commend the Doctor for the good results he attained. I am of the opinion that while his treatment was most emphatically correct and proper throughout, yet I believe the improvement was more or less accounted for by the fact that in patients of this age it is easy to train the motor fibers of the opposite side to do the work that would necessarily be interfered with by a lesion of the left side, and possibly this case might have received some benefit from this, as well as in connection with the other methods he used.

So far as the question referring to ambidextrous people that Dr. Ely has brought out is concerned, I do not mean to say we have cerebral localization as yet down to a point where mistakes can not be made and, as you remember, I have only touched in a general way upon the points that are definite and positive; however, in these cases there is plenty of evidence that will enable us to locate the lesion generally without trouble.

I wish to say, in closing, that we have in this country a most
careful and painstaking physician, Dr. Eskridge, of Denver, who stands well in the front on this subject and who has sent me copies of a number of cases reported where the post-mortems have proved the correctness of the diagnosis in nearly every instance.
The advantages of early treatment of the insane can not be too strongly urged on the medical profession and friends of the afflicted ones. Many a patient on the verge of insanity, whose reason may be said to “hang wavering in the balance,” might be saved to health and happiness by timely interference. To this end, it is necessary that insanity should be early diagnosed. And here the first difficulty arises, for the early symptoms, except in extreme cases of mania and melancholia, are so obscure, the indications of mental derangement so mingled with the individual’s peculiarities or concealed by bodily disease, as to deceive “the very elect.” Little assistance is to be expected from friends of the unfortunate, for the initial attacks are often too insidious to attract attention to the seriousness of their symptoms. Too often to the question, “Is this a recent attack?” comes the answer, “It is only a few days (or weeks) since we have known she was insane, but for a year or more my wife has not been herself. She was cross and irritable, and neglected her children. But she had a great deal of work to do and was not well, and I did not think of her losing her mind until she ran away from home, or, in another instance, until she snatched a knife off the table and tried to kill the baby.”

A young girl was recently received in the hospital, who had a history of stomach trouble that began two years before and culminated in a violent attack of mania, which has now become chronic. In this instance there were no symptoms except certain fits of despondency and a tendency to avoid com-
pany, such as one might expect in a sufferer from severe attacks of indigestion.

Since insanity in its early stages borders so closely on sanity, let us look for a few of the symptoms that point to an unbalanced mind. In order to do this it is well to fix upon a definite standard of comparison, and I know of none better than Chapman's definition of insanity. He says, "Insanity is that mental condition characterized by a prolonged change in the usual manner of thinking, acting and feeling—the result of disease or mental derangement." This, as the author states, is in accordance with medical requirements, in the sense that it presupposes the existence of disease. Accordingly, we must determine, first, that there has been a departure from the individual's ordinary way of thinking, that the change is a prolonged one, and the result of disease.

Take, for instance, a case of puerperal insanity—one of the most amenable to treatment and the quickest to recover. Your patient passes safely through the trying ordeal of confinement and seems to be doing well. But in a few days, or weeks, she begins to act strangely, takes no interest in her child, will not let it nurse, sometimes will fondle it, and at other times push it from her in disgust, so that its life is in danger. Or hysterical manifestations may develop. The patient laughs or cries, apparently without cause, and at inopportune moments. Again, gloomy forebodings may seize her, and suspicions of husband and friends. If such conditions exist outside of the delirium of fever, or are prolonged beyond that time, you may be pretty certain that you have a case of puerperal insanity, and your most watchful care and prompt treatment are demanded.

In acute forms of insanity delusions are almost always present, and readily aid in a diagnosis. But when the disease develops slowly, delusions are not always manifest. The patient, with the usual cunning of his race, carefully guards himself from giving expression to thoughts that may arouse suspicion, and it requires close observation of him in relation to his family and surroundings to make the case apparent.
If the patient has hallucinations of sight and hearing, he sees persons and hears voices that are not present, and that claim a part, if not the whole, of his attention. He will be found glancing about suspiciously, or gazing abstractedly at one spot, or talking to himself.

A disregard of personal appearance in one who has been neat and careful in dress may attract the attention of friends. Changes in the expression of the face and the manner of speaking are characteristic of insanity; also changes in daily life and occupation. Persistent insomnia is a very common symptom; also restlessness, an irresistible desire to be on the move, which impels the patient to get up in the night and wander around, sometimes going miles from home. Conditions like these, together with reports from neighbors and friends that the person is not "like himself," are sufficient to call attention to his abnormal state of mind.

When the physician has fully made up his mind that the patient is insane, the next question is: Shall he be treated at home or be sent to an asylum? This, of course, must be determined by circumstances. If homicidal or suicidal tendencies are manifested, no time should be lost in placing him where he can have no opportunity of injuring himself or others. Such place can be found only in an insane asylum, either private or public. Even here, as some of us too well know, he may escape the watchful eye of the attendant and carry into effect his cherished desire.

In the milder cases, where the attending physician has the confidence of friends, and some influence over the patient, treatment at home is not only practicable, but greatly to be preferred. In such case the patient must be kept under surveillance, but with as little offensive espionage as possible, or he will resent it. He must be induced to take his medicines, and have his meals at regular hours, to both of which he may object. Careful attention must be given to dress and conduct, so that he may not fall into slovenly habits and a disregard of the proprieties of life. Regular outdoor exercise is
indispensable, but should not be prolonged sufficiently to cause undue weariness.

If the patient can afford it, change of residence and travel are powerful aids in taking his attention from his troubles. I have recently had two cases in the asylum, each of whom had a previous attack, and recovered without the use of restraint or medicine. One, a lady who had an attack of melancholia, traveled over the country in a covered wagon. The husband took her, in company with her mother, to the mountains. They traveled by easy stages from one town to another, remaining just long enough in each place to rest from the fatigue of the journey and to visit points of interest. After several weeks spent in this way, the wife seemed to wholly regain health and spirits, and they returned home. Some years later she had a recurrence of the attack, and her husband not being able to incur the expense of the journey, was compelled to send her to the asylum, where she made a rapid recovery.

The other case was that of a young girl, whose parents traveled about with her during a former attack until she regained her normal status. During her recent illness she became suicidal, and they were forced to send her to the asylum. After a few weeks she was so much improved that her mother took her away, intending to accompany her on a visit to friends in a neighboring state. Doubtless she will entirely recover, though the disease may recur.

In regard to the medical treatment of the insane, it can briefly be stated that, in this as in other diseases, the condition of the patient must determine the course to be pursued. Since insomnia is a dangerous and early symptom, the first indication is to secure rest and sleep, and, as far as possible, freedom from tormenting thoughts and fears. For this purpose, hypnotics, sedatives, and nerve tonics may be used, according as the judgment and experience of the physician and his knowledge of the patient may dictate. At the same time every effort should be made to improve the physical condition and to build up and strengthen the whole system.
It shall not be my purpose in these few remarks to trespass far into the domain of psychology or psychiatry. I wish briefly to call to your attention the relation existing between psychic insult or shock and certain well-known conditions—a relation heretofore either but lightly considered or entirely ignored—and suggest to you its importance in the etiological consideration of such conditions.

In the discussion of this subject I would first consider it in its relation to the less familiar condition known as “delirium nervosum,” or “operation psychosis;” then in relation to the well-known conditions of surgical shock, puerperal insanity and hysteria.

Until recently little has been written on this subject, though Dupuytren, in his treatise upon that condition which bears his name, “Dupuytren’s delirium nervosum,” hinted at its existence, while later, Le Denta, in 1891, in his masterly article on operation psychoses, “Des delires post operatories,” drew attention to its importance and succeeded in stimulating thought along that line until it is now thoroughly established that conditions of delirium or acute psychosis may result from psychic insult induced by trivial injuries, accidents, operations, fear or other emotions.

The frequency with which the condition of delirium nervosum has followed operations or trauma has given rise to the terms “operation psychosis,” “delirium traumaticum,” “traumatic psychosis,” etc.—names somewhat misleading in that they suggest the trauma or the operation as the essential
cause of the delirium, whereas it depends entirely on the intensity of the psychic shock and not on the severity of the injury, the degree of psychic insult being invariably out of all proportion to the injury. Considerable stress has been laid on a predisposition in the etiology of these psychoses, as manifest by a neurotic temperament and heredity.

While a majority of cases do occur in such individuals, without doubt a considerable number occur in persons without a neurotic predisposition, as indicated by J. M. Baldy, in *Medical Age*, in which he says: "Operations are at times the determining cause of mental derangement where there existed no previous tendency to the disease."

What surgeon has not observed instances of transitory and even of prolonged mental aberration following some trivial injury or operation wherein as causative factors sepsis, hemorrhage or extensive injury, could be absolutely ruled out and which might easily have been the result of an exaggerated mental impression of injury or danger, in other words, of psychic shock?

There is an ancient tale among the laity, familiar to all, though for whose authenticity perhaps none could vouch, which in the light of our present knowledge is not at all improbable and could be readily understood. A man, condemned to death by bleeding, was blindfolded, his wrist scratched, water allowed to flow across it and drip into a vessel below. The man died, as of course he should have.

That could easily have been a case of death from psychic insult and have been no more startling than the case recently reported by Pagenstecher, in the *Philadelphia Medical Journal*, in which a man in good mental and physical health, had, while sharpening his pencil, cut his thumb, his pen, which he had behind his ear, falling into the wound, staining it with ink. Although the wound was immediately cleansed and dressed by a physician, he became imbued with the idea that he was suffering from blood-poisoning and demanded an amputation of the arm from all his physicians, who, of course, refused his demands, there being absolutely
no indications of infection. In spite of attempts at reas­surance by his physicians he became rapidly worse, passing
into a condition of active delirium with great mental agitation,
delusions, grimaces, twitchings of the face and great weakness.
During all of this there was a quiet pulse and no fever. This
condition continued until death, which occurred very sud­denly and unexpectedly thirty-two hours after the injury.
The post-mortem examination, the examination of the urine,
of the tissues for poisons and ptomains, and the bacteriological
examination of the knife, pen and ink, by prominent author­ities revealed absolutely nothing of importance. This case
is especially important in that while numerous cases of nerv­ous delirium, acute mania, etc., have been reported as result­ing from psychic insult, this is the first case of death from
such cause yet recorded and has, therefore, been provocative
of considerable comment.

In this connection I desire to call attention to a case of de­lirium nervosum which, in my brief experience, it has been my
good fortune to have observed.

I was called to see a boy of 10 years, whom I found suf­fering from a superficial abscess of the abdominal wall, in the
left hypochondrium just at the border of the costal arch. I
at once determined on its evacuation. The boy was con­siderably frighten­ed by the preparations for the operation,
and was anesthetized with some difficulty. The abscess was
then incised and about an ounce of pus evacuated. The cavity
was flushed out with hydrogen peroxid and a small gauge
drain was inserted. The anesthetic had been withdrawn, the
patient recovering from its effect in time to watch with some
interest and anxiety the final steps in the adjustment of the
drainage and dressing and to say rather doubtfully that it
did not hurt much.

Thirty minutes later, as I was preparing to leave, he had
what appeared to be a convulsion, which began by violent
twitching of the facial muscles, followed by clonic contrac­tions of other muscles of the body, until it was with difficulty
that he could be restrained on the bed. In a few minutes
these subsided, and he remained comparatively quiet for a pe­
riod of about ten minutes, when another attack occurred.
This was repeated at intervals for perhaps an hour, when he
suddenly became quiet and passed into an apparently natural
sleep from which he was awakened with difficulty after the
expiration of about an hour and a quarter. During the en­
tire time he was unconscious, had incontinence of urine and
talked a great deal in a wild, incoherent manner. The tem­
perature, per rectum, was 99 F., pulse, 85, and regular. The
urine, examined both before and after the operation, was free
from albumin or casts.

As this was one of my first cases in practice, I was naturally
somewhat alarmed and considerably at a loss to account for
the symptoms observed. I was then but little acquainted with
the phenomena of operation psychosis and was inclined to
regard the symptoms as epileptic manifestations, although I
was assured that he had never had a convulsion before in his
life. He went on to an uneventful recovery and has not had
a convulsion during the two years since operation.

I am now convinced that I had to do with a case of operation
psychosis or delirium nervosum, the result of psychic shock,
as the insult to the tissues was altogether too insignificant to
account for any such symptoms.

I will now pass on in the discussion of my subject to a
consideration of its relation to surgical shock or collapse. Very little attention has been given to this factor in the
etiology of surgical shock, and while some authorities admit
the occurrence of cases of shock, as the result of mental
impressions or psychic insult, few, indeed, if any, lay upon it
the stress which its importance demands as a coexistent factor
in all cases. It is very probable that many cases of operation
psychosis are but instances of surgical shock due to this cause,
and their identity overlooked because of the absence of the
usual causes of shock. I believe there are but few cases in
which it does not play an important part, and one should ever
be on guard to combat it.

Especially would I suggest its importance in the so-called
"delayed type" of shock coming on several hours after accident, in which there has been a narrow escape from serious harm with but slight injury and considerable fright—cases so often attributed to internal hemorrhage, but which subsequent examination or the necropsy so frequently fail to demonstrate.

Some authors have made a distinction between shock and collapse, assigning the latter title to those cases which are the result of profound mental impressions, or, in other words, of psychic shock. Such a distinction is, however, hardly justifiable and is not generally recognized, being of value simply as evidencing the fact that psychic insults are recognized as factors in the production of surgical shock.

The frequency with which the conditions of operative psychosis and post-operative insanity has followed operations on the female genitalia suggests a close analogy between these conditions and the condition of puerperal insanity.

In Le Dentu's collection of 68 cases of operation psychosis, 38, or over 50 per cent., were after operation on the female genital organs. And it is safe to assume that in a considerable number of cases we have to do with the same causative factor: the influence of psychic impressions or psychic shock. I do not refer to those operations in which the menopause is prematurely induced, although even in those cases, the same element, no doubt, plays an important part.

There are those who hold that puerperal insanity is invariably the result of infection, notably Rohé, who says: "Puerperal insanity is now regarded as essentially a septic psychosis." Fortunately it is so regarded by but few, and, while this may be true in quite a number of cases, there are still a vast number in which sepsis may be ruled out entirely, as may also shock from hemorrhage, extreme suffering, or albuminuria.

After accounting for all that it is possible to upon these grounds there yet remains a large class which can only be accounted for as being the result of psychic insult. The importance of this element is advanced by Hirst, of Philadel-
phia, who says: "In my experience, insanity in the childbearing woman has almost always resulted from some profound emotion." That these emotions are within themselves a sufficient shock to a mentality, perhaps already of unstable equilibrium, to result in the overthrow of reason goes without question. The fear of suffering, of death, of danger to the child, shame and remorse in illegitimate pregnancy, grief over desertion, death of child, etc., are all psychic insults provocative of disastrous result, especially in individuals of a neurotic predisposition.

Hirst cites a case of a woman who, some days after her delivery, received a letter from her seducer casting her off. She fainted on reading it, became a raving lunatic that same night, and died of maniacal exhaustion within two weeks. Of course such an occurrence might be a terrific shock, but many cases occur as the result of accidents as trivial as that was profound, as, for instance, the case in which rupture of the membranes and escape of the amniotic fluid produced the impression of hemorrhage, the resulting fear being so great as to cause insanity. With due regard to the importance of hemorrhage, sepsis, albuminuria, etc., as factors in the production of puerperal insanity, I think it may be safely said that psychic shock is the essential cause of more cases than any other two factors combined.

I wish now, in closing, to refer very briefly to the subject of psychic shock in its relation to hysteria. We are oftentimes inclined to scoff at the subject of hysteria, and it must be admitted that these cases are often aggravating in the extreme. But the time will come when the fact that these cases are dependent on an underlying remediable cause and are not the mere manifestation of an inherent devilishness, will be proved to the satisfaction of the most sceptical. There are few people who have not at some time in their lives, under stress of circumstances, displayed hysterical manifestations.

In these cases of the accidental occurrence of hysterical manifestations in persons not presenting a predisposition to the disease, occurring as they often do during emotional ex-
citement or with some organic lesion, and disappearing with the subsidence of the organic trouble, I would suggest the importance of the part played by psychic insult in their causation. The class of cases known as "traumatic neuroses," "traumatic psychoneuroses," and "traumatic neurasthenia," are dependent in their etiology more on the psychic shock than on trauma. Subject the same individual to a psychic insult of an emotional nature of sufficient magnitude and the same result would ensue.

Dubois says: "Various neuroses may result from accidents of all kinds, frequently in consequence of very slight traumatisms, in which the psychical element is the main factor." In that large class of cases in which persons of neurotic predisposition, yet previously free from the disease; in whom—incident to the wrong and mental excitement over some slight injury, illness, disappointment or grief—the disease is developed suddenly in an aggravated and permanent form, psychic insult plays an important part, for it is in such persons that mental impressions are greatly exaggerated and distorted.

In concluding, I wish merely to suggest that in the consideration of the conditions referred to more attention be given to psychic shock as an etiological factor and some effort be put forth to combat it. How few cases are there in which any effort is made to reassure the patient and overcome erroneous mental impressions. Too many who come to the physician in a state of extreme mental agitation and distress are laughed at, given a prescription, and sent away none the less fearful and with the impression that not enough attention has been given the case to enable the physician to know whether it was serious or not.

While the existence of an unstable mental equilibrium should at times determine against operation entirely, yet if in the operating-room and the lying-in chamber more effort were put forth to impress thoroughly and lastingly upon the patient's mind—suggestive therapeutics, if you like—the assurance of absolute safety and the inspiration of confidence in everything connected with the case, the number of cases
of operation psychosis, surgical shock and puerperal mania would be considerably diminished.

**DISCUSSION.**

Dr. D. E. Sedgwick: I wish to bear testimony to the importance of the subject so ably presented in this paper, and I can see in it tracings of the grand teachings of my alma mater. The author has recently passed through the strict training given in Rush Medical College, and it is a little refreshing to us older men in the profession to see how much better men come through now than they did twenty-five years ago, and see how much better the training they now get fits them for the profession.

This question seems to me to be the most important of any that has yet been presented. As I was about to take the train for this meeting, a man came rushing into my home and said a woman was dying; that they had called all the doctors in town and none of them were in, and finally I was sent for, and so I postponed my trip in order to attend her. I found the woman lying on the bed in apparent convulsions, seemingly in a dying condition, and the whole neighborhood was rushing around saying she would die before I could get there. As soon as I stepped in I thought there was a good deal of fright. I found the patient had been standing on a chair putting up a stovepipe and the chair had fallen and she had struck the back of it. There was a little abrasion, not over a quarter of an inch long, from which a little blood was dribbling. That was the only thing in the world that was the trouble with her. Now how much psychic shock was there there?

Dr. Aikin: I simply wish to endorse what Drs. Sedgwick and Roberts have said in their papers. It is certainly time we should begin to recognize the effects of mind over matter. I reiterate that we must recognize these conditions, and the men in general practice who dismiss cases because they are unable to find some tangible cause for the complaint might dismiss such cases as these, saying: "I don't know anything about the nervous system; don't want anything to do with the nervous system." I am glad the younger men coming out are taking cognizance of the fact that the influence of mind over matter is a very valuable factor in the treatment of diseases as met in all phases of practice.

Dr. Roberts: I have just a word to say in closing. I want to thank the doctors for their confidence and faith in me and my alma mater. Very little is deserved by me and a great deal by my alma mater. The paper was very brief, and from my own practical experience necessarily must be very brief, but I introduced what little I had of my own practical experience, and all I could from reading, and it was not my intention to enter very thoroughly into the subject, but my sole purpose was suggesting its importance, and, if possible, stimulating you a little along that line.
A PLEA FOR MORE PAINSTAKING EXAMINATION IN THE DIAGNOSIS OF CHRONIC DISEASES.

J. W. BULLARD, M.D., PAWNEE CITY.

The engineer, in planning any great work of construction, like a bridge across a great river, first surveys the ground at the approaches, looks well into the general surroundings, sounds the river-bed and the banks where he expects to set the mighty piers, calculates not only the probable but the possible flood that may beat with its resistless current against the structure, and, in short, takes into account every environment that might in any way affect the feasibility of the undertaking and the permanency and utility of the enterprise. When this is done, the plans are laid and the erection of the magnificent structure is begun with scarcely a doubt as to the ultimate success of the undertaking. His is like the house of the wise man spoken of in the good book—it will stand, though the rains, winds and floods beat against it; it is built with brains.

The wise general, in planning a campaign into the enemy's country, or a great battle, must not only know the character, probable number and equipment of the enemy, the craftiness and skill of the commanding officers, but he must have an intimate knowledge of the topography of the surrounding country, with all its environments.

The physician who goes into the field against the enemy, disease, is just as much in duty bound to have a thorough knowledge of his patient as is the engineer or the general, of his field of labor.

It has been said that our knowledge of pathology and our acumen in the diagnosis of disease have far outstripped our knowledge of how to bring about a return to health. This is,
unfortunately, alas, too true, and in consequence, Osler, in his classic work, gives very brief space to treatment. But be it as it may, the fact still remains that on our knowledge of the pathologic process and its correct interpretation depends the intelligent treatment of the patient. The first essential to the successful treatment of curable diseases is a correct diagnosis.

How we have all admired the ability of the distinguished clinical teacher, as we have watched and listened as he has so deftly unraveled an intricate case, and by the process of differentiation and exclusion made a brilliant diagnosis.

This is usually possible only from the fact that the case has been thoroughly studied before the lecture, and the lecturer is enabled, on account of this detailed study of the case, to arrive at a correct diagnosis.

Diagnosis is both a science and an art: a science, because it embraces a comprehension of the fundamental principles of chemistry, anatomy, physiology and pathology, and of the principles based on these facts; an art, because it demands a knowledge of the means by which the desired result is reached. Ay, and more than this, for he is a very poor diagnostician indeed who has only a knowledge of the means, never having put them into practice. This is what gives the physician of experience such an advantage over his young, though probably much more scientific, colleague. If he has been a close observer with his years of bedside experience, though he may know comparatively little about modern pathology, he is often able to make a diagnosis at a glance, where his more learned, though less experienced, professional brother is at sea. The medical profession recognizes in Mr. Jonathan Hutchinson one of the most versatile men in all the domain of medicine; and it is the result of much patient study. It is said of him that he spent some time every day at the bedside of hospital patients, with notebook in hand making systematic study of every disease human flesh is heir to. On account of this painstaking investigation on the part of Mr. Hutchinson, the medical world is much richer in medical lore.
As I said at the beginning, it is necessary that the physician have a knowledge, not only of the patient, but of his environments, his family history, and, in fact, everything that concerns him. Everything should be studied. It were better if we were more versed in the knowledge of temperament that our professional brethren of the antemicrobic days used to lay so much stress on, and which seems now to be almost a lost art. By temperament we mean, as Mr. Hutchinson puts it in his lectures on “The Pedigree of Disease,” that which concerns the original, inherited organization of the individual, and does not include anything which is the result of the influences to which his life has exposed him; or, as Dr. Laycock so aptly says: “fundamental modes of vital activity peculiar to individuals.” This must not be confounded with diathesis, which Mr. Hutchinson defines as being “any bodily condition, however induced, in virtue of which the individual is, through a long period, or usually through the whole life, prone to suffer from peculiar types of disease.” This may be inherited or acquired, and may be permanent or only active at intervals; the individual enjoying seasons of perfect health. The idea of persistency, however, always attaches, in some sense, to diathesis. Yet we do not confound diathesis with dyscrasia, which implies bad health and not proclivity, says the same authority. There is still another condition, which we designate as idiosyncrasy; this is defined as: “Any definite peculiarity of organization of which the consequences may occur unexpectedly, and otherwise inexplicably, and does not, like diathesis, imply any special proneness to disease.” It needs, however, an exciting cause. I know a lady, who, when she takes quinin, always has an attack of intense dyspnea. This might be further defined as special idiosyncrasy.

The object of this paper is to lay stress on the necessity of making careful examination of our patients. As pointed out in the introduction, it is necessary that we have a broad general knowledge of the fundamental principles which underlie the great subject of medicine, that we may be able to properly interpret conditions as we find them at the bedside.
The man who would be an adept in diagnosis must be a student of energy; one who is not afraid of work and pains-taking investigation. To go into details would be to write a volume on diagnosis, which I have neither time, knowledge nor inclination to do, but I wish to generalize to some extent on the subject.

How often a patient enters the physician's office, with some trouble, it may be acute or chronic; the physician asks a few questions, looks at the tongue, and perhaps feels the pulse and then prescribes for the patient. This is probably all well enough, provided the patient is well known to the physician and has recently been subjected to a careful examination. A lady comes to the office complaining of some trouble in her thorax; she is asked a few questions, the state of her bowels inquired into, she is asked concerning the menstrual function, and possibly her chest is auscultated through its entire covering, including the corset. A patient presents himself and says he is troubled with indigestion; he is perhaps asked if he experiences any pain after taking food, his tongue is looked at, the state of his bowels inquired into, and he is given a prescription for some digestive ferment, without any knowledge whatever of whether the indigestion is of amylaceous substances, proteids or fats. Another patient comes with urinary disturbance; perhaps frequent desire to empty the bladder; he is given some diuretic, and not even the physical appearance of the urine looked into. Another has obscure pains about the stomach and abdomen and is treated with all manner of digestive ferments, without ever a thorough, systematic investigation of his case having been made. I recall a patient who came to me from a neighboring town, to ask what I thought of the advisability of an abdominal operation for the relief of a pain which had annoyed him for several months, and which his physician had interpreted as being due to some diseased condition of the biliary apparatus. A surgeon had been consulted, as the patient had gone to a neighboring city to be under the close observation of his physician, and the result of the consultation was the pro-
posal to do an immediate operation. The patient and his family had been former patrons of mine, and he came to get my opinion before submitting to an abdominal section. A careful examination on my part revealed a urine with a specific gravity of 1005 to 1010, and containing 25 per cent. of albumin. The amount voided in twenty-four hours was between two and a half and three liters—five to six pints. There were hyaline and granular casts and the ophthalmoscope revealed profound retinal changes. Here was a case of well-advanced renal disease in which a grave operation had been urged without any examination of the urine. Such negligence is criminal. The patient was given proper diet, and a careful hygiene was prescribed, together with appropriate medical treatment. He lived in comparative comfort for two years, till one day, when after a load of hay, he got caught in a shower, with the usual result—death in a few days.

A lady past the prime of life went to her family physician complaining of a troublesome vaginal discharge; he told her it amounted to but little, made no examination, prescribed a simple vaginal wash and dismissed the case. She came to visit her daughter a few months later, when the condition was worse. Her daughter came to consult me concerning it. I asked for an examination, which revealed an uterus far advanced in carcinomatous disease. Curative treatment was out of the question. Had the family physician done his duty, this lady might have had the benefit of an early hysterectomy and her life been spared for several years. As it was, she died in a few weeks.

Mr. B. consulted me for a pain in the right side, a little above the McBurney point. He had no urinary disturbances, but had a slight elevation in temperature and an accelerated pulse. There was tenderness at the point of pain. A chemical examination of the urine showed nothing abnormal; the reaction was acid, the specific gravity 1014, the amount in twenty-four hours, 2090 c.c., or a little above the normal amount. After a few weeks' treatment, with no apparent
benefit, I decided to make an exploratory operation; but before doing so, at the suggestion of a friend of the patient, the friend's family physician was asked to see the patient. The consultant had some experience with a similar case in which he had reached the same conclusion that I had in this case, viz., that an exploratory operation was demanded; but when he opened the abdomen he found no trouble with the appendix as he had supposed, the difficulty proving to be with the kidney and ureter. In the light of his experience, he advised a very careful examination of the urinary sediment after precipitation with the centrifuge. This examination I made repeatedly and found hyaline casts and blood-cells. The patient was given an appropriate treatment, a proper diet and mode of life, a trip to the mountains for a time and he escaped a laparotomy.

It is not enough to be able to name a disease, for a pneumonia, for instance, is a very different disease in a man who has a full chest capacity and enjoys good health, from what it is in one who has weak lungs, or is a chronic alcoholic. To be able to diagnose a case with the view of properly treating it, we must take into consideration the family history, the hereditary tendency, the environments of the patient, the temperament, the diathesis, the dyscrasia, the idiosyncrasy, and, in fact, everything that can in any way influence the course of the disease. The above is applicable to all classes of disease. Every chronic disease should demand at our hands a careful examination of the urine; this does not mean a simple examination for the presence of albumin, but careful analysis, physical, chemical and microscopic. This requires litmus paper, a urinometer, test-tubes, a centrifuge, a microscope and the requisite chemical reagents. A microscope and a knowledge of how to use it is indispensable in the office of every physician who expects to do good work. The old method of collecting the precipitate for a microscopic examination is not sufficient, as the time required for the precipitation to take place in the bottom of the conical glass allows of chemical and physical changes which destroy the delicacy
of the examination; and then again it is necessary to wait twelve to twenty-four hours before the patient can be intelligently prescribed for. The centrifuge allows of a precise and accurate estimate of the microscopic findings in a few minutes. Not only for the examination of the urinary sediment is the microscope a necessity, but for many other things; in fact, every excretion, secretion and structure of the body.

How shall we make an early, positive diagnosis in incipient tuberculosis, except by the aid of the microscope? How shall we determine the scientific indications for treatment in gastric disease, either functional or organic, without the aid that the microscopic findings furnish, together with the chemical examination of the stomach contents after the test-meal.

In the examination of the blood, in different diseases of that vital fluid, it is absolutely necessary.

In the examination of the chest—and no examination for chronic disease is complete without a careful exploration of the chest—it is indispensably necessary that it be bared, at least of all outer vestments and gone over very systematically; first, by inspection, then by palpation, percussion and auscultation. Chest expansion is also of importance in many cases. It is also necessary to a correct knowledge of the condition of the patient that the contents of the abdominal cavity be interrogated in the same way. In a patient with gastric trouble, it is impossible to arrive at a positive diagnosis without an analysis of the contents of the stomach after a test-meal. In pelvic troubles in the female a careful bimanual examination of the pelvic organs is absolutely necessary to any adequate knowledge on which to base intelligent treatment, and yet how many physicians there are who seldom make a careful examination of the contents of the female pelvis.

In obscure nervous diseases, the different reflexes should be studied; here too, the ophthalmoscope is of great value, as the fundus of the eye is quite an index to the condition
of the brain and its circulatory system. But it is impossible to go into details.

The old days of empiricism are passing away and the practice of medicine is, day by day, more nearly approaching a scientific basis; and we, as the physicians of the great state of Nebraska, should be marching in the vanguard. Our patrons expect it of us. But, says one, it takes so much time and trouble to make a thorough systematic examination, and the patient is not willing to pay for it. Our patients come to us because they expect something of us, and the matter is one of education. If we give them a fifty-cent service they expect to pay no more, but if we give the case a thorough examination they will not object to paying a reasonable fee.

We can not all be specialists, but we can make use of the talents we have.

To recapitulate: The physician should first of all be grounded in the fundamental principles of medicine; he should take into account the family history of the patient; his tendencies, whether hereditary or acquired; his every environment and mode of life. It is not enough to name the disease. Above all, he should make a thorough physical examination of the patient, and where indicated, a physical, chemical and microscopic examination of his secretions and excretions.

DISCUSSION.

DR. ELY: I rise, not so much to discuss the paper to which we have just listened, but rather to make a confession which emphasizes the reader's underlying thought.

It was about five years ago that I was called somewhat urgently to see a patient who had been under my care and observation for perhaps a year, or thereabouts. Originally she complained of shortness of breath and general weakness, especially after any unusual exertion. Originally she complained of shortness of breath and general weakness, especially after any unusual exertion. Of course, this called for an examination of her heart, which revealed a clearly defined murmur, synchronous with diastole, and loudest over the apex—a bellows murmur. Till the time of this last urgent call I had kept her on tonics and under the general direction to avoid undue violent exercise, and she appeared to be doing well. I found her in bed, propped up with pillows, laboring for her breath, and presenting all the symptoms of lost compensation. But her most acute suffering was from persistent nausea; her stomach
would tolerate nothing. Digitalis, strophanthus and nitroglycerin were tried, one after the other, but without beneficial effect, either alone or in combination with opium, aconite, veratrum or bromids. While I succeeded, to some small degree, in relieving her other distressing symptoms, her nausea persisted without any alleviation whatever. In the meantime about three months had passed, and my patient, a woman of about 45 years, who had borne five children, seemed ready to succumb to inanition. At this time she casually remarked that for a long time there had been a "little bunch" in her right groin, which occasionally became tender, and that it was paining her at that moment. This brought about an examination of her pelvis and the development of the fact that she had always been troubled with considerable pain immediately before and during the first two or three days of her menstrual molimen. The "little bunch" proved to be a tumor of some sort, probably her ovary, apparently about the size of a small lemon—perhaps a lime would be a juster comparison—acutely sensitive, and pressure upon which exacerbated all the signs of her cardiac trouble. Accepting this condition of affairs as a possible one to the source of her exaggerated cardiac symptoms, I prescribed the fluid extract of black haw in full doses, with the result that upon my visit the next day I found her entirely free from nausea, able to take food of any kind in any quantity with satisfaction and without any form of after-distress, and to lie completely down with comfort; in short, all the signs of lost compensation had departed. She was completely restored to her former condition of fairly comfortable invalidism, in which she remains to this day. She has mitral insufficiency with some enlargement, but under the conditions with which she is surrounded, compensatory hypertrophy maintains the equilibrium of her circulation and she enjoys a fair degree of health and comfort.

Out of this experience I have learned the lesson never to omit an examination of the pelvis of every woman who consults me for any chronic ailment. The nervous interrelations of the sexual apparatus are so wide that any irritation there may cause reflex disturbance in any part of the physiology and increase the distress of well nigh every other pathological condition.

This case is related here because it has been a most instructive one to me and it may not be entirely devoid of interest to others of my professional brethren.

Dr. W. L. Ross: I am very much pleased with the paper and with the remarks that have followed. It is certainly true that the general practitioner has to be something of a specialist, and take into consideration all of the peculiar symptoms and family history and everything pertaining to his case in every manner, and while it does require a great deal of care, still it seems to me that if the physician would ask a few leading questions he would very easily ascertain whether it is necessary to make a further examination, for instance, what hours he keeps, if he gets up at night or not, if the
bowels are regular, whether there is any pain in taking food, if he is troubled with insomnia, and a few leading questions like that, it seems to me that then the necessary result must be that the general practitioner will be able to go a step farther. I always make examinations after I begin treating a case, and if the patient does not seem to get along satisfactorily I begin to rather question my diagnosis and question the patient a little more carefully, have him come to the office more often, and from that I determine whether I am right in my diagnosis or not.

I have a patient in mind now that was treated all last summer for trouble of the bowels and the case came to me, and I could not help confirming the diagnosis on the first meeting, and I thought my diagnosis was right and that perhaps with a little different treatment he would get along. However, he grew gradually worse and I began to question my diagnosis, and finally, on the fourth visit to my office I told the patient I would have to change my opinion, and told him wherein I believed I was wrong, and he was sent home and told to go to bed and stay there. He complained principally of a pain in the bowels, commencing about three hours after eating anything, which pain continued often until food was again taken—obstinate constipation of bowels from some mechanical obstruction, which could not be relieved by medicine. Operative interference was urged and a surgeon called in. Patient was taken to the hospital, and on abdominal section carcinoma of cardiac flexure of colon was found.

Now, there is a case that simply dragged along for at least six months, and if anyone would question his patient on not finding an improvement he would be assured of the condition of affairs sooner, and you will find that it will greatly aid you in making a proper diagnosis of the case. Inquire into the family history, and it seems to me that that will give us considerable light in making a proper diagnosis.

DR. HILDRETH: While I would not raise any objection to the paper, yet at the same time I believe that some of us in general practice could not in each case make this thorough examination. Of course, a specialist has nothing to do but to give his attention to a particular case, but in general practice I think we sometimes can license ourselves a little to slighting cases. In fact we have to do it. Our knowledge of the family that we have dealt with is a great help in lightening our burden of work. Of course this paper says chronic cases specially, but these chronic characters that are in every community I think we are sometimes authorized in turning off with a prescription or a kick, and I sometimes find myself wishing we could get rid of them, because life is too short to bother with them. I would not say one word in favor of slighting any case, and we should be careful and painstaking, but many of these methods that are used in diagnosis are unnecessary in our general line of work. It is not necessary to examine the lung for a toothache, but we find
them in every community, we call them pests, that are always rambling around from one doctor's office to another and working us. They want too much for their money, and I feel sometimes that we have been too lenient. To illustrate, I have in mind a lady now. She has visited the whole list of doctors in our town, going from one to another. A while ago she came to me and wanted me to examine her for appendicitis; she had chronic appendicitis and was thinking of going away for an operation. I have known the woman for twenty years, and she has had that appendicitis from the head to the heel, and I told her she did not have appendicitis, but a day or two after that I heard a conversation between two ladies, one of whom was my wife, who had been to a woman's club, and it was said that the summer before the woman had been away and was operated on for something, but one of the ladies said: "Mrs. So-and-so is going away to be operated on for appendicitis;" the other one said, "I thought her appendix was removed last summer;" the other one said: "Yes, it was, but she says it is growing again."

Dr. Rosewater: I do not think too much attention can be given to the subject of this paper. We should be careful in making our diagnosis, but we can not all be all-round specialists in every department, and we in the city know what it is to call in the specialist, and we all neglect our training in certain lines because we know we can call them in, and in this respect the general practitioner in the country has the advantage over us. Sometimes at these society meetings it makes me ashamed of myself when I see what bright-minded men our fellow practitioners in the country are, and how much we rely on our fellow practitioners in the city in certain lines of work, but there are certain things that this paper has suggested to me that I have thought of before. One of those is the neglect that I have seen exercised by our surgeons on certain points, without reference to any particular one. I think the surgeon's neglect a serious matter. If, for instance, a physician makes a diagnosis and ascertains that an operation is necessary, he knows the family history and has been the family physician, and the people then go to this surgeon for this operation, it frequently occurs that the surgeon does not co-operate with the family physician, while if he did do so he would sometimes be enlightened on certain family traits, which would enable him to have better success with the operation, or would warn him against certain dangers in this particular case.

Again, in our surgical practice there is too little care taken in the preliminary examination of the patient before the operation.

Dr. J. W. Bullard: I wish to thank you for the liberal way in which you have discussed the paper, and for the kind words you have spoken in regard to it.

Now, in regard to questioning patients relative to the urine, they generally know very little about it. I call to mind a patient who came to my office for something for a headache. I prescribed for him. He was one of those fellows who greatly annoy the doctor. I
asked him about the action of his kidneys, and he said they were all right. I usually do not allow myself to be satisfied with this kind of an answer, but in this case I was somewhat neglectful. He came in one morning, and said: "Doc, I can not see well," and it occurred to me that he had an albuminuric retinitis. I examined his eyes with the ophthalmoscope and discovered a well-advanced retinitis. I called for a sample of his urine and found it loaded with albumin and casts. I then told him the trouble and what the probable result would be. He went from one physician to another till he finally passed into the homeopath's hands. He said to him, "Dr. Bullard is a scientific man, but I am going to beat science." Well, he did, and they planted the patient over on the hill in a short time.

There are exceptions to all rules. As I stated in the paper, it is not necessary to make this critical examination in every case that presents itself; but in chronic cases, patients you know nothing about, it is necessary to make a thorough examination.
HOW WE LIVE AND WHY WE DIE.

GEO. W. WILSON, M.D., CURTIS.

The medical profession is a field affording ample scope for the highest scientific acumen, for step by step, from day to day, and from age to age, we progress. It is not the bright, white light of medical science, it is the slow glow and glimmer of the great ignis-fatuus that leads us on to the breakers of defeat.

Every age and condition of life has had its wild fanatics, and I am well aware of approaching debatable ground; however, I shall enter the field of controversy and subject myself to the ordeal of criticism; nevertheless, so long as I am before the bar of professional responsibility, I shall adhere to duty, as a sailor clings to the ropes amid the tempest and the waves.

“How we live and why we die” is an interesting theme, and I shall deal with it from a scientific view of physiological chemistry. Life is the immutable law of physiological chemistry.

Life is a ceaseless physiological mutation, constantly building up and as constantly wearing away, constantly appropriating and secreting, and equally eliminating; for in nothing is our organized structure more remarkable than in the perpetual mutation which seems to constitute the fundamental law of our condition and subject us to the law of mortality. It is difficult, if not impossible, to give a single comprehensive definition of life, because life is a composite, aggregate, correlation of generative elements.

We perpetuate life by the active duties of life. Man is a composite glandular structure; therefore, to have a perfect state of health, all the glandular functions should act harmoniously and collectively.
Our physiologic nature undergoes changes at different periods of our lives, and it is well enough for us as physicians to observe and heed such changes; for there is more or less a mutation in our physiological relations throughout life; however, the human system appeared to constitute but one great whole; indivisible in a state of health, as well as in that of disease.

For the perpetuity of life, there should be an intimate connection and mutual influence on each other of the vascular and nervous system, for they are the first physiological strata developed in the embryo, and they fulfill the most important office all along the journey of life. The blood, in conjunction with the nerves, gives vitality to the organs they traverse, and in this I say, they exert in full force, the law of mutual dependence that connects all parts of the system, and becomes a living being. This is the synthetic homologue that is invaded by disease, and one of the many factors of death. The glandular secretions and their co-ordination by the nervous system constitute life, for the secerent glands are the life-making forces of our physiological nature. They are our physiologic and vital workshop, and when they become disturbed in their functions and the products of each and every gland are not correctly correlated and aggrandized, then we have a departure inimical to health, and generally called disease.

The anomalous secretions and their subtle vagaries engender physiological anarchy and pathological chaos, while their many recurrences cause decrepitude. Glands are endowed to perform certain functions to perpetuate life; but, when they become indolent, and functions impaired, then we are on the down grade; this is inimical to life, and is why we die.

Healthy nutrition and free elimination constitute life, while anomalous secretions and deficient elimination cause decline. It is said that nature abhors a vacuum; just so with the organized world, nature abhors idleness and inactivity. Constant mutation and correct glandular secretions
invigorate and prolong life; but when there is an indolent, torpid condition of the glandular secretions, then vital forces fail and life is abbreviated. We can live with some of the glands eliminated, but it is not the full and complete life that most of us would like to live, relative to fundamental principles upon which life is founded. In the process of life, an atrophied gland is like an unknown and forgotten grave. There are some forms of diathesis that are lethal agencies moving on in solemn silence against the functions of life, like a pathological arsenal around a defenseless citadel. Our glandular system is a physiological laboratory, where the pabulum of organic life is elaborated and functionated; in other words, every gland is a special workshop in the physiological economy of nutrition; therefore, any departure from a normal action means disease and endangers life. It is the healthy, concurrent and correct action of the glands that gives vivacity and invigorates our animal fabric. Longevity is greatest in those persons whose physiological laboratories are in constant and correct operation, while the vitiated secretions with their acrimonious results imperil life, and pave the way to death.

The fabrication of our organization requires an affluent current of arterial blood from which the glandular secretions may elaborate the plastic pabulum, to construct and maintain our physiological nature. There are two classes of substances in the blood—the elements of nutrition and the products of decay—therefore, for a successful maintenance of life our physiological functions should have a correct equilibrium. Our entire physiologic makeup is a multiplicity of glands, and each is allotted its own special duty; and when each gland has utilized and aggrandized its allotment, the residue or excrementitious material is cast off through the physiological sewers, as the ashes of physiological combustion. The ultimate of all chemical and correct physiological changes resolves itself into vitality, or what we are pleased to call life. When all the vital forces are correlated with exact nicety, the secerent glands work-
ing harmoniously, then the functions of life are carried along with exactness, and all is vivified by the crowning acts of the nervous system; then we have the process of living, but when the glandular secretions are perverted and anomalous, then there is disorder in nutrition and assimilation; therefore, inimical to health. Each gland has its own physiologic zone and chemical functions allotted to it; therefore, one gland does not perform vicariously the action of another—for every one has its own chemical affinities and relation and admits of no change without detriment to correct nutrition.

There is often a vicarious action in elimination, but never in the act of glandular secretions. Let one or more of the glands become perverted in physiological action, with anomalous correlation, then disease becomes manifest. The enzymes and disturbed functions of the glands, cause more disease than it would be wise to mention. I claim that when the entire glandular system is acting in concert, and functional harmony, we do not have such tendency to disease; it is the perverted secretions and disjointed assimilation that give what we call disease; however, it is my opinion that when the profession gives more profound study along the line of this theory much will be accomplished toward establishing medical science. Disease is often the result of inordinate and ill-directed enzymes. If from any cause there is an anomalous and perverted action of the glands, there is a blockade of the functions and a break in nutrition, assimilation languishes, and the system gradually drifts into the gulf of bankruptcy, and all is swallowed up in pathological chaos. The glands have the function of upbuilding and secreting, while the blood correlates, and the nervous system co-ordinates the vital principles of life; this is how we live, while the perverted secretions and anomalous correlation give us pathology, and is why we decline. It is by successive steps that truth is ultimately attained, and may every step of scientific advancement widen the distance between sophistry and science.
By clinical practice we often know more than we can lucidly explain, but the man of theory often tries to explain more than he knows, and such is a travesty on medical science. While some of the laws of nature, or physiological chemistry, are a mystery to us that we can not understand and can not express, yet there are some would-be scientists who make a derisive failure to elucidate nature. They can not give us the *juvantia et loedentia* of contagion or the *visvita* of man; and when a doctor uses the word “peculiar” he generally means he does not know. Sometimes nature refuses to yield some of her cunning secrets, viz., the subtle element, the *vis-vita* of man; however, there is a boundary line beyond which man’s scientific researches will never cross, for in the midst of all this and these science stands dumb, and the subject is a dark enigma and will never be determined by finite acumen. Science in the plentitude of her-garnered wisdom has never told us why some animals live only a few years, while others live a century; and like many other things, we must confess our utter inability to lucidly explain. Broad and responsible as our calling may be, there is much in the realm of cavil and beyond our field of vision.

Man can not live without physiological combustion, and I assure you, it is extremely difficult to search out the scientific ultimate of anything in physiology, because it requires persistent, scientific analysis to fathom the occult in nature. To carry out the purposes of life we must have chemical combustion between the oxygen and carbon, and when carried too far we have what I call a pathological conflagration (fever), for the law of nature is that *there can not be a chemical union without heat or light*, and sometimes both. As knowledge of the glandular structure, their functions and chemical affinities becomes more precise, the better will we be enabled to differentiate and diagnose disease; therefore, let us see clear and think straight, for I have claimed for many years that many diseases were of glandular origin, and the cause of perverted, anomalous action may be multifarious. The liver is the largest gland in the body, and somewhat cosmopolitan in
its functions, for the liver is a great diplomat in physiological nutrition, and one of its grand attributes is its functionating and aggrandizing the white corpuscles of the blood, for the corpuscles never carry oxygen until the liver aggrandizes them into red corpuscles, thereby enabling them to carry oxygen. The red corpuscle having subserved the purpose of arterial life, it is conveyed to the gall-bladder to pass through the mutations of a reconstituent. Many white corpuscles are lost by the way before they are aggrandized and functionated to carry oxygen, particularly when the liver is not in physiological harmony. When the attributes of the liver cease to functionate the white corpuscles they become lost in the economy of nutrient forces, and, unless eliminated, become a source for the formation of laudable pus. The existence of a blood-corpuscle is ephemeral, limited, and a transitory life, yet efficacious, and as life is deepened and enriched by the transmutation of the white to the red corpuscle, so is vital phenomena prolonged.

The passing of physiology from a speculative to a positive science will be the signal for a revolution in the practice of medicine, then diagnosis will become a science, and cease to be an art.

There is much hidden in the deep recesses of science, the why and wherefore that one chemical agent has affinity for another is a scientific mystery: the *juvantia et loedentia* is hidden in the occult recesses of science.

When there is a general surrender of the vital attributes and time overturns the frail fabric of man, we are often confronted with a diathesis before which art is obliged to confess its weakness, and science the loss of its talismanic force. It requires a vast amount of complicated mechanism to formulate and perpetuate life. For its correct maintenance we must have air, water and combustible matter. There must be a condition of equilibrium depending on receipts and expenditures, for life is like the flame of a lamp being ceaselessly fed as it ceaselessly wastes away. Chemically speaking, the human body is an oxidizing machine, for oxygen satisfies
its chemical affinities at the expense of physiologic combustion and wasting away. Oxygen is indispensable to all the operations of life. It requires about eight hundred pounds of oxygen to supply the demands of physiologic combustion in an adult person for one year; therefore, the liver should be in good working order to functionate the corpuscles as oxygen-carriers. Oxygen changes more, and devours more than any other element; and is reciprocal in all of its chemical relations.

While the liver aggrandizes the white corpuscle and functionates it to carry oxygen, the iron and phosphorus in the blood solicit the endosmosis of oxygen, and carry it along with the cohesive powers of chemical affinity. Iron and phosphorus in the blood is the *sine qua non* of endosmosis, and the alluring convoy of oxygen in respiration. With a smaller amount of iron and phosphorus than normal in the blood, what would be the status of respiration? (It is just the same as a small amount of oxygen in the air.) The white corpuscle is in the springtime of life, waiting the pleasure of the liver to give potentiality.

Oxygen has a great affinity for phosphorus and iron, hence in respiration the blood parts with carbonic acid gas and chooses the chemical relation with phosphorus and iron—a reciprocity.

The brain possesses the greatest amount of phosphorus, therefore, great mental activity casts off freely of phosphorus, while muscular activity requires albumin and casts off animal heat by way of physiological combustion. While the lungs are casting off carbonic acid gas, the kidneys throw off much of the ashes of physiological combustion which the sewers of nature are eliminating. The subtle vagaries of pathology are the breaking line for such promiscuous treatment, and I am not a devotee of the modern physiological vampire. The brain is the great monarch of our physiological empire, seated in the dome of our anatomical structure. I should like to coin a word more appropriate than "gland" for the brain, because glands will lessen from various causes; they will
atrophy, they will hypertrophy, but the brain of an adult person never lessens by emaciation or starvation, or augments when our physiological structure increases in avoiddu-poис. Our anatomical structure may go up or down the avoiddu-poис scale, but the brain does not increase nor decrease. Why? So far the logical acumen of man has not solved the problem. The cranial membrane may exude a fluid and give rise to hydrocephalus, but the brain remains its natural size; the skull enlarges in hydrocephalus, take off the pressure of the water on the brain, and the intellect remains lucid. The brain is the great dynamo of life and embellishes our physiological nature with ambrosial fruition, and holds in solution the thoughts of mankind.

The nervous system is the center from which life radiates; it is the nervous system that animates and regulates our whole structure; it corrects and co-ordinates our entire organism; it regulates secretions; it regulates the calorification of organic structure; it is the first physiological strata in animal life; therefore, the most serious result to be apprehended is the deleterious impression on the functions of the nervous system, which is so important and essential in the transmission and continuance of life. The concurrent attributes of the nervous system are the cause of the geneial cycle of nutrition; and the drama and phenomena of life are visualized and reproduced by and through physiological mutation.

Much of vitality is wrapped up in the emolument of the nervous system, which is the guiding and controlling principle, and moves the tide of life in gentle rhythms. It is the correct correlation of glandular secretions and the generous attributes of the nervous system that embellish the grandeur of our physiological nature and is how we live, while it is the perverted secretions and anomalous correlation that are the pathogenic cause of why we die.

The greater the advance of physiology and chemistry the more we have to surrender the recollections of classic mythology. It is useless to go through roll-call of all the etiological
factors in disease. The mutations through which physiological chemistry passes to perpetuate life are somewhat multifarious. There have been many mongers of knowledge from the days of Euclid down to osteopathy; however, the deluded pseudophilosophers have not found the elixir of life, and the delusion is as old as the days of Plato, and the pseudoscientists have clustered around them numerous and varied claims that are as fabulous as they are visionary. Let me say, many centuries have passed, and more will come, before science becomes crystallized. Many fallacies and idolizing schemes are perpetrated and led on by credulous and crude belief; because ignorance and error go hand in hand, and will until the break of doom.
A SPECIFIC TREATMENT OF DIPHTHERIA AND OTHER SORE THROATS.

J. A. POLLARD, M.D., NEHAWKA.

No doubt the title of this paper seems very presumptuous to you all; it does seem rather ridiculous for an obscure country practitioner to claim to have discovered a remedy for diphtheria, and especially that the remedy should be a simple combination of drugs to be found in every country drug store. My formula is this:

R. Sodium sulphite ....................................................... grs. 1
   Dilute phosphoric acid
   Tincture of iron, ââ .................................................. 3ss
   Syrup, q. s. ad ...................................................... 3iv
Dissolve the sulphite in the acid, add the iron and lastly the syrup.
Sig. A tablespoonful every two hours after a drink of water.
In severe cases I give it every hour, night and day.

On being called to a case of sore throat, diphtheritic or not, I give, if there is much fever, a large dose of acetanilid, and direct the above syrup to be given every two hours, day and night, until recovery. A very few doses will suffice to cure an ordinary sore throat. In diphtheria the membrane will soften and gradually disappear, usually in two or three days. In nasal diphtheria it may be necessary to force the medicine through the nose with a syringe.

There have been four epidemics of diphtheria at Nehawka and vicinity in the past ten years, with hundreds of cases ranging from mild to exceedingly severe, in which this remedy has been used, with but three deaths. Two of the cases had been ill for nearly a week before receiving any treatment; the third was the only case of diphtheric croup it was ever my
misfortune to be called on to treat. In this case the cause of
death was exhaustion, and not choking. I have had no cases
of paralysis, except slight paralysis of the soft palate after
nasal diphtheria. The kidneys and bowels preserve their
functions.

The only objection to its use is the strangulating odor of
sulphurous acid gas generated by the chemical reaction of
the ingredients. Most children take it readily, more so than
some adults.

It is prophylactic as well as curative, and by giving it to
the well members of the family three or four times a day they
will not contract the disease, however much they may be ex­
posed to it. This is my experience.

I most earnestly entreat that every one of you will test this
remedy, and will report the results. I believe that I have
made a most important discovery. As compared with the
diphtheria antitoxin, I believe it is as efficient at least, and
it is certainly cheaper and more easily procured by the average
country physician. At any rate, bear this in mind, and in
case of emergency, when fresh and reliable antitoxin can not
be readily procured, try this, and you will be surprised and
gratified with the results.
TREATMENT OF CROUPOUS PNEUMONIA.

WILSON O. BRIDGES, M.D., OMAHA.

The mortality of croupous pneumonia is greater than that of any other acute disease, killing more than diphtheria, and coming next to tuberculosis in the destruction of human life. The mortality statistics in private and hospital practice show a percentage of from 20 to 40. The census of 1890 indicated that 76,496 persons died of pneumonia in the United States during the preceding year—a death-rate of 186.94 per 100,000 of population. The census reports of 1870, 1880 and 1890 show that the deaths from this disease have slightly increased. It is the most widespread of all acute diseases.

It is nearly twenty years since Frankel discovered the diplococcus lanceolatus and established its causative relation to croupous pneumonia, since which time renewed efforts have been and are being made for the discovery of a specific prophylactic and curative agent. Some years ago the Klemperers demonstrated that the injection of blood-serum obtained from one who had recently recovered from pneumonia conferred immunity in some of the lower animals, and it was hoped that an antitoxic serum would be obtained, which would be prophylactic and curative in man. While some favorable results have been reported from the injection of 20-c.c. doses by a number of observers, the treatment has not yet gained a foothold.

Various drugs have been from time to time advocated as specifics, and long before the antimicrobial theory of treatment was suggested, calomel in large doses—20 to 40 grains—quinin—30 to 50 grains daily—veratrum viridi, in doses sufficient to bring and maintain the pulse below sixty, had
the endorsement of many competent observers whose reports were certainly commendatory. The same may be said of venesection, which at one time was supposed to be the treatment *par excellence*, and yet to-day the teaching is, that the expectant plan, with the meeting of indications by appropriate symptomatic remedies, yields as good results as have heretofore been obtained, and there is much less probability of doing harm. Osler states in his 1899 edition that, "Pneumonia is a self-limited disease which can neither be absorbed nor cut short by any known means at our command; even under the most unfavorable circumstances it may terminate abruptly and naturally without a dose of medicine having been administered. There is no specific treatment for pneumonia. The young practitioner may bear in mind that patients are more often damaged than helped by the promiscuous drugging which is still only too prevalent." The remedies advocated as specifics before the expectant plan was adopted were selected because of their antiplastic, antiphlogistic and antipyretic properties. Pneumonia was then supposed to be an inflammatory disease, and was to be combated like any other inflammation. Calomel acquired its adherents because of its supposedly antiplastic effects; veratrum viridi, on account of its antiphlogistic properties, and quinin for its power over fever.

Flint made a long step in advance when he announced that pneumonia was not simply an inflammatory disease of the lungs, but an essential infectious fever, with pulmonic inflammatory manifestations. He it was who advocated large doses of quinin on this hypothesis. He writes: "As long ago as 1861 I was led by the results of the analysis of a considerable number of cases in which sulphate of quinin was given to the extent of only 15 grains daily, to the conclusion that this remedy exerted a marked curative influence on the disease. I can now (1881) bear testimony to the fact that, given in large doses, namely 20 to 30 grains daily, this remedy in a certain proportion of cases renders the disease abortive and that, when this does not follow, the disease is often modified to a greater degree than by smaller doses. Now, whatever efficacy be-
longs to the remedy proceeds evidently not from any direct effect upon the pulmonary affection, but from a controlling influence over the pyrexia, thus sustaining the doctrine that the disease is an essential fever.”

The newer pathology of a pneumococcus infection was but a step in advance of Flint’s doctrine, for it determined the actual cause of the infection. It holds that the disease is a general toxemia resulting from the formation of toxins produced by the development of the diplococcus in the lung, and having a varying effect, upon the nervous system, the circulation, and the digestive tract; plus an inflammatory condition of the pulmonary vesicular walls and smaller bronchi, the direct irritative effect of the bacterial growth, which results in an exudate filling the air-vesicles, interfering with the functional pulmonary circulation and respiration by mechanical pressure. With what we believe now to be the true pathology of croupous pneumonia, may we not hope that a true specific will be found, or are we to calmly sit by the bedside and study the interesting clinical phenomena, awaiting the crisis or a fatal termination, with only symptomatic treatment? The true specific which shall be applicable to all cases must have for its effect the power to inhibit the development of the pneumococcus in the lung, either by directly destroying it or by rendering its environment inimical to its growth, or by acting as an antidote to the toxins produced. It must at the same time be innocuous.

With these thoughts in my mind, I had treated a severe case of embolic pneumonia of streptococcus origin, now nearly two years ago, by means of large doses of guaiacol carbonate, with recovery, and was on this account deeply interested in a paper on “The Treatment of Pneumonia as Based upon Recent Views as to its Pathology,” by Andrew H. Smith, of New York, published in the Medical News, Dec. 6, 1899, in which he urges very strongly the use of guaiacol carbonate or the salicylates as a specific in this disease. He refers to Robinson and Kerr, who are recent enthusiastic advocates of creosote, both by the stomach and by inhalation. The great ad-
vantage of this remedy is that it can be taken in large doses without harm and that, being eliminated in its passage through the lungs, it has a double action. E. Congier, in an inaugural address published in 1898, showed that the carbonate could be taken in very large doses, up to a dram or more, without any irritation of the stomach, and that being slowly decomposed in the intestine, it liberates the creosote so that the blood is constantly charged with it, even when there are six to twelve-hour intervals between the doses. Thirteen cases from the clinic of Dr. Cassonte, of Marseilles, are reported in this paper, three of lobar and ten of catarrhal pneumonia, in which the carbonate was practically the only remedy employed. In every instance the effect on the temperature was most marked, defervescence occurring promptly in the cases of lobar pneumonia, while in the catarrhal the severity and duration of the attack were proportionately lessened. Dr. Wm. H. Thompson, of New York, in the discussion of Dr. Smith's paper before the New York Academy of Medicine, said: "Recently in cases of double pneumonia I have had excellent success with 20-grain doses of creosote carbonate administered every two hours. A very palatable emulsion can be made of the drug and patients take it readily. I have had three most unpromising double pneumonias recently recover under this treatment."

Robert Liegel in 1898 reported seventy-two consecutive cases of recovery from pneumonia under the salicylate treatment, occurring in the Lohen Seegraben. The patients were from 16 to 74 years of age. Eight had emphysema, six cardiac disease, and a large proportion were alcoholics. The drug used was sodium salicylate in large doses, not less than 120 grains daily. No other drug was used excepting an expectorant, and small doses of morphin when pain was excessive. Under this treatment not only did recovery ensue in every case, but the duration of the attack was materially lessened, and in no case did crisis occur, the temperature declining after the first day, reaching the normal by the fifth, when convalescence was established. The expectoration soon became catarrhal and the
physical signs did not fully develop, or in cases where they did, rapidly retrogressed. In the first cases treated the remedy was suspended too soon, when relapse occurred. After this was observed the drug was continued several days after convalescence, when no further tendency to relapse was manifested. Previous to the adoption of this treatment the management of the disease had been unsatisfactory and the mortality high. Liegel believes that the salicylate exerts a specific effect on the mucous membrane, increasing its secretion and throwing off the exudate. Dr. Smith believes that Liegel did not grasp the antibacterial idea of the action of the drug. He states that his own experience with this line of treatment has been encouraging, though not large. He has used all the drugs which have appealed to him as specifics, with the exception of quinin, which has seemed too slow in action and too disturbing to the stomach. He prefers creosote carbonate to the salicylates, because of the gastric irritation often produced by the latter and its depressant effect upon the heart in the latter stage of the disease. So enthusiastic is Dr. Smith in his belief of the efficacy of this plan of treating pneumonia that he urges the family physician "to provide his families with creosotal or one of the salicylates, and to instruct them that with the slightest chilly sensation or the slightest stabbing pain in the lung, a dose is to be given at once, and that this dose is to be repeated at stated intervals until the physician arrives. This might prevent the development of pneumonia in some cases and shorten the attack in others."

Have we a specific for pneumonia in these two drugs, and by that I mean a remedy which will apply to all cases on antibacterial grounds which will do no harm and which will not in any way interfere with the treatment of symptoms as they indicate? This question I have made a start to solve to my own satisfaction during the past winter, when I have had an opportunity to put it in practice, and I append a few illustrative cases, some of which were exceedingly severe.

Case 1.—Mr. H., aged 35, single, an accountant, had pneu-
monia several years before. When in apparent good health, he was seized with a shaking chill, lasting one-half hour, attended by severe pain under the right nipple and a slight cough. Recalling his former experience, he at once went to bed and I was summoned. On reaching him, two hours later, I found him with acute pain in the right side, temperature 101, pulse 96, respirations 24, and during my visit he coughed and expectorated the typical rusty sputum. On physical examination there was diminished expansion of the right side, lessened pulmonary resonance in the lower right mammary region, and characteristic crepitant râles over a part of this area. He was given a hot prolonged bath, 5 grains of calomel to be followed by a saline, a mustard and flaxseed poultice applied to chest, and was ordered 15-grain doses of sodium salicylate every two hours, absolute rest in bed after the bath, and liquid diet. In eighteen hours the pain was much less, he sweated freely; temperature 99.5, pulse 90, respirations 24, no further physical signs. Several times he raised bloody sputum. Salicylate intervals were increased to three hours. In twenty-four hours temperature was normal, pulse 80, respirations 20, sputum only slightly tinged. From this time he went on to complete convalescence, the salicylates being kept up for five days more at longer intervals.

Case 2.—Miss E., aged 30, single, a teacher, three days before my first visit, while at work had a severe chill, followed by lancinating pain in the right side, and dry, hacking cough, with fever, severe nausea and vomiting, the latter occurring several times. On first examination countenance was flushed and expression anxious; there was severe pain in the right nipple line through the shoulder; tongue was much furred; she was exceedingly nervous and sleepless; temperature 104, pulse 100, respiration 40; cough dry and painful, no sputum had been raised. There was much diminished expansion on the right side; vocal fremitus was increased; there was complete dulness and bronchial respiration with bronchophony over right infrascapular and axillary regions. Liquid diet was ordered, with absolute recumbency; calomel 8 grains to
be followed by a saline, guaiacol carbonate 8 grains, strychnia 1/40 grain every two hours, codeine 1/2 grain, phenacetin 4 grains; for pain, mustard and flaxseed poultice covered by oiled muslin. On the fourth day, temperature was 104, pulse 108, respirations 52; she was delirious most of the time. There was rusty sputum. The consolidation of the right lung extended to the axillary region, with physical signs of consolidation in left infrascapular region; treatment continued. On the fifth day, temperature was 104.2, pulse 108, respirations 50; she was still delirious; breathing was labored; cyanosis was marked. Oxygen-gas treatment was commenced, twenty-minute inhalations every alternate hour. On the sixth day, temperature was 104.4, pulse 120, respiration 48. On the seventh day, temperature was 101.4 to 99.6, pulse 106 to 92, respirations 40; termination by lysis, convalescence uninterrupted. The total amount of guaiacol carbonate administered in four days was 320 grains.

Case 3.—Mr. X., single, aged 28, a chemist, previously well, was seized with severe chill, followed by fever, and pain in right mammary region. He was seen first on third day, when temperature was 104, pulse 120, respirations 40. He had a cough with typical rusty sputum; slight delirium; tongue thickly furred, physical signs of complete consolidation of upper lobe right lung. Calomel 8 grains, followed by saline; guaiacol carbonate 8 grains; strychnia 1/30 grain every two hours, were ordered, with absolute recumbency and liquid diet. On the fourth day, temperature was 104.5, pulse 120, respirations 50; delirium was more pronounced; he was very restless; tongue was brown and dry; consolidation extended to lower lobe, also to lower lobe left lung. Guaiacol was increased to 12 grains. On the fifth day, temperature was 105, pulse 140, respirations 60. There was muttering delirium; sordes tend to collect on teeth; cyanosis commencing. The right lung was completely solidified; left lobe increased; heart-sounds feeble but regular. Oxygen-gas treatment was commenced—twenty minutes each alternate hour—and strychnia was increased to 1/20 grain every two hours,
hypodermically; calomel, 8 grains, was ordered, to be followed by saline. On the sixth day, temperature was 103, pulse 103, respirations 50; delirium was less marked, restless, cyanosis not continuous, tongue moist, commencing resolution in upper right lung. Oxygen gas gives great relief, but wants it no longer than ten minutes; treatment continued. On the seventh day, temperature was 101, pulse 108, respirations 50; there was no delirium; resolution in right lung had extended and was commencing in left. On the eighth day, temperature was 99, pulse 100, respirations 40. From now on convalescence was uninterrupted, and resolution became complete in three or four days. Guaiacol was continued for one week in lessened doses; also strychnia.

Case 4.—Mrs. U., aged 32, for several years in delicate health, had a chill, with fever and severe pain in right axillary region; cough, with mucopurulent expectoration. Physical signs of consolidation were not manifest until the sixth day, when they were found in the lower lobe of the right lung. Temperature was 103, pulse 90; guaiacol carbonate 12 grains and strychnia 1/30 grain was ordered every two hours. From this time on for six days the temperature ranged from 101.8 to 104.4, pulse, highest 120; respirations, highest 60; delirium marked at times. Resolution took place by lysis, but temperature did not reach the normal. After one week of improvement, temperature and pulse increased, when physical signs of plural effusion were found. An exploratory paracentesis thoracis revealed pus in the infrascapular region after two failure punctures in the mammary and axillary regions. A pleurotomy with rib resection was performed by Dr. Jonas, which was followed by a tardy though sure convalescence, with complete expansion of the lung.

Case 5.—Mr. H., aged 45, married, a clerk, very robust, had a cold and cough for several days while traveling. A chill, followed by fever and pain in right side, occurred before reaching home, and two days before my first visit. I found the temperature 103, pulse 110, respirations 36; cough, with bloody expectoration, prune-juice in character. There were
physical signs of general bronchitis, more marked posteriorly, and consolidation in right infrascapular region. Guaiacol carbonate 10 grains and strychnia 1/20 grain were commenced at once, with calomel 6 grains, followed by saline. Under this treatment and a mild expectorant, resolution took place by lysis, so that by the sixth day temperature was normal, and the bronchitis slowly disappeared.

Case 6.—Mr. C., aged 50 years, married, an accountant, was seen in consultation on the fifth day after a severe chill followed by high fever and some pain in the side. Temperature had ranged to upward of 104 and pulse to 115. At my first visit he was partially comatose; the tongue was brown and dry, sordes on the teeth; there was enormous distension of the abdomen from gas, and complete consolidation of the right lung. Calomel 6 grains was ordered, to be followed by saline; sodium salicylate 15 grains every two hours for four doses, then at longer intervals; strychnia 1/20 grain. The following morning the temperature dropped to about 102, pulse 112, abdominal distension was relieved, tongue moist, but stupor had increased and cyanosis was manifest. Oxygen gas was commenced in the afternoon. The same evening the pulse was 124, temperature 103, and incontinence of feces; coma increased, but commencing resolution was manifest in the consolidated lung. In spite of large doses of strychnia and digitalis hypodermically, he died comatose the same night.

Case 7.—Mrs. S., aged 38, housewife, of rather delicate constitution, had been curetted by me on the eighth day after labor for a supremia of mild type, which had not yielded to uterine irrigation. Her temperature was practically normal and her condition very favorable until the fifth day following, when she had a chill with headache and general malaise, followed by temperature of 103.5. The next day severe pain developed in the inframammary region left, which required morphine hypodermically for its relief. A careful physical examination made after the pain was controlled, when the respiratory movements were free, was negative. Fearing the development of pneumonia, at my next visit I took with me
5-grain capsules of guaiacol carbonate. On the third day, temperature was 103, pulse 128, respirations 40; pain had returned, and was also in left supraclavicular region. There was no cough. There was consolidation in left infrascapular region, crepitant râles distinct in inframammary same side. Guaiacol carbonate 10 grains, strychnia 1/20 grain every two hours, codein as required for pain, were ordered. On the fourth day, temperature was 103.2, pulse 140, irregular, respirations 38. Perspiration was free; tympanitis marked. Vaginal as well as abdominal examination negative. Physical signs were the same, but crepitant râles in addition heard in supraclavicular left and inframammary right; no cough. On the fifth day, the morning temperature was 102, pulse 140, respirations 44. At 5:30 p.m. she had a chilly sensation for one-half hour, with temperature of 106, pulse not countable, respirations 40. At 10 p.m., temperature was 104, pulse 148, respiration 36. On the sixth day, temperature was 101.4, pulse 136, respirations 24. Signs of resolution were marked over consolidated area; no extension where crepitant râles were heard elsewhere. For the first time she expectorated a bloody sputum, which on bacteriological examination by Dr. Lavender was found to contain staphylococci, pneumococci, and a very few streptococci. During the next few days all evidence of pulmonary trouble disappeared and the temperature, pulse and respiration became normal. The guaiacol was continued in the same doses at longer intervals.

Case 8.—This was a case of embolic pneumonia, the result of a septicemia from a self-induced abortion at the second month, terminating in abscess and the expectoration of large quantities of pus containing streptococci and staphylococci. The pulmonary infection occurred in the left mammary region and gave the typical signs of consolidation; temperature ranged from 102 to 104, pulse 130. Large doses of guaiacol carbonate with strychnia was the only medicinal treatment, the patient convalescing in ten days, with good results. This case can not be classified with the ordinary pneumonia of pneumococcus origin, and it is recalled because of the appar-
ent influence of the antimicrobial treatment over a septic embolic pneumonia, a disease which is so fatal in its results.

Individual statistics bearing on the treatment of disease carry weight only with him who has been through the personal experience of the foundation for the statistics. It requires a collective investigation to determine whether in reality any progress has been made, and more particularly is this true of pneumonia, a disease which is attended by so many surprises, and the results of which are so uncertain. My own experience with the remedies so earnestly advocated by Dr. Smith is so limited that I hesitate to bring the subject before you at this time; yet I was so impressed with the results in some of them, which represent the severe types of double pneumonia, that I desired to suggest a trial along the same line in order that we might the sooner ascertain whether we yet had a specific treatment for this disease. We must go on hoping that we will accomplish as much in this direction as we have in the treatment of malaria, of syphilis and of diphtheria. It is all well enough to write and talk of treating the individual instead of the disease, but when we can do both with the same degree of intelligence, we will lower the mortality of pneumonia to figures which, to say the least, will not be alarming. So far as we know, I would rely upon guaiacol or the salicylates, giving preference to the former in cases past the stage of congestion, in the enfeebled, or where there were heart lesions. The addition of strychnia to the salicylate treatment obviates in part the depressant effect upon the heart, and so does alcohol. I combine strychnia with guaiacol also for its influence upon the nervous system, and to prepare the patient for very large doses, if they became necessary. I will not take up your time with the details of the individual or symptomatic treatment, only to say that I have found the hot poultice more agreeable than the cold; that I would resort to venesection when there was an overloaded right heart with threatening symptoms; that digitalis is reserved for an irregular and flagging heart; codein in small doses for the relief of pain and
delirium; strychnia in increasing doses and alcohol for enfeebled heart action; calomel and saline for constipation or sluggish portal circulation; oxygen gas commenced at the first sign of cyanosis and in quantity sufficient to relieve; and last, but by all means first, the absolute recumbent posture until resolution is established.

DISCUSSION.

Dr. Mitchell: The Doctor has completely covered the subject of pneumonia here, and it leaves little to say. It has been my custom to treat these cases largely by the accepted method, and to follow just such a line of treatment as laid down in his closing remarks in nearly all instances. There is one point, however, which I would like to urge on practitioners in all these cases, especially where there is a slight increase in the temperature, and that is a careful exploration or examination of the chest of the person to locate pus in the pleura. I have had two cases within three weeks, and in both cases pus was found in the pleura. I simply mention it because of the interest it was to me, and I believe that where there is a high temperature lasting for any length of time we should explore the chest very carefully.
Deluded on the one hand by some overzealous surgeons who see things only from their own point of view, and awed on the other by the fear of fatal results from surgical procedures, the general practitioner stands, as it were, between Scilla and Charybdis, not knowing which way to turn or what course of action to pursue. The one class of practitioners tells him that he is not doing his duty by his patient if, in a case of appendicitis, he does not promptly call in a surgeon and have the offending appendix removed. On the other hand, he may have seen, and certainly has heard and read of, instances where a simple, uncomplicated, non-septic appendicitis, or no appendicitis at all, was found upon abdominal section, and where the patient died from the operation, which was found to have been entirely unnecessary.

Again, we see cases where a timely recourse to surgical measures might have saved a patient who was allowed to die either for want of the proper diagnosis or proper interpretation of the indications present.

We are brought face to face with these grave conditions often enough to feel the weight of responsibility resting upon us. We wish to do our full duty by our patients. Which way shall we turn? What course shall we pursue so as to insure the greatest safety to the patient?

Still another class of patients presents itself in which every indication warrants and demands surgical intervention, but the patient's general condition, or the serious impairment of some vital organ, would hold out little hope for the success
of such a procedure. The patient could not stand a laparotomy. What shall we do? Shall we sit down, fold our arms and say, "nothing can be done?" Most assuredly not. Yet this is just what I found several members of our profession, otherwise excellent men, do, simply on account of a misinterpretation of their duties to their patients, or on account of blind faith in the guidance of some overzealous surgeon who has issued the dictum: "Operate in all cases if you wish to do your full duty." This is the dilemma in which the medical profession to-day finds itself. Before seeking the path which is to lead us out of this labyrinth of doubt and uncertainty, a little review of the conditions which confront us will not be amiss.

Appendicitis, an inflammation of that little offshoot from the bowel in the ileocecal region, whose function no one has so far been able to determine, may be catarrhal, suppurative, septic or perforating; it may be simple, or, what is more frequently the case, complicated by a localized peritonitis, involving the peritoneum of the ileocecal region, or spreading over the entire abdominal peritoneum. This peritonitis is, of course, accompanied by the formation of a plastic exudate, which agglutinates the various coils of the bowels and, becoming organized, permanently impairs their vermicular movements, thereby rendering intestinal digestion and intestinal action imperfect and deficient. Intestinal movement becomes imperfect, painful and deficient, and the contents of the bowels are not evacuated as they should be. Fecal accumulations are liable to occur, causing new irritation and leading to inflammatory attacks, the relapses to which the subjects of appendicitis are so liable.

The primary attack of appendicitis sets in sometimes without any marked symptoms of invasion, insidiously producing its pathological changes without the patient's being aware of any local pathological process until the introduction of some irritating ingesta, the use of a cathartic, a sudden exertion, or a direct injury, produces decided local and general symptoms, pain referable to the right groin, or sometimes to the umbil-
ic, vomiting, and, as a rule, constipation. Now the physi­
cian is called in, and finds a tense, tender abdomen, the ten­
derness being greatest at the point known as McBurney's
point, the abdominal muscles are rigid, the pain is constant,
temperature elevated, tongue badly coated, pulse rapid and
small. Close questioning will elicit the fact that the patient
has not been well for some time past, suffered from anorexia,
occasional colicky pains in the abdomen, especially in the
right groin, and constipation, but he was either too busy to
attend to it or did not think it of sufficient importance to re­
quire any special attention.

In other instances, a sudden sharp abdominal pain, accom­
panied by all the symptoms of shock and septic peritonitis,
announces to the physician that some septic accumulation has
ruptured into the general peritoneal cavity. The locality and
previous history tell the balance of the tale, and if not, the
findings of a laparotomy or post-mortem examination will re­
veal them. Let us see what has been the local condition which
has gradually brought about such results.

That only a very small percentage of cases of appendicitis
are really primarily due to the lodgment of a foreign body
in the cavity of the appendix is now generally conceded, but
the majority of cases are due to colds and improper diet. The
first step in the pathological process is the congestive swelling
of the mucous lining of the appendix with narrowing and final
closure of the opening into the bowel; then a retention of the
accumulated secretions in the cavity of the appendix, disten­
sion of the latter—thinning and softening of its walls—with
sometimes local ulceration from the mucous surface and at
others gangrene of portions of the wall and rupture. Mean­
time, however, the inflammatory action has not been confined
to the mucous and muscular layers of the appendix, but at­
tacking its peritoneal covering, it produces a peritonitis which
most frequently is circumscribed, creating a localized tumefac­
tion in the right iliæ region, containing either a plastic effu­sion or pus, and walled off from the general peritoneal cavity
by the surrounding adhesions.
The presence of this tumor in the groin, the course of the temperature and previous history of the case will assist the physician in recognizing the presence of pus, and consequently the urgent need of surgical intervention.

The treatment of appendicitis must, of course, be carried out along the lines indicated by the conditions found and impending dangers to be avoided. As the presence of intestinal accumulations threatens to aggravate the inflammatory conditions by local irritation, the first step in such a case should consist in the thorough emptying of the bowel by a mild mercurial purge—calomel—followed by a saline cathartic. A copious enema of warm salt water—a gallon or two— injected high up into the colon assists materially in many cases, but should not be resorted to where, by increase of the peristalsis, the rupture of an abscess may be brought about. Ice applications locally, in the form of an icebag over the groin, do much to assuage the pain; in fact, I have found them so beneficial that the patients, after becoming accustomed to the ice, will not do without it. Opiates should be avoided as much as possible, not because they stop the peristalsis, but because they so mask the picture of the disease as to leave the physician at sea as to its progress. The patient should remain in bed on his back and his surroundings quiet. His diet should be confined to liquid food, preferably peptonized milk, either warm or cold, according to his predilection. All solid food and such as leaves much waste should be forbidden until all signs of local irritation have subsided. Too great care can not be taken in this particular during the first year following an acute attack of appendicitis, for upon this care will depend the permanence of the recovery. In the beginning of an attack, where vomiting is a prominent symptom and the stomach is very irritable, 1/20 grain of calomel given hourly will quiet this irritability in a large proportion of cases. Bits of ice swallowed at intervals will assist in accomplishing this result. Sometimes iced champagne is retained in small quantities by such a stomach where other fluids are vomited. To combat the fever and nervous manifestations, salol and phenacetin—
grains of each every two to four hours—with \( \frac{1}{8} \) grain of citrate of caffein yield good results. Judicious stimulation during the use of phenacetin is deemed advisable.

The treatment outlined here is carried on during the height of the disease, with the object of relieving the local irritation and checking the progress of the inflammation until resolution sets in. As the inflammation subsides, gradually a new element enters into the treatment, namely, the removal of the effects of this inflammation, the removal and absorption of the inflammatory exudate, which, if allowed to remain, leads to agglutination of the intestinal coils and permanent impairment of the intestinal activity. To attain this object I have used with good success ammonium iodid, in doses of from 1 to 3 grains every four hours, followed by copious draughts of hot water. In fact, all through the attack of appendicitis hot water should be given freely and in large quantities. My experience with this treatment has been very gratifying in cases of appendicitis where patients, apparently needing surgical intervention, have refused to be operated on. In one case in particular, where serious valvular heart trouble led me to fear an operation, and where the treatment was instituted without expectation of favorable results, eight months after a second attack of appendicitis, the patient, aged 12 years, presented a history of arsenical poisoning occurring at the age of 2 years—followed by an irritable digestive canal—and chorea; at the age of 11 years she had her first attack of appendicitis, followed in a few months by a relapse. Eight months had passed by since the partial recovery from the relapse, and a number of physicians who had been consulted declined to treat her, claiming that nothing could be done without an operation. In view of the peculiar complications in the case rendering an operation extra hazardous I felt justified in postponing serious consideration of the latter and instituting the treatment as outlined above. The result was immediate improvement and ultimate complete recovery from the effects of the appendicular trouble. This patient suffered from chronic constipation due to the agglutination of the in-
testinal coils, but was entirely relieved after the treatment
with ammonium iodid and copious hot-water draughts was
instituted, so that her bowels acted regularly without a laxa-
tive. This proved to me conclusively that the adhesions must
have been removed and the intestinal peristalsis re-estab-
lished.

It is to this phase of the subject that I wish to call especial
attention, applicable, as it is, in numerous instances where op-
erative procedures are not feasible and always dangerous. I
do not wish to be understod as opposing surgical measures,
especially where they are clearly indicated and not counter-
indicated by the presence of other dangers.
INFANTILE ECZEMA.

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I present this paper as chairman of the Section on Dermatology and Skin Diseases. In doing so I assume the prerogative of writing a paper on some one disease common to all general practitioners, instead of writing a paper on progress during the past year. There is no malady that I am at all conversant with or have had experience in treating that is met with more frequently than this disease among infants or children, to a greater or less degree, and I know of no ailment to which an infant may be subjected that is more annoying, both to the child itself, to the mother and to the practitioner who is called to treat the same.

Eczema is such a common disease, and the diagnosis is so readily made, that it is unnecessary to describe it. The eczematous eruption may be described as having been produced from the papillae, which increase in size by cell formation in their interior, the connective-tissue corpuscles enlarge, and usually contain fluid, and their number increases. Microscopically their spindle-shaped corpuscles are observed, filling the papillae, and extending up from them into the rete malpighii, crowding apart the cells of this layer, and reaching and elevating the epidermis. The epithelial cells in the immediate vicinity of the papillae also become swollen. This so-called cell growth produces the eczematous papule, and if the cell formation continues within the papule, certain of the cells are ruptured, and when moist a liquid is effused. This when raised up over the papule produces the eczematous vesicle. In all acute attacks, the skin is infiltrated and swollen. The longer the disease has run on, the greater the extent of the infiltration, and it is noticed in
chronic cases that the entire thickness of the skin is involved more so than in recent acute cases.

It is quite noticeable that the discharge from an eczematous surface is irritating to the healthy skin, which is reddened by it at once. It has also been demonstrated frequently that a nurse, or those having in charge and taking care of an infant afflicted with eczema, may contract the disease from the child under their care, although it is considered a non-contagious malady.

Cause.—There is no doubt that eczema is often produced by irritating substances applied to the skin, certain kinds of irritating combinations, certain soap, or irritation caused by tight-fitting clothing, may produce it in those who have a thin, delicate skin; at the same time, a number of other causes may be assigned as an important factor in its production in those susceptible to it, and in my opinion there is a certain percentage of people who in infancy were in accord with this susceptibility, those with a delicate skin more so than others. In Nebraska, the dry, cold, dusty wind of our winters is certainly conducive to it in those where the susceptibility exists; hence it is if a case contracts this trouble in the early autumn months on face or hands, it is nearly always liable to extend through the winter months. It is no doubt in many cases of infantile eczema due in the main to constitutional causes, although apparently obscure, and also due to indigestion and a dietetic course that in no way at all agrees with the infant or supplies the nutrition that the little one requires. Quite often it occurs in infants whose mothers at the time of nursing them are invalids. Anemia, from whatever cause, may have a tendency to produce a field sufficient for its propagation. I have seen the disease more frequently among the real poor than any other class. Thus it would appear quite evident that poorly clad, poorly cared for infants are more susceptible than those who are well fed and well cared for.

Some of the cases of this character exhibit a tendency to tubercular disease, and yet many of them have no tendency
whatever to it. Too frequent nursing is one source of trouble in the infantile variety of this disease. The breast should not be given to the child each time it cries from the irritation caused by the disease.

In the treatment of this disease a great many things should be taken into consideration, and it is the treatment that most concerns us—all. It is of the utmost importance that healthy breast milk be secured for the child, and not infrequently the mother deserves more medical attention than the child. Should she be the subject of constipation and dyspepsia, if her secretions from the bowels and kidneys are not normal, the secretion from the breast is also not normal, and might in all possibility provoke the disease of the child. Any debility, of whatsoever nature or cause, in the mother may provoke, excite and continue that in the child.

Among all the classes of infantile diseases treated it is my opinion that we find more errors in the diet of eczematous infants than any other class of cases. In country practice and in smaller towns the nurses to whom, as a rule, are entrusted this class of cases are from the lower walks of life and ignorant regarding the laws of health. I have seen a number of cases where it seemed almost impossible to reach any degree of success in the care and treatment as long as the mother nursed them. At first they seemed to improve, but on account of disregard as to directions in feeding, and nursing and giving medicine erroneously, the physician’s efforts prove futile, and they pass from one doctor to another, giving them all an equal chance. Where this is the case, nothing will do the child any good, except to wean it, thus changing the whole mode of nutrition, and this is a difficult matter to accomplish during the heated months. In my experience it has more than once been done by allowing the child plenty of water and a certain supply of milk, not more often than once in four or five hours. Directions in this regard must scrupulously be followed, or any good result will be nil. I have succeeded in the permanent cure of some very severe cases, where directions were carried out, but
no sign of any improvement until the whole mode of nutrition per se was changed. It must be remembered that a permanent cure of eczema is never dangerous, and is the correct thing to do at once, if it can be done. It is desirable to do so, notwithstanding the strong prejudice to the contrary nearly always existing in the minds of the laity and quite a percentage of the medical profession. In treating a case, each individual case is a study in and of itself, regarding the exciting cause, and, if possible, to remove and eliminate it; for although relief may result from local measures alone, in the great majority of cases it is only temporary. No one can hope to bring about anything like a permanent cure until the cause is removed, and in doing this the physician is called upon to decide whether the disease is due to an external or an internal cause, or both.

External causes may readily be discovered by the appearance of the child and information gained from the mother, and noting how the child is cared for. Internal causes relate to derangement of the digestive tract, or to some functional disturbance of the kidneys. If the child is fat and seemingly well nourished, it may be the case that the fat of the milk is too high, and must be reduced. This excessively rich milk is found in women in good health, with large, well-developed breasts, which are full at nursing-time. At the most, the mother is on a full diet mostly nitrogenous, and taking but little or no exercise, and possibly taking some kind of a stimulant with the notion that if the child is not thriving well the milk is poor. The milk from such a mother or—sometimes when it is the fad to be unpopular to nurse a child—from the wet-nurse, who has just landed at a place where everything is plentiful, and who likes best of all an easy time in general, the milk from such might contain an excess of fat—proteids, sugar, and a decrease of salts from the usual natural milk. The clinical examination shows the cream to be from 8 to 12 per cent. and the specific gravity from 1.032 to 1.033; the diet, especially the meat, with the nurse, or mother, when the above is the case, should be reduced and
the woman be requested to take more exercise, especially walking in the open air. Under such a regimen the child’s condition improves almost immediately.

Scanty milk of a poor quality is often seen in a poorly nourished mother suffering from anemia. Perhaps the mother has had a complicated and tedious confinement, and looks careworn, weak and feeble, emotional and nervous. The milk is so poor that one can decide after an examination or two that it is useless to continue lactation, especially to an anemic babe suffering from eczema. In such cases the milk is found to have a specific gravity of 1.024 to 1.027 and the cream only 2 or 3 per cent. In some other cases, where the variation from the normal is not so great, the amount of cream may be 4 per cent. and the quantity fairly abundant. In this latter class of cases one may be able to improve the milk so that lactation may be continued. However, if this should be undertaken in such a case, the mother should be relieved of all care of the infant, have plenty of fresh air every day, a carriage drive, and walking as soon as able.

Massage of the breasts is an excellent and also a powerful stimulant to the secretion of milk; the breast, as well as the nipple, should be rendered aseptic, as should the hands of the masseuse. A mild aseptic ointment may be used, if desired, with the massage. This might be done with advantage two or three times daily for ten minutes; the diet should be abundant, especially plenty of good, wholesome, pure milk, and at the same time a generous supply of good beef, and an iron tonic should be given; compound syrup hypophosphites is timely.

If the anemic condition depends on constitutional debility, in a woman of a severely marked nervous temperament, the hopes of improving her condition, and in this way the milk to a sufficient degree to fairly nourish the child, will in all probability have to be abandoned and the child be artificially fed.

Another class of mothers have anemic children who become eczematous, namely, those whose milk is about normal
in quality, but deficient in quantity. If the milk is to undergo
the crucial test of an examination, the entire quantity from
the breast should be secured for examination. If the object
in treatment of the mother is to increase the quantity of milk,
this can be readily done by increasing the fluids, especially
milk with a generous supply of alcoholic malt extracts.
Should there be an excessively rich milk, this can be modified
by diet and by more exercise outdoors, walking, etc. The
poor milk is usually low in fat, small in quantity, and the
proteids may be in excess or scant. If the variations from
normal milk are only moderate, and the causes such as can
be remedied, prognosis is favorable. If, on the other hand,
the opposite condition exists, prognosis is not good, and
there is but little hope of permanent improvement. On
taking everything into consideration, and after a trial by
the physician to remedy these faults, without marked suc­
cess, it is better to institute a thorough course of artificial
feeding, as it will, when intelligently carried out, give better
results than doubtful nursing. It might be well to cease
nursing early, and resort to artificial means, in a mother who
is anemic, with an eczematous child. It is true that certain
infants again are prone to eczema, as others are to catarrhal
inflammations, etc.

It is doubtful if this disease can to any degree of certainty
be connected with any diathetic condition, and yet it may
be noted that it is more often found in children whose parents
are gouty. Any very marked manifestation to gout in in­
fancy is also the tendency to eczematous inflammation. At
the same time it is well to mention that children of rheu­
matic families and rheumatic children are liable and prone
to the disease. Eczema of the face is common in fat, healthy­
looking infants, and is quite common in those who are over­
nursed and overfed artificially. This disease may be pro­
duced by any form of disturbance to the digestive tract, a
result of improper and over feeding. It is not altogether
problematical to presume that the interference with the
hepatic function which accompanies fatty changes in general may be an important factor in its production.

I have seldom seen an infant suffering from eczema that did not present symptoms of deranged digestion; hence this calls for the assumption that some form of reflex irritation is productive of it, especially as is usually the case when accompanying teething.

Many writers regard eczema reflex in infants who at the same time exhibit disorders of the stomach and intestinal tract. One well-known author has said the following: "The stronger the predisposition, the more trivial is the reflex irritation which will induce an eruption." The authorities whom I have consulted do not discuss the pathology very definitely. It is my individual opinion that the disease is produced by or is the production of its own special form of bacillus.

We have probably said enough regarding the diet of both mother and child, and shall now consider what is to be done in the treatment of this disease and whatever may be the case, or cause, it is too well known that it is a slow, tedious one. Hygienic measures and therapeutics, as well as medicinal agents, should receive the attention of the practitioner. Hygienic measures are of the first influence—loose-fitting, light clothes, to be added to or taken from, according to the time of day; a comfortable, well-ventilated apartment to live and sleep in; all soiled clothing to be changed the minute soiled; all clothing when washed should be thoroughly rinsed in clean water, so that the fabric may contain no particle of soap or irritating washing powder, that proves a curse instead of a blessing to all infants' clothing. The child should be taken out in its cab frequently. In the early forenoon or toward evening is the best time of day for such exercise, and be it remembered that in five cases out of six the cases of infantile eczema met with in general practice are owing to the want of water—the want of an abundance of clean, pure water. An infant that is well soosed every morning with plenty of water very seldom suffers from any kind of ex-
coriations or eczema. Cleanliness, then, is the grand preventive of and the best remedy four times out of five for these little sufferers. Naaman, the Syrian, was ordered to "wash and be clean," and he was healed, "and his flesh became again like unto the flesh of a little child, and he was clean." This was a miracle, but how often does water, without any special intervention of divine providence, act miraculously, both in preventing and curing skin disease. "The Princess of Wales might have been seen on Thursday taking an airing in a brougham in Hyde Park with her baby, the future king of England, on her lap, without a nurse, and accompanied only by Mrs. Bruce. The Princess seemed a very pattern of mothers, and it was whispered among the ladies of the court that the mother of this young gentleman might be seen every evening in a flannel dress, in order that she might properly wash and put on baby's nightclothes and see him safely in bed. It is a pretty subject for a picture."—Pall Mall Gazette, 1863.

I wish all, or many, at least, of our American society mothers might not only read the above extract, but take a lesson therefrom, and be a subject equal to the above picture in the care of their children every morning and evening, instead of entrusting him to a careless, indifferent nurse, while they attend salons or fondle a shaggy, mutton-chopped, double-nosed poodle dog. This may be considered quite a comparison indeed; nevertheless it is not altogether devoid of truth.

If the child is to be strong and hearty, in the water every morning he should go. The water ought to be slightly warmer than new milk. He should be washed thoroughly in the morning before he has had his breakfast, and on an empty stomach, as it might interfere with digestion. Every infant, from its earliest babyhood, should have a bath—be immersed—every morning of his life in water. Water to the body, to the whole body, is a necessity of life, of health, and of happiness. It wards off disease, it wards off eruptions, and not only prevents, but will actually cure, four-fifths of all
cases of infantile eczema, as it braces the nerves and strengthens and hardens the frame. It is the finest tonic in the world. If every mother would follow to the letter this advice, how much ill-health, how much misery, might then be averted. The hygiene of the nursing mother of an infant suffering with this disease has already been considered.

I shall now proceed briefly to note the therapeutic action of medicines in the treatment. It is my opinion the disease is of parasitic origin, but whatever view may be taken as to the nature of the affection, it is of vital importance to take into account that it may be brought into existence by a number of external and internal exciting causes. Since the authors generally agree that there is no specific for the disease, the internal treatment, then, must of necessity be symptomatic. The old plan of active purgation is not to be thought of, much less recommended. As constipation and derangement of the stomach in the infant is usually always present, this should be corrected; a powder of calomel and soda—calomel ½ grain, sodium bicarbonate 1 grain—a tablet triturate of this compound may be given to an infant, which if quite young may be divided, or older may be increased. A dose of two or more may occasionally be given. Another combination, as a digestive agent and at the same time mild laxative, is:

B. Syr. rhei ................................................................. \( \frac{\text{5i}}{\text{g}} \)
Cascara cordial .................................................. \( \frac{\text{3ss}}{\text{g}} \)
Syr. simplex, q. s. ad........................................... \( \frac{\text{5iv}}{\text{g}} \)

A dose of 10 to 20 drops to an infant over three months old acts well; if younger than three months a less dose; if older it may be increased. In this disease I have been using with good results a tea made from wahoo bark, which is pleasant for the nursling or artificially-fed infant to take, and acts well. After the child is a few months' old, Fowler's solution of arsenic may be given, and more good has been obtained from small doses than large. This may be administered three times per day, but in weak, anemic infants, cod-liver oil has produced excellent results, and may be continued and pushed to its tolerance. There are so many
phases of eczema in infants that each individual peculiar phase calls for its own individual therapeutic treatment. Any preparation of opium, no matter what the restlessness caused by the disease, is not to be administered, as it has a tendency to increase the cutaneous irritation; and should it be necessary to produce sleep, small doses of elix. bro. potass-sium and chloral hydrate act well in the small child. Under no consideration should Dover's powder be given. When the disease occurs, as it most frequently does, in flabby, anemic children, iron and bitter tonics, with treatment described above to build up the general health and strength of the infant, should be given just the same as if no eczema existed. Elimination by the kidneys should be resorted to when there is a seeming tendency to a rheumatic or gouty diathesis. Much water may be given, to which is added the citrate or acetate of potassium.

Management of cases is important. The skin ought to be protected by an ointment whenever the child is in the open air. In facial eczema it is quite necessary to prevent the child from scratching itself. The use of a mask is not at all times sufficient, neither is the wearing of mittens, and the application of lotions and ointment is not always successful. In severe cases mechanical means are absolutely indispens-able. A satisfactory method is to surround the arms at the elbows with pasteboard splints and hold them in place by bandages. This allows the hands to be used, but it makes it impossible to reach the face. Local treatment is necessary, for not only are the causes sometimes external, but the condition may persist after the internal cause has been removed. There are several indications to be met in the disease by local treatment at different stages in its progress: 1, to remove crusts and other products; 2, to allay congestion and inflam-mation; 3, to protect the new, delicate skin which is forming; 4, to prevent infection; 5, to stimulate the skin in the chronic stages of the disease. Before any local application is used, the scales, crusts and other products of inflamma-tion must be softened and removed in order to insure the
diseased surface to be reached. The application of olive-oil for twenty-four or thirty-six hours, and then washing in soap and water, is recommended. Should the crusts be indurated and thick, they can be softened by a bran poultice. In the severely acute stage a sedative application should be used. One of the very best of these is said to be a lotion composed of zinc and calamine.

B. Pulv. calamine .................................................. 3ii
    Zinc oxid ......................................................... 5ss
    Glycerin .......................................................... 5i
    Lig. calcis ......................................................... 5ii
    Aquæ rose, q. s. ad ............................................. 5viii

Should there be much itching, carbolic acid 1 per cent. should be added. A piece of muslin should be dipped in the solution and applied to the part, kept in place by a bandage, if need be, or the parts might be kept covered with equal parts of boric acid and starch, or the stearate of zinc. Black wash is useful in allaying intense burning and itching. This may be applied with absorbent cotton for a few minutes several times per day and allowed to dry on, after which an ointment is used. Ichthyol may be used diluted in the same way. A protective ointment can also be made, and I have found this very serviceable containing starch, oxide of zinc and bismuth, either alone or in combination. Lassar’s paste is said to be an excellent formula. I have had no experience with it myself. I have made an ointment that gave very good results in several cases, composed of sodium salicylate, oxide of zinc and vaselin. I have also used the following lotion:

B. Sodii salicylatis ............................................. 5ss
    Glycerin ......................................................... 5ii
    Aquæ, q. s. ad .................................................. 5viii

This has proved, as it does in almost any cutaneous eruption, very efficacious; it allays the burning and itching, is soothing as well as healing. It is one of the best lotions I know of for any kind of a cutaneous eruption, and is a splendid preparation for an infantile eczema after the surface has been prepared for it.
In severe cases of the chronic form, after the disease has existed for some time, an ointment containing tar may be used with good results; but all ointments used should be spread on muslin and kept in close contact with the inflamed part by means of a bandage. Very little or no good can be accomplished by simply rubbing the ointment on the inflamed part, where it is impossible to keep the dressing in place. A paste called Pick's paste may be tried. This is composed of the following:

- Pulv. tragacanth ................................................. 5i
- Glycerin .......................................................... 3i
- Aqüe rosae ......................................................... 5iv

To this may be added:
- Zinc oxid .......................................................... gr. xl
- Carbolic acid ..................................................... gr. v-x

A similar basis for ointment made from gum tragacanth has been suggested, and may be combined with tar, zinc, salycilic acid, or resorcin.

The above therapeutic measures are especially useful to the face and scalp. For the pustular eczema of the scalp the best application is said to be white-precipitate ointment, which can be combined with three or four parts of vaselin. This is also recommended for small patches of eczema over the body, but is not recommended to be used over a large surface. In the seborrhoeic form of eczema the following is said to be especially useful:

- Resorcin .......................................................... gr. x
- Unguent. aqüe rosae ........................................... 3i

INTRAOCULAR TUMORS.

W. D. DAYTON, M.D., LINCOLN.

In considering the subject of intraocular tumors, I will merely mention, en passant, the benign growths, confining myself to the malignant growths which invade the interior of the eyeball.

The cancerous tumors most liable to occur within the eye are the sarcomatous, gliomatous, carcinomatous varieties. The sarcomatous form may be either of the round-celled or spindle-celled variety; they are usually highly pigmented, hence the term 'melanosarcoma'; they arise from the choroid, the pigment tunic of the eye. They have their origin at any point in the choroid; they are more frequently found originating posterior to the equator of the eyeball; their tendency is to grow laterally and forward into the vitreous body, rather than posteriorly, involving the sclera.

If seen early with the ophthalmoscope, we may find a rounding eminence over which the retinal vessels are seen to pass, these vessels appearing somewhat larger than normal, particularly the veins. As the growth increases in size, the retina, normally very loosely attached to the choroid, becomes detached, and the vision is affected. At this period of the growth the patient, owing to the deterioration of vision, seeks advice. At times it is often quite difficult to make a diagnosis of intraocular growth, owing to the detached retina masking to a certain extent the true conditions; the history of the case often assists in arriving at a proper diagnosis, yet we may be misled by it into making a doubtful one.

Up to this stage we have had no subjective symptoms save the disturbance of vision in the shape of a defect in the visual field corresponding to the site of the tumor; the objective
symptoms to be seen only with the ophthalmoscope as a slight detachment of the retina. As the growth increases the detachment becomes more marked, we find an increased hardness—glaucomatous—of the eyeball, with possibly an involvement of the iris and ciliary body, in an inflammation, with more or less increased vascularity of the ocular conjunctiva; quickly following this train of symptoms we find that the pupil reflex in place of being black is now a yellowish-white or golden, with the pupil more or less dilated. This condition is known as the "amaurotic cat's eye" reflex, and is a pathognomonic sign of intraocular growth usually of a gliomatous nature, but also seen in the intraocular sarcoma. Pain, as a rule, is not very severe until the growth has filled the entire globe and is forcing its way through the sclera, during which time the pain is excruciating, and there may be mental disturbance. While the tendency of malignant growths within the eyeball is toward the point of least resistance, forward into the vitreous body, we occasionally find a tumor extending backward, involving the sclera and orbital tissue and walls. When this occurs there is an early exophthalmus or protrusion of the eye forward; the movement of the eye may be more or less restricted, and pain be very severe. After the growth has broken through the sclera and has become extracocular, either posteriorly or anteriorly, its growth is very rapid. When the growth breaks through the sclera posteriorly and invades the orbit, it may quickly involve the thin orbital plates of the frontal bone, or by passing through the orbital fissure or along the nerve involving the sheath, may soon attack the brain, and a fatal issue shortly follow.

If it bursts from the interior of the eyeball at the sclerocorneal margin, which is a favorite place of rupture, it rapidly grows, and if not operated on may in an exceedingly short time grow as large as an apple. After the neoplasm has become extracocular, ulceration with frequent severe hemorrhage often ensues. The growth of an intraocular tumor may be very slow or rapid; death usually ensues from exhaustion, in consequence of the severe hemorrhages or from
metastases to internal organs, particularly the liver, or from extension of the disease to the brain. "The metastases in remote organs arises through embolism. The blood-current detaches cells from the tumor and carries them into other parts of the body, where they develop into independent tumors." Glioma retinae develops from the granular layers of the retina, is not pigmented, and is essentially a tumor of the nerve-cells—neuroglia. Virchow claims that glioma proceeds from the neuroglia to the interstitial connective tissue of the retina and is composed of a basis analogous to the latter and of cellular elements resembling nuclei. Glioma is peculiarly a disease of early childhood, usually between 1 and 5 years. It has been held by some, especially our earlier ophthalmologists, that it was congenital, and even hereditary. There may be no subjective symptoms; the first intimation the parent has of any ailment of the eye is the appearance of the yellowish pupillary reflex, spoken of above as the amaurotic cat's eye. Again, there may be external irritation, with cloudiness of the cornea and evidence of an iritic inflammation, all occurring before the peculiar reflex is shown. Until the growth is large the lens and vitreous are clear; as it encroaches upon the vitreous body and lens they become opaque, the pupil dilated and sluggish, and possibly adherent. The anterior chamber becomes shallow and the cornea cloudy; with the increase of the growth within the eyeball there quickly follows increased tension of the eyeball—glaucomatous—with thinning of the scleral walls and bulging—ectasia. The trend of the growth of glioma is similar to that of sarcoma, it growing rapidly in size after its escape from the interior of the eyeball.

In the matter of diagnosis of intraocular tumor, one might err more easily in case of glioma than in sarcoma, hence the history of the case must be carefully taken into consideration. A previous illness may have caused a choroiditis metastatica; especially may this be true following meningitis or cerebro-spinal meningitis, in which case we may find the eye reddened, the anterior chamber shallow and a yellowish reflex


through a dilated, sluggish pupil. We may have a deposit of fibrous tissue behind the lens, due to previous cyclitis and choroiditis producing similar objective signs of glioma; these are called "pseudogliomas," from their similarity in some objective signs to the true glioma. In either sarcoma or glioma of the eyeball the great desideratum is the early removal of the eyeball before it breaks forth, i.e., while it is yet confined within the eye. In enucleating the eyeball, care must be taken to sever the optic nerve well back, a quarter or a half inch from its scleral entrance, in order to be more certain of ridding our patient of the disease should the nerve already be involved.

The occurrence of the growth in some remote organ may take place even before the fundus has burst forth from the interior or even entirely filled the globe, as was undoubtedly the case in one of my patients—Case 3.

We may find both the round cells of sarcoma and the nuclear cells of glioma in the same tumor, giving us the form of a tumor known as a "gliosarcoma," as was the condition in Case 1.

Case 1.—In July, 1895. C. M., aged 20 months, was brought to me with the following history, given to me by his parents: "About a month ago he came into the house from play complaining of his left eye paining him. We thought he had gotten sand or dust in the eye; the white of the eye was quite red. For a day or so he complained of his eye. We noticed the color of the eye was a dark green, and the pupil small, and as he continued to complain of his eye we called in a physician, who prescribed for him; after a few days we were advised to see a specialist."

When the child was brought to me I found the iris discolored, pupil immovable and bound down by numerous synechiae, the media was not clear, being of a reddish-brown color, hence it was impossible to get a view of the fundus. I advised the parents that the trouble might be a cancerous growth within the eye, and if such was the case the eye would have to be removed, but, inasmuch as the first symptoms of
the disease had presented but three or four weeks before, we might wait and keep the eye under observation for a time before deciding upon an enucleation. I was going to start for Europe in a few days, and advised them to seek advice from some other oculist; they agreed to do this, and consulted a colleague in Omaha. What his diagnosis was I do not know. He made an operation to allow the escape of blood in the anterior chamber and presumably to relieve the tension; he then lost sight of the case.

In June, 1896, the boy was again brought to me, and I made a positive diagnosis of intraocular growth, and advised immediate removal. I removed the eye, and stitched the muscles and conjunctiva together at the center to furnish a good stump for an artificial eye. The lad recovered from the operation and left the hospital in ten days. He remained quite well for six months, when he returned, and I found that the soft tissues were involved, and on Jan. 12, 1897, I removed the entire contents of the orbit; this did not appear to check the ravages of the disease, for he returned on Jan. 30, with a renewal of the growth which extended for a half inch or more through the palpebral fissure. I again removed the growth from the orbit and cauterized the bony walls with chlorid of zinc paste. For a short time it seemed to us that the disease had been entirely eradicated. Such was not the case, however, for in a couple of months a new growth was discovered, and of a different color and more firm in its texture. This new growth confined itself within the orbit, having no tendency to grow forward and protrude through the lid fissure. There was an extension upward upon the forehead and also about each ear. Two months before he died he lost the sight of the other eye. He died June 27, 1897, about two years after the eye was first affected. The last four months of his life he was under the immediate care of the family physician, and I did not see him enough to keep informed of the symptoms from time to time. He evidently died from an extension of the disease to the brain. A microscopical examination made of the first growth showed nuclear cells with a few round
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cells; an examination of the growth first removed from the orbit showed only round cells, hence it was a tumor of the gliosarcomatous type in this case. The microscopical examinations were made in Dr. Ward's laboratory at the State University.

Case 2.—I. B., aged 13 months, was brought to me Nov. 3, 1897, the physician in charge giving the following history: "In September, 1897, the child had what appeared to be a catarrhal conjunctivitis of the left eye, which passed away in a few days. About a month later the attack was repeated, and again passed away. Some two weeks after this it was noticed that the left eye turned out, a divergence, and was not used at all for vision. At this time a light thrown into the eye disclosed a gray reflex with a blood-vessel extending across the field from left to right; it appeared like an opaque lens traversed by an artery. Within a few days a violent ophthalmitis ensued, rapidly obscuring all view of the interior of the eye.

When the little patient was brought to me there was still considerable inflammation of the ocular tissue; the cornea was steamy and the iris discolored; the pupillary space was nearly occluded by exudate, but I was fortunate in getting a glimpse of the reflex, which indicated to me the presence of an intraocular growth. There was a specific history in the father of the child which led me to hesitate, and I thought that possibly we might have a gumma to deal with, in which case an enucleation would not be necessary. I told the parents, however, that I feared we had a tumor, and that the eye should be enucleated, but under the circumstances suggested that they get the opinion of other ophthalmologists before deciding upon the operation. They took the child to Dr. Gifford. When he saw the eye, although less than twenty-four hours after I first saw it, the pupillary space was entirely occluded by the inflammatory exudate. No view of the interior of the eye could be obtained, nor did the reflex from the interior show as when I saw it. The doctor was inclined, owing to the specific history, to believe that we had a gumma to deal with rather than
a tumor, and he advised strict antispécific treatment for a short time and watch the eye. At the same time he informed the parents and physician that if I had seen the reflex when I examined the eye, it probably was a tumor, and the eye would have to be removed. The parents returned to Lincoln and placed the child in St. Elizabeth’s Hospital, where he remained on the treatment suggested for several weeks. The eye continued to grow worse until I concluded it was not safe to wait longer, and on December 13 I removed the eye, under chloroform narcosis; a simple enucleation was made, and the child made a rapid recovery. The tumor did not fill the interior of the eye, there were extensive changes in the uveal tract and complete detachment of the retina. From word received last week from the father, I learn that the little one is well and there is no sign of a return of the growth.

The eye was sent to Dr. Gifford for a microscopical examination, who pronounced it glioma. In this case, and also in Case 1, we have a history of quite violent inflammation during the first stage of this disease, the subjective symptoms being marked. This usually is not the rule, these symptoms appearing in the second stage of the disease.

Case 3, we will find, has followed the general rule in this particular.

Case 3.—H. E. D., aged 27 years, of Salt Lake City, consulted a local specialist in 1898 concerning the vision of his left eye; the visual field was one-half lost at that time. He was told of the probable nature of the trouble, but was not advised to have the eye removed at once. Vision was gradually lost. He passed into the hands of a charlatan, who agreed to cure the eye by absorption. In December, 1898, and January, 1899, he had two attacks of an inflammatory nature, at which time the eye became red and he experienced severe pain; these attacks passed off. Early in 1899 he was visited by a personal friend, a former family physician, from this state, who informed him that he had an intraocular growth and that the eye must come out at once. He did not heed this timely advice. For four or five weeks prior to February,
1899, he was very much jaundiced, during which time he experienced excruciating pain in the eye, probably from the intense intraocular pressure. Late in February the growth burst through the sclera at the temporo-inferior quadrant of the sclerocorneal margin. For several months the growth of the tumor was very slow, when suddenly it began to rapidly increase in size. About the middle of November he had a severe attack of vomiting and indigestion, simulating gastritis; after this attack his abdomen became tense and swollen.

The patient had now returned to his old home in Nebraska and placed himself under the care of his former family physician, who brought him to me early in January for operation. January 11 we removed the eye and all the contents of the orbit, down to the bone; we dressed the orbital cavity with protonuclein. At the time of operation, and while under the anesthetic, a careful examination of his abdomen was made, and we found that the board-like hardness of the abdominal walls did not relax, and continuing from the liver downward as far as the umbilicus was a hard mass; this extended to the left beyond the mesial line. We undoubtedly had a metastatic growth involving the liver and contiguous organs. From the history we find that after the growth had burst through the sclera, for several months there was scarcely any increase in its size. The reason therefor, in my opinion, is that during this stage of quiescence in the external growth the more remote organs had become involved and rapidly invaded the surrounding structures, until, from its size it encountered resistance, and from this time on developed less rapidly, and then the external growth began to rapidly increase on account of reinforcements of germs from the new foci.

He made a good recovery from the operation, but was growing weaker day by day. He died January 30. No autopsy was allowed. The immediate cause of his death was uremic poisoning. There was total suppression of urine for four days before he died.

Microscopical examination of the eyeball was made by Dr. H. W. Orr, who reports as follows: A dissection was no
made, but a brown-colored tumor occupies about one-third of
the surface of the sclera without involving the cornea, and
projects out from the normal curvature of the globe for about
three-fourths of an inch. A small piece of this examined mi-
croscopically shows it to consist of many small spindle cells
lying in a loose reticulum of connective tissue. The tissue is
not highly vascular, but a number of small blood-vessels lie
among the cells. There is present a considerable amount of
pigment, which gives the brownish color to the growth. Diagnosis, small spindle-celled sarcoma.

I have outlined the history of the above cases somewhat in
detail to demonstrate that the objective symptoms are of a
character to mislead and even justify the postponement of
enucleation in a child until we are satisfied beyond doubt that
we have an intraocular tumor. Again, an early operation is
imperative if we would save the life of our patient, as in Case
2 cited an early recognition of the disease and prompt removal
of the eye apparently eradicated the disease. In Cases 1 and
3, remote organs were infected by metastases before the eyes
were removed, they undoubtedly being the primary seat of the
disease.

The percentage of deaths from sarcomatous intraocular
growths in the adult is not so large as in the gliomatous form
in children. The cause of this I do not attribute so much to
the greater malignancy of glioma as to the fact that the adult
applies early to the physician when he notices a defect in the
vision, one of the very early subjective symptoms; in the child
we must depend on the objective symptoms alone, at which
time the growth has involved nearly all the inner tissues of
the eye.
ETIOLOGY OF INTERNAL EAR DISEASES—WITH REPORT OF FOUR CASES.

F. S. OWENS, M.D., OMAHA.

The sound-perceiving apparatus protected by the cranial bones and by its bony capsule within the petrous portion of the temporal bone is rarely the seat of a primary disease, but secondary affections are not so infrequent. The most common source of secondary changes within the receptive apparatus is found in the middle ear. By reason of the anastomosis of the arteries of the middle ear with those of the labyrinth, the weak resistance offered by the membrane closing the round window and the relation of the foot-plate of the stapes to the internal ear, there exist avenues through which diseases of the middle ear, both acute and chronic, may start secondary processes in the labyrinth. These disturbances may result from direct pressure on the inner ear, transmission of the process to it, or disturbance of its nutrition. In acute middle-ear inflammation, disturbances of the labyrinth are often met with, due to the direct pressure exerted by the exudate within the middle ear or congestion of the labyrinthine vessels transmitted from those of the middle ear. Less often is the infection carried directly to the labyrinth, or are these cavities invaded through the fenestra or through the destruction of the bony partition.

In chronic suppuration of the middle ear the inflammation may extend to the labyrinthine cavities, either through a carious fistula or from a rupture through the membranes of the fenestra. Chronic non-suppurative processes in the middle ear may extend to the inner ear by the continuation of the process through the fenestra, or changes may take place from mechanical pressure exerted by adhesive processes within the
middle ear. By reason of its communication with the subdural lymph-spaces and arachnoidal space, through its aqueducts, and the relation of its blood-supply to that of the brain, the internal ear is liable to become affected by any alterations of the blood-pressure or pathological changes in the brain or its membranes. Thus in meningitis the inflammatory process may extend along the lymph-channels of the vestibular and cochlear aqueducts and involve the structures of the internal ear, or disturbances may arise from the congestion attending this disease, or that produced by a tumor at the base of the brain, or thromboses of some of the blood-channels. In scarlet fever, diphtheria, epidemic influenza, mumps, and other acute infectious diseases, the labyrinth may be invaded by direct infection through the blood-current.

Besides the causes mentioned as arising from pathological changes in the tympanum and brain, hyperemia of the labyrinth, with disturbances of nutrition and permanent anatomical changes, may occur from any condition which favors congestion of the cranial cavity. Among these may be mentioned diseases of the heart and lungs, the acute exanthemata and tumors of the neck. The opposite conditions of anemia of the labyrinth, with irritation and paralysis of the auditory nerve, may depend on a general anemia as a consequence of a profuse hemorrhage or an obstruction to the circulation in the internal auditory nerve.

Hemorrhage into the labyrinth, with disorganization of its structures, may occur as a result in the course of any acute disease which tends to cerebral hyperemia, as seen in scarlet fever, variola, typhoid fever, nephritis, etc., or it may occur in diseases attended with alteration of the blood, as found in pernicious anemia, leukemia, etc. It may also occur from trauma of various kinds. Besides that portion of the sound-perceiving apparatus represented by the labyrinth, that portion comprising the trunk of the auditory nerve and its central origin may be the seat of diseased conditions arising from pathological changes in the brain. These are cerebral tumors, tabes dorsalis, inflammatory and other degenerative changes.
Disturbances in the apparatus of the auditory nerve are not infrequently the result of the ingestion of certain medicinal substances, as every practitioner will bear witness who has exhibited quinin or the salicylates. They may be a prominent symptom of hysteria or neurasthenia and they are by no means uncommon as reflexes dependent on a pathological condition in some other portion of the body, particularly that of the abdominal viscera. The internal ear is a seat not uncommonly of hereditary specific disease, and occasionally of the acquired form.

Without any attempt to completeness, I have thus endeavored, in as concise manner as possible, to point out a few of the causes of internal-ear disease. Our knowledge of the pathology of the inner ear has not by any means made the strides commensurate with its importance nor with the great advance made in our knowledge of the pathology of the field of the middle and external ears. And until our clinical observations are supported by a more perfect knowledge of the anatomical changes, our diagnosis of many of the conditions affecting the receptive apparatus must at least be viewed with some degree of doubt. Therefore, while the following cases are given to illustrate a variety of causes of internal-ear diseases, the diagnosis in some of them remains doubtful. Recent cases with suddenly occurring deafness only have been chosen, for the reason of their greater practical interest.

CASE 1.—On May 13, 1898, I was called to see C. R., a boy of 8 years, who had suddenly become deaf. The following history was given: Six days previously he had returned from school suffering from a severe headache. The following night he was delirious and had considerable fever and suffered greatly from pain in the head. The next day the symptoms had somewhat abated so that the child played about the house, but complained at times of nausea and of feeling chilly. During the second night the fever again rose, and he was delirious at times and cried out frequently from the pain in the head. The fever, with the headache, continued this time for thirty-six hours, when it subsided. He now only com-
plained of a stiffness of the legs and slight pain about the knee-joint. Again, after an interval of forty hours, fever and headache reappeared, lasting this time only a few hours. The following morning, and the day preceding my visit, he wakened his mother, complaining that he could hear the ringing of bells and all sorts of noises. On speaking to him, she discovered that he could hear only when she spoke in a very loud voice. The next day, the deafness continuing, they sent for me. The mother had not deemed it necessary to call in a doctor until then, thinking his illness was due to a simple fever, and had used such household remedies as were at hand. I found the following conditions present: tongue coated, bowels constipated, temperature normal. He complained of stiffness of the legs and slight pain about the knee, which was not swollen. There was no nausea, but there was considerable vertigo on assuming the erect posture. He said the noise in his head was terrible, resembling many bells and whistles all sounding together. On inspection I found the drum membranes perfectly normal. He could hear only the loudest shouts close to the ear. Bone conduction was entirely absent. I diagnosed the case a labyrinthine involvement caused by a mild meningitis.

After a full dose of calomel, followed by a saline, I placed him on pilocarpin, two doses daily being taken, the evening dose sufficiently large to produce profuse perspiration, the morning dose one-half the amount. I also gave 5 grains of potassium iodid three times daily, and after a week added to this treatment full doses of strychnia. The pilocarpin was kept up in the manner above named for six weeks, then for another six weeks in doses just enough to produce moderate ptyalism. Potassium iodid was continued for the same length of time. The strychnia was continued for five months. Four days after the commencement of the treatment the patient could hear a loud-ticking clock held close to the right ear and words spoken in a loud voice. Bone conduction was just perceptible. This degree of hearing was not manifest with the left ear until the seventh day. On the fifteenth day
he could hear the tick of a watch in contact with right ear, and the voice, slightly elevated, at three feet. The lower notes of the scale were heard much better than the higher. The degree of hearing with the left ear was much less than that of the right. From this time on for three months following the illness there was a gradual increase of hearing. At the end of this time, hearing distance for the watch was for the right ear 16/36, for the left ear 4/36. Bone conduction was considerably reduced in each ear. Lower tone limit was nearly normal; upper tone limit considerably reduced. At the present writing hearing remains unchanged.

Case 2.—Nov. 16, 1896, I was summoned in consultation to the bedside of Robert M., aged 7 years, who gave the following history: On the 9th of the month he was taken down with a mild attack of the mumps, which had nearly subsided by the 13th. On this day he complained of buzzing noises in the ears. On the 14th he complained of not hearing well and of the continuation of the noises in the head, to which, on account of their mild character, the parents paid little attention. On the 15th, on awakening, he was found to be totally deaf. A doctor was then called in, and a dose of castor-oil and other appropriate remedies given.

Speculum examination revealed nothing abnormal about the tympanic membranes. That any hearing remained could not be elicited. The patient complained of hearing musical notes resembling those of a violin. Any attempt to assume the erect position caused extreme nausea and vomiting. Vomiting occasionally occurred while recumbent. This tendency to nausea continued for about ten days. No staggering in gait was observable when, in two weeks, the patient commenced to walk about. Pilocarpin hypodermically in full doses was advised, and later on potassium iodid and strychnia. In spite of the most energetic treatment, no improvement of hearing took place. Only loud notes of low pitch can be heard. Bone conduction is absent.

Case 3.—Frank H., aged 26 years, consulted me March 16, 1895, for deafness, which had occurred, without warning, the
day before. No cause for the trouble could be ascertained, as he seemed to be in perfect health in every respect. The symptoms as given by him were, that on the day prior to his visit he suddenly felt a severe pain in the left side of his head, accompanied by loud noises and giddiness. The giddiness was so bad that he was compelled to take to his bed. He felt nauseated, but did not vomit. On the day of his visit he walked with slight unsteadiness, but did not complain of nausea. The noises in the head, though troublesome, were somewhat diminished. On examination I found the drum membranes in each ear normal. The hearing of the right ear was normal, but that of the left totally abolished. Exhibition of pilocarpin and potassium iodid was of no benefit, as the hearing remained nil. The tinnitus and giddiness disappeared in a few days. One year from the date of this attack he again presented himself at my office for another complaint, that of failing vision. On ophthalmoscopic examination of the fundus there was presented a beautiful picture of albuminuric retinitis. The diagnosis of nephritis was corroborated by an examination of the urine, which revealed the presence of albumin and casts. Here, in my opinion, was revealed the cause of the trouble in the ear, which was doubtless an effusion into the labyrinth due to the obstruction offered to the general venous circulation by the diseased condition of the kidneys, which doubtless then existed, and perhaps a diseased condition then present in the blood-vessels of the labyrinth.

Case 4.—W. W. D., aged 22 years, consulted me May 31, 1898, on account of deafness. He gave the following history: He had been almost totally deaf in the right ear since childhood; the left, though dull of hearing, retained it to a degree of usefulness. The deafness followed a fracture of the skull on the left side occasioned by a fall in infancy on a sharp iron. Up to the present attack the hearing distance had remained practically stationary. From my notes made of the case in 1893 I found the following hearing distance for watch: for right ear 0/36, for left ear 6/36. Bone conduction was absent in right, considerably diminished in left; tympanic mem-
branes normal. Diagnosis, internal-ear deafness, due doubtless to central lesion. Continuing his history of the case, he said that two weeks before his visit, while suffering from what he supposed to be la grippe, he became very deaf in the good ear and suffered greatly from tinnitus. He wrote concerning his condition to his brother, who is a physician, and who sent him medicine, which he had taken without improvement. Upon speculum examination, the membrana tympani presented a normal appearance. On the left side of the skull, a little above the posterior inferior angle of the left parietal bone, was a distinct depression marking the site of former injury. Bone conduction was abolished on each side. Hearing for both high and low tones was greatly diminished for the left ear and not perceptible with the right. He could hear words only when spoken in a very loud voice close to the left ear. Inflation of the middle ear did not increase the hearing. That there was an involvement of the nerve at some portion within the cranial cavity in some way dependent on the original lesion I was convinced, but as to its precise nature I was not prepared to state. He was put upon pilocarpin and potassium iodid. A dose of pilocarpin sufficient to cause profuse perspiration was taken at bedtime and a second dose of half the size in the morning. Potassium iodid was given in doses ranging from 5 to 15 grains three times daily for three months. The pilocarpin was given in the above manner for six weeks, and then for another six weeks in doses to produce moderate ptomain. There was a gradual improvement of the hearing for two months, when it reached its former acuity, beyond which no progress was made. The tinnitus disappeared at the end of two weeks' treatment.
ACUTE OTITIS MEDIA.

JOHN P. WILLIAMS, M.D., LINCOLN.

The subject, although one with which all, both in general and in special practice, are more or less familiar, is not so minutely understood and appreciated by many that its reconsideration may not be of interest and of value at this time.

Too often a matter may be obscure from its mere simplicity, while were it more intricate and seemingly inexplicable, it would notwithstanding be more fully appreciated from the mere fact that our attention would be constantly directed toward an understanding of such an intricacy. Such is often the case with reference to acute otitis media, and particularly when it occurs in early childhood. When the affection occurs at this period of life, it is too often regarded as a very simple matter that will take care of itself. Such is the belief among the laity, and in this belief they may often be aided by the family physician, who sometimes underestimates the gravity of the condition. Particularly is this the case in communities where the sphere of the aurist is not recognized.

The gravity of such conditions is necessarily not so vividly before the mind of the family doctor, as before him, who, perhaps ten or fifteen years later, as a specialist, is called upon to check, if indeed such a thing is possible, the well-nigh irresistible flow of fetid pus, emanating from an apparently inexhaustible source—the walls, contents or accessories of what was once a normal tympanum. How often these patients enter our offices, bearing on their person an odor that would do credit to a sewer-pipe, and when questioned as to the history and duration of their affection, will reply, "oh, ever since I was a baby," or, "I don't remember when it started, it was so long ago." Such conditions should not exist, save possibly
in a small proportion of intractable cases, if the gravity of this condition, acute suppurrative otitis media, is early recognized, and as early, a rational treatment instituted.

That we may more intelligently pursue this theme, let us as briefly as may be practical, reconsider the etiology, pathology, symptoms and treatment of the affection under discussion.

The causes of both forms of acute otitis media, catarrhal and purulent, may be largely the same, and in my opinion, a large part of the cases, if evacuated early in the attack, under aseptic conditions, never pass beyond the catarrhal stage, that otherwise would result in a purulent form with all its dangers and complications. Briefly enumerated, the causes may be: external—exposure to cold and wet, particularly contact of cold water while bathing; also injuries, as concussions from a blow or sudden contact with water while diving. More common, however, and naturally so in children, are internal causes, such as extension from existing nasopharyngeal catarrh; infected secretions being violently blown into the tympanic cavity, or extension by continuity of tissue along the mucous membrane of the Eustachian tube; involvement during the course of exanthematous diseases, diphtheria, pneumonia, and that disease of endless complications, la grippe, so often resulting in a purulent otitis media of the most severe form.

The normal tympanic cavity probably contains some germs, capable, when a weakened resistance offers the opportunity, of instituting an inflammatory process. Such germs may be conveyed thither by the lymphatics of the submucosa, or along the surface of the mucous membrane of the Eustachian tube. One other cause must be mentioned in the case of children, and it is that dependent upon dentition. Just what trophic disturbance occurs at this time we are unable to explain, but that an intimate causal relation exists is only too well established.

With reference to the pathology of this disease, one point is of especial importance, as a recognition of it should
prompt, in my estimation, an early interference in the course of this disease. In the purulent form we find usually the soft tissues of the vault of the tympanum involved. This tissue is composed of reduplications of the mucous membrane, together with connective tissue, which go to make up the ligaments of the ossicles. In the purely catarrhal type, the superficial layers of the lower portion of the tympanic cavity are concerned, and every precaution should be taken to limit the disease to this particular field, which is more accessible for treatment and is always disposed to heal more kindly. In other respects the pathological changes are similar to those occurring elsewhere on mucous surfaces.

In the case of an adult the symptoms are too plain to be mistaken, both in the catarrhal and the purulent, a difference in their intensity being the chief distinction. In the child, however, errors or oversight may easily occur, the true nature of the conditions being masked by the severity of the symptoms to such an extent that a general rather than a local affection is suspected. Convulsions, vomiting, rise of temperature to 103 or 104, the little one tossing about and clutching its head in an indefinite manner, may throw the unguarded physician off his track and lead him to suspect possibly meningeal trouble. Fortunately, the tympanic membrane ruptures promptly in many cases, and a sudden cessation of all severe symptoms coupled with a copious discharge from the ear allows him to breathe easier in reference to his anxieties for the child and to think that his troubles are over. Not always so, however, or at least they should not be, and this leads me to the important part of this theme—the treatment of acute otitis media.

In considering the treatment it is not my purpose to elaborate on the care of the various complications, such as mastoiditis, but rather to consider briefly the technique established with the view to avoid the occurrence of such complications of acute otitis media. Bearing in mind that a large proportion of the cases may never pass into the purulent form—that is, that if the inflammatory process can be limited to
the inferior structures of the tympanum, we may limit it to a purely catarrhal affection, I would advise an early paracentesis, even in cases that do not show marked bulging, and that might be classed as merely suspicious cases, and where the temptation to allow the patient to wait a few hours, or even a day or two, is great. Such delay may be exceedingly detrimental to the patient, even though resolution apparently is undergone without the perforation of the membrana tympani, for the detritus left in the drum cavity may be sufficient to materially delay the return of the normal function of this end-organ, if indeed it does not permanently prevent it. Again, the paracentesis of the membrana tympani is indicated in such suspicious cases lest, if delayed, the disease progress insidiously to a spontaneous perforation, in an undesirable portion of the drumhead. This may occur with but little pain to the patient—perhaps for an hour or two just before evacuation, and at a time when the aurist cannot conveniently be consulted—and then on examination we find the tympanic walls swollen, perhaps already ulcerated and a point of bone bare and ready to furnish a field for granulation tissue that will tax our patience and energy to suppress. Such cases seem to assume a chronic character from the start, and a discussion of their treatment is beyond the scope of this paper. But should paracentesis of the drumhead be determined upon, precautions are needed, that its best advantages be obtained. Asepsis is here essential, and the canal should be well cleansed before attempting the operation. I prefer a weak solution of formaldehyde, for in it we have an excellent antiseptic that will not do damage to the keen edge of the knife. I emphasize "keen," for the pain occurring in this operation is largely proportionate to the condition of the knife. Incise freely, in the dependent posterior portion, and if the knife-point incise the mucous membrane of the inner wall of the tympanum the further flow of blood will often result in more complete relief to the patient. Even though but a few drops of serum reward our incision, and the case proceeds to recovery without further progress toward a suppurative character, we may consider the
operative interference justified, if done under aseptic precautions. But if, after incision we obtain a free evacuation of secretion, be it catarrhal or purulent, irrigation or some form of removal of such secretion is necessary; and one or two points with reference to irrigation must not be overlooked. The syringe point must be clean, and that form is best which is supplied with numerous glass points which may be removed and sterilized readily. Again, bearing in mind that the contents of the drum may be free from pus contamination, just sufficient irrigation should be used to remove the secretion from the canal, and not enough to carry back into the tympanic cavity any of the contents of the canal, which from day to day may be contaminated with pus organisms that are so constantly on the watch for opportunities to start trouble.

The solution used for such irrigation may vary from merely sterile water, to antiseptics of the strength of solution bi-chlorid of mercury 1-5000. The writer prefers in many cases, the formaldehyde solution. Following—or, if the canal contains little secretion—preceding such irrigation, Politzeration should be employed to remove the last drop of secretion retained in the tympanum, the canal wiped dry and a very small quantity of dressing-powder may be dusted on the lips of the wound. Do not use powder in the canal in any considerable quantity, else the very end desired by the treatment outlined will be for naught. Boric acid (powdered), nosophen, aristol, are all useful dressing powders in the conditions herein discussed. Many even do not stand the irrigation well, and we should watch carefully for the conditions that would contraindicate its use. The tumescence of the tissues in such cases seems to be increased by the pressure of fluids and the drier treatments produce the better effects. In this class we will find that merely wiping out the canal with cotton, catheterization, and a dressing powder will usually prove sufficient to arrest the disease.

Should the case appear in the purulent form from the first, either coming on insidiously or as is more common, with violent pain and profound general symptoms, more
strenuous treatment may be necessary, as the tissues high up in the cavity are involved. Intratympanic cleansing alone may dislodge the secretion. In the rather recent drug, enzymol, we have an agent that seems especially adapted to the removal of pus from such cavities. It should be introduced into the tympanum freely, and at the temperature of about 99 F. and allowed to remain for several hours. Other cases yield more promptly to vigorous antiseptics, and when the discharge is profuse to such blennostatics as silver nitrate 2 to 4 per cent., or sulphate of zinc, 2 grains to the ounce.

Where acute otitis media accompanies the exanthemata, as it does so often in children, and during dentition, the mouth, nose and throat should receive proper attention. Cleansing washes should be used, and the secretions restored to normal as soon as possible. This applies also in the case of adults, for in a large proportion there will be found catarhal conditions that bear, if not a causal, at least an associated, relation to the disease under discussion.

In conclusion, let me again suggest that I have attempted briefly to call your attention to some of the conditions in the care of acute otitis media, which though simple in nature may be overlooked or slighted, but which are essential to success in the treatment of such cases.
DIFFERENTIAL DIAGNOSIS IN SOME OF THE INFLAMMATORY DISEASES OF THE EYE.*

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I was prompted to prepare this paper on account of the fact that a number of patients have come into my hands from the general physician, where an error had been made in diagnosis, and in consequence, the proper treatment not carried out. Failure to recognize a beginning iritis leads to irreparable damage, and it is in this disease that the failure to make an early diagnosis has been most noticeable in my experience.

The recognition of the different forms of conjunctivitis is also a difficult matter for one not especially versed in diseases of the eye; and here also it may be very important, in some of the graver forms of conjunctivitis, to be able to differentiate, else very grave results may follow, that might have been averted had an early diagnosis been made and the proper remedy applied.

In glaucoma we have another dangerous disease, as the contraindications for treatment are such that a failure to recognize the disease is almost sure to lead to very bad treatment.

In the treatment of this subject I shall not go into technicalities, for the reason that this is a society largely made up of general practitioners and not of specialists.

Here, as elsewhere, it is not enough to simply call a disease by its appropriate name, as an iritis or a conjunctivitis, for instance; for an iritis in a syphilitic subject is quite different.

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from one in a rheumatic subject. We must have an understanding of the patient’s general condition and environments; the object of the diagnosis being, that we may know how to intelligently treat the condition; for, after all, it is the patient and not the disease that we treat.

I shall first speak of the inflammatory diseases of the iris; and it is necessary to a correct understanding of the subject that we say something concerning the anatomy of the iris without going into minute details. It is a continuation of the choroid, which is the vascular coat of the eye, and is therefore very vascular. It is suspended as a curtain from the inner surface of the eyeball and is pierced near its center by the pupil. It does not lie in a vertical plane, as is generally supposed, but its pupillary border, which is free, is coned forward by the convex anterior surface of the lens, which is a very important fact to remember when treating inflammatory diseases of the iris.

The blood-supply is through ciliary arteries, and the nerve-supply is both motor and sensory. The motor fibers are from the cervical sympathetic, which supply the dilator or radiating muscular fibers, stimulation of which causes dilatation of the pupil; and fibers from the oculomotor nerve supplying the circular and sphincter muscular fibers, stimulation of which causes contraction of the pupil. The sensory are fibers from the long ciliary from the nasal branch of the ophthalmic.

Iritis, according to statistics, furnishes from 2.5 to 4 per cent. of all ophthalmic cases. It is relatively infrequent during the two extremes of life; the two decades from 20 to 40 years of age furnishing the greater number of cases. It is also said that there are more men than women who suffer from the malady. This is probably due to the etiological factor, as we are told that in 60 per cent. of all cases of iritis the remote cause is syphilis, either hereditary or acquired; 30 per cent. are due to rheumatism, and the remaining 10 per cent. to various causes, such as gonorrhea, malaria, fevers, tuberculosis, traumatism, etc.
In treating of the symptomatology it will serve our purpose to speak of iritis in its general significance without going into differentiation of the different forms of the disease, as many of the symptoms are common to all forms. The following ensemble is fairly characteristic of all forms: 1, pain, photophobia and lachrymation; 2, redness of the eye; 3, exudation of inflammatory products; 4, impaired mobility of the iris, and 5, disturbances of vision. This is not in the order of their frequency, however, as pain is not a constant symptom, for in the so-called quiet, insidious iritis it is usually altogether absent. Patients have come to me suffering from this form, where irreparable injury had been done to the eye, and yet they had declared that there had never been any pain. This is the one extreme; the exact reverse happening in the neuralgic variety, where pain, which is of an intense character, becomes one of the most urgent and annoying symptoms. The character of the pain is variously described as, "aching," "boring," "stabbing," "pressing," etc. It is usually paroxysmal, and worse at night. It sometimes spreads to the brow, check, side of the nose, gums, and other parts of the supraorbital and infraorbital nerve distribution of the fifth. Closely allied to the pain and general irritability of the eye, photophobia and lachrymation, the latter symptoms, however, are not so well marked as in some cases of keratitis.

In almost all cases of iritis, at some time in the history of the case the eye is red. The redness usually appears early and is one of the last symptoms to disappear. The usual form of redness is as follows: the cornea is surrounded by a pink zone, it is not red. The engorged episcleral twigs of the anterior ciliary artery, which, we remember, supplies the iris, are seen radiating almost in a straight line from the cornea. In the hyperemia and congestion of cyclitis, or inflammation of the ciliary body, we have the peri-corneal zone, but the color is not a pink, it is rather a violet hue. In corneal affections we also have the pink zone, which is, however, more of a bright red, as there is involvement of the superficial conjunctival vessels, especially in their anterior divisions.
In every severe iritis there is more or less hyperemia of the conjunctival vessels; there is some chemosis or swelling of the conjunctiva and in consequence the characteristic arrangement of the subconjunctival vessels is masked. It will, therefore, be seen that it is not always easy nor safe to base a diagnosis of iritis on the location and character of the redness alone. Just here it may be well to remark that the differential diagnosis between ciliary and conjunctival hyperemia lies in the different arrangement and location of the vessels. In ciliary hyperemia, as seen in iritis, it is the subconjunctival vessels that are involved. With a magnifying glass they will be seen to radiate from the cornea, forming a zone from 2 to 5 or 6 mm. in breadth. These vessels do not move with the conjunctiva, and if pressure be made with the lower lid-margin close to the cornea, and the lid be gradually moved downward, it will not do away with the redness, as it will in conjunctival hyperemia. The vessels are not tortuous, as in conjunctivitis; the redness is greatest next the cornea and not toward the canthi and the upper and lower culs-de-sac, as it is in conjunctivitis.

As every case of iritis is accompanied by an exudation of plastic, serous or purulent material, the iris, on close inspection, will be found to be changed in appearance. The texture of the iris becomes altered, and it is dull, muddy looking, or thickened in varying degrees.

There may be only disturbance of the epithelium, which appears roughened, manteling or veiling its beautiful texture, as blowing one's breath on a pane of glass destroys its perfect clearness. This is the first stage. The appearance may differ from this to a very decided change in color; blue or gray eyes becoming greenish, while in brown eyes the change, though not so decided, becomes more of a reddish or rusty cast, and the natural texture of the iris is lost in the inflammatory changes. In the iritis of secondary syphilis and some other forms there are special changes, but the above are the general changes.
Exudations always lead to adhesions to the anterior capsule of the lens unless the pupillary border is pulled away by a mydriatic. If these adhesions are broken up by atropin, there are likely to be portions of pigment left adherent to the capsule. More or less exudation nearly always takes place into the aqueous humor, changing its transparency in varying degrees, from mere cloudiness to a condition containing so much lymph that it settles to the lower part of the anterior chamber, and we have a false hypopyon.

At the height of a severe acute iritis a small iritic vessel may rupture and a hemorrhage result, the so-called hemorrhagic iritis.

One of the first symptoms is impaired mobility of the iris; the pupil is contracted, and does not respond to light and shade, or only feebly so. If the disease is confined to one eye, this impaired mobility is easily recognized by comparison with the unaffected eye. The turgescent iritic vessels, no doubt, are responsible in a measure for this sluggish condition; but probably the most potent etiological factor is the irritation of the ciliary nerves, which supply the sphincter of the iris, causing a tonic contraction. Later on, however, posterior adhesions may play an important rôle.

There is always more or less disturbance of sight; at first due, perhaps, to an increased lachrymation, photophobia and general irritability of the eye.

There is sometimes a transient alteration in the refraction of the eye, as a result, probably, of spasm of the ciliary muscle. At a later period turbidity of the aqueous, steaminess of cornea, etc., may interfere with the acuity of vision.

In an uncomplicated iritis there is no purulent or mucopurulent secretion in the eye; there is an increased secretion, but it is of a purely lachrymal character.

In the conjunctiva we have a membrane very richly endowed with glandular structure. It would seem from the recent researches of Dr. Adolph Alt, of St. Louis—who read before the recent meeting of the Western Ophthalmological Oto-Laryngologic Association a paper which was very profuse-
ly illustrated with lantern slides—that there is much more glandular structure in the eyelids than is taken cognizance of in our text-books. When one realizes the wealth of glandular tissue in the conjunctiva, he does not wonder at the stubbornness of some of the chronic diseases in yielding to treatment.

A large proportion of the ocular troubles the physician is called upon to treat are diseases of the conjunctiva. There are many forms of conjunctivitis, each dependent on some specific etiological factor, but it is sufficient, as in the foregoing subject of iritis, to treat the subject in its general application. In conjunctivitis there is discomfort in the eye, but of a different character from that complained of in iritis; a sensation as if something were in the eye, redness, and mucopurulent or purulent secretion. This latter is, perhaps, the most significant sign in the diagnosis of conjunctivitis. The amount and character of the secretion is dependent on the kind and severity of the inflammatory trouble. A mild catarrhal conjunctivitis gives rise to a limited amount of mucopurulent secretion, while an intense gonorrheal ophthalmitis presents an eye that literally weeps pus of a thick, creamy character. The first stage of conjunctivitis, to be sure, is not characterized by a mucopurulent or a purulent secretion, but this feature or symptom is not long delayed. Both the palpebral and the ocular conjunctiva are thickened and infiltrated, the transparent character is lost to a greater or less degree, according to the severity of the process. The membrane becomes roughened, the papillae are enlarged, and in severe cases the epithelial covering of the cornea is involved and the vision impaired. The conjunctival vessels are engorged and tortuous, and are seen to move with the conjunctiva.

As before stated, it is very necessary that a correct diagnosis be made in glaucoma, as the disease with which primary glaucoma is most likely to be confounded, iritis, requires exactly the opposite treatment; and in consequence, a mistake in diagnosis is very likely to lead to disastrous results. Many
of the symptoms are common to both diseases: the character of the pain is quite similar; there is the deep-seated, pressing pain, which may overflow to the distributions of the ophthalmic branches of the fifth nerve; there is haziness of vision; there is redness of the eye and a sluggish pupil; there is this difference, however: the redness is usually more general, and there is likely to be more general involvement of the conjunctival vessels; the pupil is dilated and not contracted; the eyeball is much harder on palpation than the normal eye, which is a very essential point to remember, though we must not forget that the tension is also sometimes raised in iritis, but not to such a marked degree. Right here I will say, it is well for every physician to familiarize himself with the feel of the tension of the normal eyeball. This is best done by standing or sitting in front of the patient, who is directed to close the eyes and look downward, and then, with the index finger of each hand placed on the upper lid, palpate the ball by making alternate pressure with the two fingers, much in the same way you would in testing for fluctuation in a case of abscess. The pressure should be gentle and the sensation imparted to the examining finger compared with that of the other eye. To say the normal eyeball is yielding conveys no adequate idea. The best way is to familiarize yourself with the sensation by actual experience. To return to the consideration of the symptoms: 90 per cent. of the patients who have primary glaucoma are past 40 years of age. The ophthalmoscope—which is an instrument with the use of which every physician should be familiar—will usually, when the absence of haziness will permit a view, reveal a cupped disc; this, however, is more marked in the chronic condition. The depth of the anterior chamber is usually very much lessened; there is also cloudiness of the cornea owing to the hindrance in the flow of the corneal lymph-streams. There is partial anesthesia of the cornea; the power of accommodation is diminished; there are also varying degrees of refractive changes in most cases.
Chronic and secondary glaucomas do not so much concern us at this time, and we will not discuss their symptomatology. Diseases of the cornea are usually apparent, and their diagnosis will receive no consideration here. Cyclitis, or inflammation of the ciliary body, is usually associated with iritis, and as it is not likely to be mistaken for glaucoma, if we bear in mind the differential symptoms, it will simply be passed with the mentioning. The main object of this paper is to call attention more particularly to the differential points in the diagnosis of iritis, conjunctivitis and glaucoma; for this reason I shall not speak of the other inflammatory diseases of the eye.

At the expense of brevity I will recapitulate. In practice, iritis and conjunctivitis are the diseases usually confounded, and this should not be so in uncomplicated cases, though they not infrequently occur together.

In iritis there is no mucopurulent or purulent secretion, if the case is uncomplicated, the secretion being simply lachrymal, hence watery. In conjunctivitis, on the other hand, there is a purulent or mucopurulent secretion. In iritis the pain is deep-seated and not a scratching, as if something were in the eye, and is usually worse at night. The redness is usually confined to a zone immediately surrounding the cornea, and is pink and not fiery red. The lid, pressed against the sclerocorneal junction and moved away while pressure is maintained, does not cause the redness to disappear; neither does rubbing the border of the lid against the conjunctiva cause the engorged vessels to move with the conjunctiva. The redness is subconjunctival and not in the conjunctiva. In conjunctivitis, on the other hand, there is usually more redness on the ocular conjunctiva remote from the corneal limbus; the vessels are tortuous and running in every direction, and can be emptied by pressing the lid border against the corneal edge and slipping it away, and the vessels move with the conjunctiva. The iris is sluggish, i.e., does not respond to light and shade, is changed in color, and the pupil is contracted in iritis, while in conjunctivitis there is no iritic change.
In the differentiation of glaucoma and iritis we will remember the increased intraocular tension, the dilatation of the pupil, the more diffused redness, the shallow anterior chamber and the cupped disc of the former, the only slightly, if at all, increased intraocular tension, the contracted pupil, characteristic zone of redness, the unaltered depth of the anterior chamber, and optic disc of the latter. The age of the patient should also be borne in mind. A diagnosis of iritis in a patient past the age of 40 years should never be hastily made without first having carefully noted all these points of differential diagnosis; for it would be, indeed, a very great error to put atropin in a glaucomatous eye.
CONGENITAL OCCLUSION OF THE POSTERIOR NARES.

GEO. H. BICKNELL, M.D., OMAHA.

This is a comparatively rare condition and one upon which very little has been written in American text-books or literature. Bosworth, in his large two-volume work, simply mentions the fact that such conditions may exist, and other works published in this country do not say much more. In the "Handbuch der Laryngologie und Rhinologie," of Heymann, there is a comprehensive chapter on the subject by Kayser, and German literature in general seems to be rich in reports of cases of this anomaly.

J. F. Pugh\(^1\) reports a case of one-sided posterior occlusion which was successfully operated on, and a few other cases have been reported in this country, but their number is very small. Dr Eugen Joel\(^2\) has written a résumé of the literature on the subject up to date, with very complete bibliography, and concludes by reporting an interesting case of his own. Dr. Ernest Baumgarten\(^3\), of Budapest, collected up to 1896, about forty-five cases from the literature and had several under his own observation, all of which were successfully operated upon. True congenital posterior nasal occlusions are defined by Baumgarten and Joel as those occlusions only which lie flush with the rim of the choanae. They may be either unilateral or bilateral and may be bony or membranous, or what is more common, a mixture of each with the bony portion predominating. All cases are excluded in which the condition is an atresia caused from narrowing of the nasal fossae, as are also those due to exostoses, deviated septum and syphilitic and other ulcerations. They must also be distinguished from those curious membranous formations which
come on later in life which divide the nasopharynx into two compartments. Baumgarten describes two of these curious cases, which he calls false occlusions, and says that the etiology of the condition is obscure. As might be expected, many of the cases of complete congenital occlusion of both nares present the picture commonly observed in cases of adenoids in the pharynx: i.e., small pinched nostrils, drooping under jaw and pale, doughy complexions. All these cases, however, do not present this miserable aspect; some of Baumgarten's cases were strong and well nourished, and my own case was a picture of health. Joel's case had marked abnormalities in the conformation of both superior and inferior maxillae and teeth, and that side of the face which corresponded to the nasal occlusion lacked development and expression. One of Baumgarten's cases was brought to him on account of an intermittent jerking of the muscles of one side of the face. On examination he found that on the affected side there was a congenital occlusion of the choana. In the intervals between the twitching and jerking of the muscles of the affected side the face had the appearance characteristic of Bell's paralysis.

The case which came under my own observation was one of complete occlusion of both nares. Effie H., aged 10 years, of German parentage, was brought for treatment because of defective phonation, total absence of olfaction and inability to breathe through her nose. She was the picture of health, and unusually large and well developed for her age. Her cheeks were full and ruddy, mouth and teeth perfect and nasal fossa fully developed. She was quick, vivacious and highly intelligent, answering all questions without hesitation.

In breathing her chin did not droop, as is common with mouth-breathers, her lips being parted so slightly that it was on close observation only that the mouth breathing could be detected. Her father, an intelligent and observant German mechanic, claimed to have noticed her inability to breathe through her nose the first day of her life. On asking her to
breathe through her nose I found that she could not force through a particle of air. On anterior rhinoscopy the nasal fossae were seen to terminate just behind the posterior end of the turbinates in a rounded cul-de-sac covered with normal mucous membrane which at all points felt firm and resistant to the touch of the probe. The turbinates and nasal fossae were normal, and the nose in general amply large and well formed. There was a considerable amount of clear mucus in the nasal passages which the patient could remove only by squeezing her nose. On posterior rhinoscopy the oropharynx and tonsils were seen to be normal and the nasopharynx was large, roomy and free from adenoids. The oval openings of the posterior nares were completely and evenly bridged across by what seemed at first sight to be ordinary mucous membrane interspersed here and there with several narrow vertical bands of tissue which were pure white glistening bands, similar in appearance to tendon. Thinking from what had been seen that the obstruction was probably composed of mucous membrane and thin cartilage I attempted to break it down with my finger, but finding it extremely firm and resistant soon gave up the idea of so easy and speedy a cure. The patient, being young and timid, was then anesthetized, the nasal chambers cocainized and treated with a solution of extract of suprarenal capsule to prevent hemorrhage and then cleansed as thoroughly as possible. A good view of the field of operation could now be had, and with the small trephine drill driven by a dental engine enough of the occluding tissue was quickly drilled away to make large free openings on either side. There was almost no hemorrhage and no tamponing was necessary. Some of the cases reported have been operated on by mallet and chisel, but Baumgarten operated on most of his with the trephine, which seems the ideal method, as it is clean and quick and leaves no rough edges to be chipped off. Healing was speedy and uneventful, the after-treatment consisting of simple cleansing sprays. The occlusion was found to be bony and cartilaginous except a small slit about 1 mm. in length in
the center on each side, which was composed of two thicknesses of mucous membrane. A few days after operating on my case she informed me very proudly that she could “smell things” for the first time in her life. She was tested from day to day and was able in a short time to distinguish a number of different odors, although at first she classified them under two heads, good and bad. In testing her, care was taken to exclude all substances such as ammonia and others which make their presence known chiefly by reason of their pun­gency and irritating effect on the mucous membrane.

Bosworth, in his chapter on Anosmia, says that in his opinion, in cases where, from obstructive conditions of the nasal passages, olfaction lies dormant for six or eight years, certain degenerative changes of an atrophic nature occur either in the nerve-endings or their trunks, which completely and permanently destroy the sense of smell. He says, “A nice question arises here as to how long the olfactory nerve will retain its integrity while its function is suspended by an obstructive lesion of the nasal cavities.” He says further that in all the cases seen by him where obstruction from polypi continued as long as ten years there was no case of restored olfaction. He cites a case, however, from another author in which the sense of smell was restored after being lost for fifteen years.

Dr. Joseph A. White, of Richmond, Va., in “Burnett’s System of Diseases of Ear, Nose and Throat,” reports a case of his own in which restoration occurred after twenty years. He cites also the case of Dr. Agano, in which a man had anosmia of forty years’ duration resulting from a blow by a stone in the frontal region and who was cured by having an operation on his deviated septum and removing some polypi. In the cases of congenital occlusions of the posterior nares collected in the literature there is little mention made of this interesting feature, the reason probably being that most of the cases were unilateral, the sense of smell being performed by the normal side. I have made this feature of the case prominent because it seems to me to be a point of con-
siderable interest from a physiological standpoint, that one of the senses after having lain absolutely dormant until the tenth year of life should upon removal of the obstructive lesion take up and go on with its mission with such seeming perfection.

Another interesting and rather puzzling feature in many of these cases is the robust habit of the patients. We are taught to believe in cases of adenoids in the nasopharynx that the mouth-breathing is responsible for the miserable picture presented. In congenital obstruction of the posterior nares we have the same end accomplished by different means, but in many cases with scarcely a symptom excepting the mouth-breathing to point to chronic obstruction.

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The medical student, as a rule, has not much love for chemistry, or at least he did not a score of years ago, when it was considered to be the usual thing to fail to pass in that branch. That great advances have been made in teaching chemistry since that time no one will question, but even now it is surprising to discover that it is very common for the recent graduate to be ignorant of the chemical composition of many of the most common articles used as medicines. The sudden call sometimes made on our knowledge of chemistry does not allow us to refer to our books. When we are called by an excited messenger to attend a case of poisoning, it does not look well to stop and examine our books, and to virtually say there is no use of going until I find out what to do. But I desire to deal more particularly with the question of chemistry in its application to the preparation of certain articles of the materia medica.

From time to time I have found prescriptions printed in journals which, if written as directed and sent to the average druggist, would result in a dangerous compound. For the welfare of the doctor, as well as his patients and the much-abused druggist, I have concluded to report a few instances of this kind.

This subject has received scant attention in the past, so far as I am able to find, and it will be doing a good service to the profession to collect together as complete an account of dangerous mixtures as the literature of the past and personal experience will furnish.

Explosions have frequently been reported as resulting from the combinations ordered by physicians in prescriptions. I
recently read an account of an accident which happened to a physician of some years’ practice: he was somewhat alarmed in observing the contents of a bottle fly upward by his adding sweet spirits of nitre to a solution of potassium iodid. Certain explosive mixtures are frequently prepared, and those who use them are not injured by the explosions, but there is danger that explosions may occur from very trifling causes, such as change of temperature. It should be remembered that potassic chlorate, glycerin and tincture of iron (chlorid) make an explosive mixture, and yet these articles are prescribed by physicians as if they were perfectly safe.

Half an ounce of each of these was mixed by a New York physician; the bottle containing the mixture was put in a satchel, where it exploded with great violence, much to the alarm of the man who carried it, but to the great advantage of the patient for whom it was prepared, who might have been more seriously hurt than frightened. I have recently noticed this combination, together with listerine, recommended for diphtheria. We should be careful not to mix glycerin and substances which are easily reduced with such oxidizing agents as permanganates and chlorates, chromic and certain organic acids.

Potassic chlorate and catechu mixed, and used as a dentifrice, have exploded in the mouth when much friction was employed in cleaning the teeth. The following prescription was prepared for a lady:

B. Argenti oxidi ............................................................gr. xlvi
   Morphiae muriatis ............................................................gr. i
   Extracti gentianae, q. s.
M. Ft. pilul. xxiv and silver them.

The lady put the box of pills in her bosom, where many of her sex often place valuables for safe keeping, but in three-quarters of an hour afterward an explosion occurred, severely injuring the woman, and setting fire to her dress.

A physician in Iowa prescribed the following mixture for a sore throat:

B. Tinct. ferri chloridi ....................................................3ii
   Potassi chloratis ..........................................................3i
   Glycerini puri ............................................................5iii
M. 21
As the whole of the mixture was not used, the lady of the house, desiring to keep it for a similar emergency, started one day, some length of time after its use, to carry it to a storeroom, the entrance to which was out of doors. When outside, thinking of other articles, she put it down on the veranda in the sunshine and returned for them. When coming back she heard an explosion, and on reaching the veranda she found it on fire. It burned so rapidly that before it was subdued it had done considerable damage. She said the explosion was quite violent.

In the preparation of the tincture of chlorid of iron, it will be remembered that hydrochloric acid is used to make the chlorid of iron, to which alcohol is added. Any excess of acid present in the tincture will act upon the potassium chlorate, and form enchlorin, or protoxid of chlorin, a gas which is explosive from a slight elevation of temperature, the warmth of the hand being sufficient to cause an explosion. It is not difficult to determine why an explosion occurred from the heat of the sun when the Iowa mixture was exposed as it was.

Here is another accident which affected the doctor himself, Dr. Harnden. He says: "Several years since, when engaged in the drug business, and recently in the course of my practice, I witnessed two explosions. The first occurrence was while compounding a liniment for a customer, in which several oils, a quantity of glycerin, and an acid, either nitric or sulphuric, were being mixed. I was about to put a cork in the bottle when there was a slight explosion, and the contents of the bottle shot up to the ceiling like a flash, the flames being of a bluish tint. The bottle remained in my hand empty." The second was as follows: "Having occasion to use some nitric acid (C.P.), I poured a few drops into an empty, and apparently perfectly clean, three-drachm vial, put it into my vest pocket, and started out to make a call, when I heard an explosion and felt a sensation as if I had been shot. The report was as loud as a small revolver. As I had been in practice but a short time, I thought no one would shoot me for money or revenge, and, not falling, I concluded to investigate,
when I found the top of my bottle and my clothing badly dis­
colored by the acid. I afterward learned that there had been
some glycerin in the vial.”

Potassic and sodic chlorates are both officinal, and the phar­
macopeia cautions the druggist against triturating them with
readily oxidizable or combustible substances. There are at
least two cases reported of severe burns from the ignition of
sodic chlorate which had dried on gloves or cloths which had
been wet with a solution of it, in the treatment of rhus poi­
soning, and another in inflammation of the hand. The first
case was that of an engineer, who was given a solution to ap­
ply to his hands. The cloth, which was saturated with the
medicine, was allowed to become dry, and ignited, resulting in
a severe burn. In the other case the gentleman who was using
a similar solution allowed the cloths to become dry, and in
going into his greenhouse at night, holding a candle in his
hand to which the chlorate solution had been applied, the draft
of the air brought the flame of the candle upon the dry cloth,
and rapid ignition occurred.

The Boston Medical and Surgical Journal, of Feb. 28,
1884, reports that “in Manchester, England, a druggist dis­
pensed quicksilver and nitric acid to a man who wished them
to make some sort of an ointment. The man had bought
these articles before, but they had always been put up sepa­
rately. On this occasion they were put up in the same bottle,
which the man placed in his breast pocket and left the
shop. Very soon the bottle exploded, burning his face and
eyes so severely that he died at the Manchester Eye Hospital.”

The druggist, of course, did wrong in putting these sub­
stances together in the same bottle. It is true that the phar­
macopeia (U. S.-Br.) directs nitric acid to be poured on mer­
curry in the preparation of the ointment of nitrate of mer­
curry, but he ought to have known, if he had any knowledge
of the experiment, that it is made in an open vessel, and not
in a closed bottle, where the gas that is generated must exert
an explosive force; or if ignorant of what might have hap­
pened in pouring a strong acid on a metal, he ought to have
said that he did not know what the effect would be, and that it would be safest to keep them in separate bottles.

In recent years the permanganate of potash has come into general use as a remedy for amenorrhea. It is prescribed in pill form, and the point I wish to make is that the druggist must not use as an excipient any readily oxidized agent, like glycerin. Talc or kaolin mixed with the pill mass will make the mixture and division into pills safe to the druggist, and the keeping and swallowing of the pills safe to the patient. It has been truly said that "it is a solemn thing when a physician puts a pharmacist at work upon a concoction which may blow him up." He should, therefore, forbear to prescribe mixtures of permanganate of potash with alcohol. Warning had been given of the danger of this combination some time ago, but a somewhat recent case has called attention to it. A bottle containing 10 parts of permanganate of potash to 15 parts each of alcohol and water, corked and tied over, exploded, doing bodily harm to the bottler. Experiments subsequently made showed that this occurrence, under the circumstances, was commonly to be apprehended.

To the list of explosive prescriptions—which have now attained to a somewhat formidable length—must be added mixtures of fluid extract of uva ursi with certain samples of spirits of nitre. Furthermore a mixture of chromic acid and glycerin has been known to explode with a violent detonation.

It appears, therefore, in the light of these facts, that it might be well for physicians to post up on their chemistry, when about to devise new formulas.

While it is generally conceded that a thorough knowledge of chemistry is highly useful to the doctor, it has, however, become of vital importance to the druggist, and he will do well to prayerfully consider before he puts together the strange combinations commended to him by physicians who do not see what earthly use chemistry is in the practice of medicine.
The physician as a rule, writes his prescriptions without regard to neatness or accuracy, and the pharmacist finds great difficulty in deciphering them. This is usually the result of haste or carelessness, as I am sure there is no good reason why we should not write as good a hand as the members of the other learned professions. In writing a formula, great care should be taken to make it plain, especially when the welfare or even the life of an individual might depend upon it. I have recently adopted the plan of writing all my office prescriptions on a typewriter, and find it is much more satisfactory to myself, and a source of pleasure to the druggist. A typewritten prescription looks neater, it makes a favorable impression on the patient and does away with the possibility of being improperly read by the druggist. Of course, we can not depend on the typewriter in the matter of orthography and grammatical construction, but if we know how to indite a formula, the machine will do the rest.

If castor-oil is ordered, the druggist will not be so likely to send or put up croton-oil, use corrosive sublimate for calomel, or mistake the symbol 5 for 3, or direct tablespoonful for teaspoonful.

The art of prescribing correctly is a subject of great importance and one which has received but little attention up to the present time, in the medical colleges of this country. Why it is so I am unable to understand, but the fact remains that the average graduate of our medical schools finds great difficulty in writing his first prescriptions. It is quite embarrassing to start to write a formula and be compelled, in the presence of the patient to give it up and start over again. After a few failures along this line the confidence of the party who is watching you is very much lessened, and success or failure may depend on the first impression made and the manner in which the prescription is written. "Show me the prescription you write, and I will tell who you are," was a wise saying of Herbert Spencer's.

The difficulties encountered in prescription writing are many, and hundreds of our brightest young doctors leave col-
Medical Jurisprudence.

In writing on this subject, Judge Joseph Daily, ex-judge of the supreme court of Indiana, has lately given much needed information. He has so thoroughly covered the ground that I shall take the liberty of quoting extensively from his article. He defines medical jurisprudence as that science which applies the principles and practice of the different branches of medicine to the elucidation of doubtful questions in courts of justice. It is obvious, therefore, that the whole subject of medical jurisprudence is a question of evidence. Many cases pending in the courts can only be determined by recourse to medical knowledge. Medical jurisprudence, or forensic medicine, includes all matters pertaining to public health and the physical welfare of society. It is otherwise known as hygiene, sanitation, or the science of public health. The early nations recognized the public welfare as paramount to that of the individual, and sanitary and hygienic regulations had an important place in their legal code. The most primitive people could hardly exist as an organized community without observing to some extent the principles upon which medical jurisprudence is based. In the sixteenth century, however, forensic medicine had its birth in Germany, when a penal code was enacted compelling courts and magistrates to call physicians as witnesses in all cases of violent death, injuries, poisoning and infanticide. As a natural sequence, dignity was added to this science and there followed careful and studious investigation of medical problems by the greatest physicians of the time. It resulted in the overthrow of the widespread belief in witchcraft and other kindred superstitions.

In the eighteenth century splendid works were written on forensic medicine. Germany then established chairs for teaching it in her universities. By the beginning of the nineteenth century France followed with three professorships, and has since led in the development of this important sci-
enee. Strangely enough, there was no similar chair in England until 1820. It has made rapid strides since the nineteenth century to its present prominent position. Nor has the United States been idle during this wonderful human development. She has kept up with the procession in this country and is cognizant of the constantly growing science. It will be observed that the essential purpose of the aid and testimony of forensic medicine is to help the court and the law in securing exact justice to and for all, by showing the facts in the case, and the inferences to be drawn from them, in aid of scientific medical investigation.

Medicolegal evidence may be of two kinds; 1, that from medical men whose connection with or relation to the case is that of physician or surgeon, who testifies to the facts he has observed; 2, that of specialists or experts in certain branches, who may not have seen or treated the person who is the subject of inquiry, but whose testimony is based on a hypothetical question embracing facts testified to by others, and is intended to strengthen or make clear the facts or hypotheses presented by the one side or the other, or by the court itself. It will be seen that the duties of a medical jurist are distinct from those of a mere physician or surgeon; the latter looks only to the treatment of disease or accident and the saving of life; but the object of the former in a large percentage of cases is whether, in reference to the living or dead, to aid the law in fixing the crime on the perpetrator, or to rescue an innocent person from a falsely imputed crime. Thus he may be required to determine whether, in a particular case, the cause of death was natural or violent.

There is no other subject in relation to which so many medicolegal questions may arise as in case of marriage, it being a civil contract into which those only who are physically and mentally competent can enter, and which they alone can fulfill. If a party is not of sufficient age, of sound mind and physically able to consummate marriage, as to the person contracting such relation lacking in these qualities, the marriage is either void or voidable, and proceedings to anul the
bond may be begun. In all such cases medical science may be called into requisition to aid the court to determine the facts. The same science is invoked as to symptoms of pregnancy and period of gestation in cases of paternity, and to determine the question of premature birth, and to settle a controversy as to the legitimacy of children born during wedlock, where non-access by the husband is alleged.

The subject of insanity involves questions concerning the safety and personal liberty of individuals, the motive for strange acts and horrid crimes, the perpetration of fraud and evasion of contracts, and the protection and welfare of society in general. Insanity may be defined as a condition of the mind in which a false action or conception of judgment, a defective power of the will, or an uncontrollable violence of the emotions, may be produced by disease. It may be in the form of idiocy, mania, monomania, or dementia. The legal grounds that justify restraint are, that the patient is dangerous to himself and others, and that he is incapable of taking care of and properly managing his business or property.

The question of insanity also arises when a person whose life is insured commits suicide. To understand and know the motives that control the actions of men requires the best thought of the profession, and, to properly discharge the duties of an expert, he can not be the paid partisan of a litigant. It will be thus seen that the expert occupies a proud and exalted position in the administration of the law, and is a co-worker with the courts and the attorneys in the administration of justice, and is vested with the right to give an opinion on medical facts as observed by himself, or on facts observed by others and given in evidence.

He is accorded these rights because it is considered that by reason of his previous studies and scientific research he is competent to aid the court and jury in arriving at the truth and promoting justice.

There is no exact test by which a court can lay down a rule and determine with mathematical precision how much
skill or experience a medical witness must possess to qualify him to testify as an expert. That question rests within the sound discretion of the court, whose duty it is to decide whether the experience or study of the witness has been such as to make his opinion of any value.

Malpractice is defined as "the unskillful or negligent treatment of a patient by a physician or surgeon, or some one undertaking to act as such, resulting in injury to the patient. This definition will have to be somewhat modified if the following suit for damages is successful.

A suit has recently been brought against a doctor living in Crawfordsville, Ill., for refusing to attend a case. The mother and child died, and the husband commenced legal proceedings against the doctor, for $10,000 damages, on the grounds that their death was the result of the refusal of the physician to attend the case. In commenting upon this suit, the editor of the Journal of the American Medical Association concludes that it will be very remarkable if the outcome will be such as to cause any uneasiness on the part of the profession, and the lawyer who introduced the suit must have curious ideas of the rights of individuals as to the disposition of their services under the law. I find it is, as a rule, the opinion of the laity that a physician can be compelled to attend a case, especially if his fee is tendered in advance. If a doctor assumes charge of a case, he must see it through until recovery or death takes place or his dismissal. A physician has a perfect right to refuse to attend a case, and he is not required to give his reasons for so doing. It would be rank injustice to hold a physician responsible for the unfavorable termination of a case that he had not treated. This would be a new departure, and there would be no limit to his responsibilities.

In a paper read before the Washington (D.C.) Medical Society, Dr. W. C. Woodward stated: "From a medical standpoint, malpractice may be divided into criminal and civil malpractice—criminal being the result of intent or gross ignorance, or neglect; civil being the result of ordinary ig-
norance or neglect. The maximum of knowledge, skill and care allowed by the law is the average knowledge, skill and care employed by physicians generally, in like cases, at the same period of time, and in the same and similar localities.

"Whether the facts in any given case constitute malpractice is a question to be determined by the jury, under instructions by the presiding judge, as to the principles of law involved.

"For civil malpractice, the physician must answer in damages to his patient; he will not be liable unless the plaintiff shows that he has been injured by the alleged malpractice, and, after a prima facie case has been made out against him, the defendant may show that the treatment he adopted was proper or that the alleged injury did not result from it.

"If the injury complained of be due to the failure of the patient to follow the instructions of the physician, the latter will be relieved, in whole or in part, of liability.

"For criminal malpractice, the responsible party is liable to the state for punishment, by fine and imprisonment, or both, and good intent is no defense.

"If the physician be acquitted of a charge of criminal malpractice he may, in an action for malicious persecution, recover damages from the responsible party, if he can show that the charge was made without probable cause, and through malice.

"If, in a civil proceeding, a judgment is rendered in his favor, he will be relieved from liability for court charges, but whether he can maintain an action for malicious persecution is doubtful."
POUNTS IN THE CHEMISTRY OF TOXICOLOGY.

C. S. MINNICH, M.D., PALMER.

Poisonous alkaloids—and this includes nearly all the poisonous vegetable drugs and their tinctures, extracts and fluid extracts, as well as salts of their alkaloids—are well antidoted with tannic acid in solution or strong infusion of common “store” tea, forming nearly insoluble tannates, followed by emetics.

All the poisonous alkaloidal salts—not the pure alkaloids—are easily precipitated with acetate of lead—not of itself poisonous in small doses, especially if vomited by use of emetics.

Salts of opium, opium itself and its alkaloids, as well as strychnine and its salts, are properly antidoted by permanganate of potash or soda. Alkaloids and alkaloidal salts of these poisons are decomposed by this agent.

Strychnine is the best physiologic antidote for absorbed morphine or opium. Large doses, almost to the danger-point, must be given. Stimulant and especially diuretic. Five hundred times the lethal dose of strychnine may be recovered from if only artificial respiration is properly maintained. (Reichert.)

Arsenic oxid, arsenious oxid, arsenious acid, and arsenic acid must be treated by freshly precipitated hydrated sesquioxide of iron, or even fresh carbonate of iron, forming insoluble arsenic compounds. Dialyzed iron is useful; emetics; tube.

Compounds of arsenic acids with alkalies and arsenical salts generally require dialyzed iron or hydrated sesquioxide mixed with a salt of iron—acetate, citrate or sulphate—forming by double decomposition insoluble arsenic compounds of iron; emetic; tube.
Mineral acids, sulphuric, nitric, muriatic, phosphoric and acetic—organic—may be treated by any non-poisonous alkali—chalk, magnesia, milk of lime, plaster off the wall, soapsuds, forming innocent compounds, but not emetic nor tube.

Nitrous or oxalic acid require lime in some form, but on no account soda, potash, magnesia or ammonia. Lime forms insoluble non-poisonous oxalate of lime. Alkalies form soluble, very poisonous oxolates.

Oxalates of soda, ammonia, magnesia, and binoxalate of potash are antidoted by bromid of calcium well diluted. chalk—carbonate of lime—plaster off the wall. Double decomposition, oxalate of lime formed. Tube should be used.

Carbolic acid—an alcohol, phenol, and not an acid at all—if pure, is antidoted by albumin—milk, finely chopped fresh meat—albuminates formed—milk of magnesia and sulphate of magnesia—phenates and sulphocarbonates formed. Tube. Emetics act slowly, if at all.

Carbon monoxid, found in city water, gas, old wells, and mines, requires fresh air, oxygen inhalation—carbonic monoxid changed to carbonic dioxid—artificial respiration, and a little or much strychnine as long as the heart beats. Hours and hours the artificial respiration must be kept up.

Formaldehyde, formol, formalin—related to acetic acid—takes carbonate of ammonia, aromatic spirits of ammonia—ammonia compounds formed.

Alkalies, soda, potash, ammonia, and caustic lime require lemon juice, citric acid, vinegar, weak acetic acid, juice of sour canned fruit, any non-poisonous vegetable acid, sour molasses. Oils or fats do little, if any, good.

Phosphorus, if in lump, goes on through without being dissolved. Give Epsom salts, or other cathartic. In solution of fine subdivision, old turpentine containing oxygen in solution—ozone—permanganate of potash mixed with hydrogen peroxid—ozone. The ozone oxidizes the phosphorous to phosphoric anhydrid, which, meeting water, forms phosphoric acid. Emetics: tube.
Hydrocyanic acid, cyanid of potash, oil of bitter almonds, nitrobenzol, dinitrobenzol, have no clinical antidote. Pump if possible, using stimulant. Oxygen, artificial respiration.

Oil rue, savine, tansy, pennyroyal, have no chemical antidote. Emetics; pump.

Soluble salts of lead are counteracted by any soluble nontoxic sulphate, as sulphate of soda or magnesia—insoluble lead sulphate formed. Workers in lead do well to take small doses of Epsom salts and iodid of potash daily.

Iodin is met by any form of starch. Iodid of starch formed.

Soluble salts of barium needs a soluble sulphate. Insoluble barium sulphate formed.

Silver nitrate is antidoted by any soluble nontoxic chlorid, such as common salt. Silver chlorid formed.

The new silver preparations, albuminate, lactate, etc., are utterly decomposed by very small doses of ammonia sulphid. Silver sulphid formed. Eggs, yolk and all, beaten up, act nearly as well on account of the sulphur they contain. Pump; emetics.

Salts of mercury is opposed by white of egg, milk, chopped meat, soapsuds, and oil, baking soda, lime water or chalk. Use stomach tube cautiously.

Chloral hydrate is decomposed only in the bowel into chloroform and sodium formate by the alkaline bile. Not decomposed in the blood. Stomach-tube. Emetics are not reliable. Do not give cathartics. Keep the chloral from entering the bowel. Strychnia for physiological antidote same as for chloroform.
MORBUS VENEREUS.

AN EVER-INCREASING MENACE TO THE HUMAN FAMILY.

J. LUE SUTHERLAND, M.D., GRAND ISLAND.

In the brief paper which I present for your consideration to-day, I have limited what I have to say to one phase of the subject, viz., gonorrhea. I wish to state, also, that it is not from the standpoint of a venereal specialist that these observations have been recorded and the conclusions drawn; but the fact that a general practitioner in an inland town of less than ten thousand inhabitants, where physicians are numerous, and each one is a specialist in everything, is so frequently confronted with this disease and its recent pernicious effects, and that with relative increasing frequency with each succeeding year, and when he reflects that the number of cases which come under his observation are only a fraction of the whole, even in his own little city, and that the whole is even a much smaller fraction of the number seen daily in a single city metropolitan in size and character, he can but conclude that in venereal disease we have a very formidable menace to the family human, and its ravages are increasing out of proportion to the increase in population.

The gloomy, and I admit rather pessimistic, view proclaimed by the title of this paper is in no way relieved by a study of the etiology of the disease; for it can but be conceded that it is one and the same, upon which depends the perpetuation of the race, namely, that God-given instinct, sexual desire. This extinguished, the disease would die for lack of fuel with which to feed its fires; but alas! population would also cease, though perhaps not so soon. Add to the great underlying cause the subsidiaries of vice and ignorance, and what more is
needed to assure us of its perpetuity as long as the sexes are accessible to each other?

It is not my purpose to discuss in detail the dynamics of this first great cause, they being well understood by all who have given the subject any thought, and understanding that we are conscious that they will be operative until the end of time. There is perhaps some hope for amelioration in a more thorough education of the people in all matters pertaining to sexual life and the proper sexual relations necessary to health, together with the aid of efficient and comprehensive laws. Ignorance, wherever found, continues to work with telling effect, and in its application here it is no exception. I use the term in its broadest sense, not only in reference to the victims of the disease, but ignorance upon the part of that class of the profession who announce themselves as “specialists in private diseases” and who both publicly and privately bid for this class of practice, thus openly encouraging the acquisition of a disease which renders the remainder of the patient’s life a burden and a curse. In this connection we might pertinently inquire as to the attitude of that great educator, the lay press, with the glowing headlines, illustrations, and full-column ads of quacks and secret nostrums, which guarantee to “cure the worst cases in three days or money refunded.” Of course, the spirit of commercialism has much to do with it, but surely not all. Ignorance here must play no insignificant part—ignorance as to the nature of the disease, more ignorance as to the absolute worthlessness of the nostrums advertised, and, it is to be hoped, ignorance of the incalculable amount of harm they thus do.

But no matter what the cause, or whence the source, we are at uncomfortably frequent intervals reminded of the fact that we have among our clientele a disease which is no respecter of age, sex, or station in life, being found in the young girl just entering her teens and in the white-haired veteran of 60; in the repulsive outcast of the city slum; in the innocent, confiding wife of refinement and affluence; in the all-round tough of the sporting fraternity, and the unsophisticated farmer-
It is acquired by sexual intercourse in perhaps 95 per cent. of all cases, but that it is possible for the infection to be conveyed by means of towels, clothing, instruments, the bathtub, or even that much-abused convenience where even the minister’s son is exposed—the public toilet—I am charitable enough to believe. That it is difficult to treat satisfactorily even in the most docile and obedient patient, all fair-minded physicians will admit, and as practiced with the average ambulatory patient, satisfactory cure is much more often the exception than the rule. That it is of much more frequent occurrence in the dissolute and sporting classes does not afford much consolation, from the fact that they do not limit their favors to those of their own class, nor do they believe it necessary to in any way change their usual mode of life while being treated.

Notwithstanding our advancement in point of knowledge as to the etiology and nature of the disease, the attitude of the laity toward it has undergone but little, if any, change for the better within the last half-century. People continue to look upon it in the light of a joke, and when a patient and his friends, having tried all the druggist and barber “reseets” and failed to stop the “running,” present themselves to a physician, they confidently expect him to guarantee a cure in a week or ten days; and the fact that such a patient will still have his disease after he becomes a nice quiet corpse does not in the least diminish the number of exposures, nor lessen the use of quack nostrums for its cure. As a class, the most prolific disseminators of the disease are the demi-monde. In former times the mention of them suggested the populous city, and inmates of houses of prostitution; not necessarily so now. They are everywhere: in houses, factories, workshops, printing establishments, on the street, and even in overland caravans encamped on the environs of the unsuspecting country village, and industriously plying their trade in rural highways, at ruinously low prices, in every part of the globe where man is found; and who is mathematician enough to compute the number of links which each year forges into this endless chain?
The dissemination of this disease is not infrequently sanctioned by physicians—through ignorance, let us hope—in the following manner: When a complaint is made against an inmate of a public house, her first thought is to "square herself." With this sole object in view, she seeks some obliging practitioner who for a paltry consideration will make a very superficial examination and give her a written certificate pronouncing her free from any venereal disease, etc., and in the majority of such cases the man whose name is subscribed there-to never possessed a microscope, nor never looked through one half a dozen times in his life. Armed with this bit of paper, she posts it in a conspicuous corner of her dressing mirror, and triumphantly exhibits it to each of her subsequent callers, and tells them how basely she has been slandered. What shall we call this bit of paper? Simply a license for wholesale gonorrheal infection; and the number of victims it will assist in securing, and the amount of misery that it will entail, God only knows.

As to the best methods of treatment of this disease, this paper has but little to offer. If anything in the nature of a specific in either remedy or method, or both combined, has been discovered, I am free to confess that I do not know of either the one or the other. Furthermore, should such a specific be discovered or devised, and become known to the laity, its announcement would herald an increase in the number of infections; on account of the security thus engendered greater indulgence would be encouraged. As before intimated, our greatest hope for the diminution in the number of the victims lies in the education of the laity to the fact that it is an incurable disease; nor are we so wide of the truth when we so affirm it. Prevention, then, being our chief reliance, the query at once presents itself: How? Can it be answered by the words, "legislative enactment"? Not altogether. Of course, all legislation hitherto has been only half a law, on account of its having for its object the regulation of the female prostitute only. There should be stringent laws governing all illicit intercourse, and all parties indulging in the same. Both ap-
Applicants for marriage license should be compelled to furnish clean bills of health from unimpeachable medical authority. Prostitution should be strictly confined to licensed houses, and all inmates thereof should be under strict and constant medical supervision. Not only should the female prostitute be compelled to furnish authentic certificates at least twice a week as to the entire absence of venereal disease, but equally exacting requirements should be demanded of every male prostitute each and every time he presents himself for entertainment at any of the houses. These laws, rigidly enforced, would almost eradicate venereal disease within the time of one generation.

There is, however, one serious obstacle to the success of this method, and that is its utter impracticability. There is at present nothing to encourage the hope that any such laws will ever be enacted, and, if enacted, they would not be enforced. Hence morbus venereus is an ever-increasing menace to the human family.
ELEPHANTIASIS—REPORT OF A CASE.

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Elephantiasis is a non-contagious disease, characterized by recurrence of febrile paroxysms, attended by inflammation and progressive hypertrophy of the integument and areolar tissues, chiefly of the extremities and genital organs, and occasionally by swelling of the lymphatic glands, enlargement and dilatation of the lymphatics, and in some cases of the coexistence of chyluria, and the presence in the blood of certain nematoid hematozoa, together with various symptoms indicative of a morbid or depraved state of nutrition.

The disease is endemic in the West Indies and parts of Asia and Africa. It occurs sporadically in regions where the endemic forms do not exist. In North America it is seen only in its sporadic form and is a very rare disease. Elephantiasis affects both sexes and persons of all ages and conditions of life. No race is exempt, but it is much more frequent in dark than in fair races, and more men suffer from it than women. It occurs at all ages, but is most common in adult and middle life and is comparatively rare in young children and the aged. Of the intimate nature of elephantiasis nothing satisfactory is known. The disease is evidently of an inflammatory character, but how this is brought about we are entirely ignorant. It has been supposed to be owing to an obstruction of the principal veins of the affected parts, impeding the return of the blood, and thus creating congestion and irritation, followed by plastic exudation in the interstices of the cutaneous and connective tissues. From the fact that attacks of erysipelas not unfrequently precede the outbreak of elephantiasis, it has been imagined that the disease is dependent on the disturbance which it occasions in
the nutritive and secretory functions of the parts. Others, again, have been led to conclude that the malady is an inflammation of the lymphatic vessels, attended with plastic deposits within and around these vessels, and in the lymphatic glands, whereby their caliber is choked up, and their contents are prevented from discharging themselves into the thoracic duct. This view is plausible, for it comprises all the cardinal elements of a consistent theory, which the others do not. That there is serious mechanical obstruction of some kind or other is unquestionable, and we know of none that would be more likely to produce such a result than compression of the lymphatic vessels. Elephantiasis is generally considered to be non-hereditary; still the case I am about to report gave a history of her mother and sister both being affected with the disease.

The lady was 64 years of age; white, in poor circumstances, and had always worked hard, supporting herself by doing chores and taking in washing. She lived in a small town in the central part of Pennsylvania, in a mountainous district, where malaria, which is often associated with the disease, was practically unknown. She said her left limb had been swollen for over ten years, but, as she had never suffered much, she did not deem it necessary to consult a physician. The disease was first noticed around the left ankle, and kept progressing up the limb until, when I first saw her, the entire left limb, as well as both lips of the vulva and the inguinal glands, were greatly hypertrophied. The left limb was not only enlarged from the foot to the groin, but enormously increased in weight and consistence. It felt heavy and cumbersome, was hard, dense and unyielding, and as rough as the leg of the animal from the resemblance to which it has derived its name. The surface of the skin was fissured and tuberculated and much darker than normal. There were several deep ulcers in the fissures above the left ankle, from which oozed an offensive yellowish lymph-like fluid, very much resembling chyle. However, there was very little necrotic tissue and the ulceration did not become extensive
until three years later. The fever and pain were of a paroxymsmal nature, occurring about once in three or four weeks, and always preceded by a mild erysipelas rash over the face and trunk. The disease appeared to remain almost stationary in the left limb, but now pea-sized nodules appeared in the skin on the calf of the right leg. The disease spread rapidly in the right limb, and in two years the circumference of the right limb below the knee was over 20 inches. The circumference of the calf of the left limb was 30 inches. Her general health remained good, but she was able to walk only by using stout canes, on account of the enormous weight of the legs. I now removed from that locality and the patient fell into the care of another physician. Two years later I wrote to him and asked him to secure photographs of the case. I am sorry the entire limbs are not shown on the plate, as the enlargement of the left thigh was enormous. You will notice on the photographs that extensive ulceration of the left limb has taken place, which I think could have been prevented by proper antiseptic local treatment. The patient died about a year and a half after the photographs were taken, from exhaustion, due, no doubt, to the excessive ulceration. Richards says, "the average duration of the disease, as deduced from the observation of 636 cases, was 11 1/2 years. In this particular case the disease lasted about 17 years. It appears, therefore, that elephantiasis has little influence in shortening life. I concluded the case would be interesting to report on account of both limbs being affected and the disease extending up to the groin and vulva. If this condition is not absolutely rare, it occurs sufficiently seldom to arouse more than ordinary interest."
What we mean by suppurative cases are those in which inflammation of a part results in the formation of pus, of breaking down or destruction of a portion or all that part. The subject is a large one, none of the tissue or organs of the body being exempt. The general subject, suppuration of different parts of the body, includes too much to undertake to discuss it all, so for this occasion I wish to call your attention to inflammations of the parotid gland which result in suppuration.

Now, before calling your attention to the pathological processes leading up to or causing suppuration of the parotid glands, I wish to report a few clinical cases in point in order that we may make our remarks on the different pathological conditions as actually occurring in specific cases.

Case 1.—I was called in consultation to see Mrs. A., aged about 32 years, married; has three children. She developed fever after having a traumatic injury of the fundus of the womb, which caused suppurative process of same, extending to the mesentery of the bowel. This lady had a severe chill, and convulsions, for which I was called to see her. Two days thereafter the temperature was 104, and she was delirious. On examination, the region over the parotid gland was swollen and tender. Two days thereafter the patient had another violent convulsion, and examination disclosed swelling in the other gland. I will state here that swelling and edema were not confined to the gland alone, but included all the anatomical parts in immediate proximity, the skin being so much involved that we thought it suppurative erysipelas. But this
was eliminated by incising the part freely. We found the parotid gland all broken down, almost complete destruction of same having taken place. That is, the entire thickness of the skin was involved in the inflammation, but the suppuration was confined to the capsule and the gland. The bacterial examination of the pus revealed staphylococci only.

Case 2.—Miss M., aged 19, single, American; family history good. She was of a rather delicate build, but had been reasonably healthy all her life. On coming to the city to visit the exposition was seized on the way with abdominal cramps, and frequent bowel movements. When I was called to see her she was having intense griping pain, and considerable blood was found in her discharge. A diagnosis of acute dysentery was made, and remedies to relieve same instituted. The next day I found her temperature down to 101, pulse 95, griping pains better, and less blood in the discharge from the bowels. The third day I found her bowels better, discharges less frequent, but the temperature higher, and slightly delirious. On examination, I found no tympanites in the abdomen, but swelling over the region of the parotid gland, so I prescribed an antiseptic lotion and the ice-bag to be applied to same. On my next visit I found the patient perfectly delirious, the region over the left parotid enormously swollen, and I thought I could detect fluctuation. I also noticed some swelling over the region of the right parotid gland. After consultation with a brother practitioner, we decided to open up the parotid, which I did, and found about a teaspoonful of pus. The capsule of the gland appeared to be invaded by the suppurative process. The gland was drained and dressed; the patient remained delirious, however, until the other gland was incised and drained, the condition of which was about the same as the previous one. The next day I found my patient perfectly rational, though both glands were discharging freely in spite of all curetting and irrigating with antiseptic solutions. This suppuration continued until it seemed that all the gland substance had been thrown off in the form of pus. The convalescence was slow but perfect.
Case 3.—Mr. H., aged about 60; had always been healthy, excepting one attack of pneumonia some years ago. Was called to see him in consultation with another physician, and found a latent pneumonia on one side, some tenderness and swelling over one of his parotids, and in perfect delirium. Sent him to the hospital, opened up the parotid gland two days afterward, curetted out about a teaspoonful of pus and then irrigated thoroughly with an antiseptic and drained. The suppuration from this gland continued, however, until it seemed that all the gland had broken down. When the incision was made I found the capsule of same greatly thickened and infiltrated. After the discharge became free from the gland the patient's delirium all passed off, and I was told by the physician in charge that the convalescence from pneumonia was rapid. I will state that in this case the bacteriological examination revealed both the pneumococcus and the staphylococcus, but the pus secured was several days after the primary opening was made, and the staphylococci may have been, and I believe were, carried in by dressing same after the primary incision.

Case 4.—Mr. X., aged about 25 years; had always been healthy up to about three months ago. When I saw him in consultation with another physician who had just been called to the case they told us that about three months previous to that time he took the measles, after which he had malaria and typhoid fever, and two weeks previous to the time we were called he took the mumps, from which he was then suffering. On examination, we found him comatose, his neck and head swollen beyond description. There was fluctuation extending from the temple to the clavicle. When we incised the part the patient was so comatose no anesthetic of any kind was needed. The amount of pus was something enormous—must have been over a quart. The jugular vein was broken down, and we were able to get casts of thrombi extending in both directions in same. There was a thrombus in the carotid artery, the external, internal, and common, extending to the clavicle or its origin on the proximal side, and
as far as it was possible to palpate distally. It is needless to say that this case did not rally from his comatose condition, although we cleared out the part as best we could, and applied a large absorbent dressing, after providing free drainage. Unfortunately, the sample of the pus secured was lost, and no bacterial examination was made.

Case 5.—Miss X., aged about 22; family history fairly good; looked fairly healthy. Her attending physician said that about a month previous to that time the swelling was first noticed and the enlargement seemed to be progressive up to that time. The attending physician was inclined to maintain that it was probably malignant or tubercular. After keeping the case under observation for some ten days, we thought we could detect fluctuation. But there was no edema of the skin or proximal tissues. We determined to incise and curette the part, and at the same time secure enough of same by which a diagnosis could be made. This we did, and found the capsule of the gland greatly thickened, and infiltrated in the center of the gland substance. We also found about a half dram of a semi-fluid resembling pus. The specimen secured, which was a part of the gland and capsule, was pronounced by a pathologist to be sarcomatous. But after carefully dressing same by her physician and removing all the broken-down tissue, resolution was completely established, showing, to my mind, that it was purely a supplicative process, the great amount of inflammatory infiltration excluding tuberculosis.

Case 6.—Mr. X., aged 18; developed swelling over the left side of the face over the region of the parotid gland; pain was intense, swelling great; complained in two days of pain and swelling of the testicle, which greatly increased during the next two days. The diagnosis of mumps was made. Four days after the inflammatory process began in the gland, I thought I detected fluctuation in the gland. The patient had become perfectly delirious. I incised the parotid about one-third the circumference of the gland, when some pus escaped. Next day the patient was perfectly rational, and
seemed to be suffering no pain. Temperature had gone down to 101, swelling had greatly subsided, but there was a free discharge of pus through the opening. This continued for several days, and gradually recovered.

The above six cases about cover the different pathological conditions causing suppuration in the parotid gland. By looking through our text-books it is surprising to see how little is said about the pathology of inflammatory processes of this organ, and the histology of same is also given but little space in the books to which I have had access. In order to arrive at any conclusions, however, as to the exact pathological change taking place in the gland to produce a suppuration, it is necessary to have a general knowledge of its histology and anatomy. And while it is not my purpose to go into an exhaustive discussion on the pathology of suppuration of the parotid gland, I do wish to make a few remarks on the pathological conditions found in the clinical cases to which I have just called your attention, and before doing so I wish to refresh your memories by saying that this is what we call a racemose gland composed of lobules. This gland is surrounded by a capsule of connective tissue from which trabeculae pass inward, separating it into lobes. From these smaller trabeculae are given off, dividing the lobes into lobules. From these still smaller ones—interlobular connective tissue—separate the alveoli themselves. Within this connective tissue the nerves, the lymphatics, and the blood-vessels pass, supplying all the entire structure. The function of this gland is the discharge of saliva to the mouth through Steno’s duct. Within the capsule of this gland are found some lymph-nodes which are formed by the junction of lymph-channels from the deeper structures of larynx and posterior nares, from the cheek and the region about the eyes and head, and if there be lymph-channels from the brain perhaps from them also.

Now, in the inflammation of the parotid gland in all the cases that I have reported which resulted in suppuration—which is always due to invasion by pathological germs—from
whence comes the infection? Does it come through the lymph-channels supplying the lymph-nodes in the gland, thereby starting a focus of suppuration in the same that extends to the gland proper and to the capsule? Does it start from the mouth, extending up Steno’s duct to the acini, and thence to the interlobular connective tissue, and then to the capsular tissue? Or does it start in and around the capillaries of the smaller blood-vessels, supplying their connective tissue, and from which the epithelium in the acini is nourished?

To the first question on the focus of suppurative starting from the lymph-node, the correct understanding of the lymph-channels from these nodes as outlined above at once says, No; it would not be possible, as there are no lymph-channels from the mucous membrane of nose, mouth, or throat leading to nodes inside the parotid capsules, so that avenue, which is frequently the source of other infections, must be rejected on anatomical grounds.

The second, which is most generally supposed to be the source of infection, looks more reasonable, that the pathogenic organisms find their way up Steno’s duct and set up inflammation that extends to the trabeculae and by continuity to the capsule, all resulting in suppuration. This, as I stated, looks feasible; but let us examine the clinical cases just reported and see if we think it probable.

First, we have, as reported in Case 1, where the primary lesion started in the fundus of the uterus, and then developed suppuration of both parotids, and later in a metastatic abscess in the broad ligament, causing death. This case by post-mortem was shown without doubt to be a case of septicopyemia.

In Case 2 the primary lesion was in the bowel, and later there resulted suppuration of the parotid glands. This case might have been infected in the mouth by the same organisms as infected the lower canal; but we also know that septicemia frequently accompanies this disease, in fact always does, and
in severe forms metastatic abscesses may be found in liver, lungs, etc.

In Case 3 the primary lesion was in the lungs, and the suppuration in the parotid was secondary, coming on several days after the pneumonia. Now we know that the pneumococcus gets into the circulation and has been demonstrated time and again as being the cause of secondary foci of suppuration in other portions of the body. It also looks feasible that the germ might find its way up the duct to the gland; but why should it be so late to manifest itself?

Case 4 had previously had measles and typhoid fever. We all have had cases of secondary suppurations, due to septicemia following typhoid fever, in other portions of the body; and is it not equally probable that suppuration should occur in the parotid gland from the same cause and in the same way, viz., by the blood-supply to the part?

Now, as to the case of mumps that developed an enormous swelling of the parotid gland, and also developed a swelling of the testicle as well, that suppurated. I know there is a feeling, or a superstition as it were, that there is a great sympathy existing between different organs of the body, but to be candid, have any of us ever seen, to our knowledge, a case of inflammation or injury of an organ cause a sympathetic destruction of another organ whose function is entirely different? It looks to me to be preposterous, and without a scientific premise. On the other hand, when we follow the scientific investigations of Comby and others, are we not satisfied that if mumps is not the result of a septicemia of its particular germ, it is a focus from which septicemia may have its origin. If it be due to septicemia, it has its origin from the circulation as its primary source. In favor of this last theory we have the long incubation period of twenty odd days, and which is greatly against the invasion along Steno's duct. Steno's duct is not a long one, and should not require so long a period for its invasion. Against such a theory we do not have a closure of this duct before we have an enormous swelling produced in the gland, and even then the function
of the duct is frequently not destroyed. If there was sufficient invasion of the acini of the gland for the inflammation to extend clear to the capsules of same and even to the surrounding contiguous structures, including the skin, as generally occurs, would there not be in every case a complete and permanent obstruction of that duct, destroying its function?

Now let us see what we find on incising a suppurating parotid gland. In the clinical cases reported in this paper I found all, excepting two, viz., the one taken for sarcoma, which proved to be a chronic suppuration, and Case 4, where all the parts were broken down, except the skin, the following conditions: Infiltration of skin and connective tissues; adhesion of all the surrounding parts; the capsule enormously infiltrated; the trabeculae greatly inflamed, and breaking down or suppurring, together with suppuration of the lobule proper. There is not suppuration in the lobules sufficient to justify the belief that the acini were the focus from whence came the inflammation.

Again, let us look and see what information we can get from a microscopic examination of the part. In one of the cases reported I succeeded in opening the gland just as suppuration began to occur, but little pus was removed, and from the specimen I could see all the signs of inflammation taking their origin from the capillaries and smaller blood-vessels, viz., there was an infiltration of leucocytes outside of same, with a proliferation of the fixed tissue-cells. This also, to my mind, was further proof of the inflammation coming from the circulation, and not an extension from the acini or the duct.

As to the best mode of treatment to be given a case where we have reason to suspect suppuration, I believe there is no choice. In other words, the proper and only thing to do is an early incision. I say early, because I have seen the result of delay as reported in Case 4. I say early, because in every case that I have seen incised as soon as pus had formed there was complete clearing up of the delirium, which invariably
existed, inside of forty hours. I say early, because there is not the amount of destruction of the glandular substance when free drainage is established. I would also insist on early incision, as we thereby relieve pressure, stop pain, and prevent a systemic absorption of the septic matter on account of the enormous tension to which the part is subjected, and which is of itself the principal cause of septic infection.

As to the incision to be made, that will depend somewhat on the character of the swelling; that is, the stage of the suppuration. If you incise the part early, as soon as pus is formed, it is not necessary that it be large. I am in the habit, ordinarily of making my incision about an inch or an inch and a half down to the gland, incising the capsule and extending the incision in the capsule a little beyond my skin incision. This lays open the capsule for almost half its circumference, and allows same to extend to almost any size. I also incise the gland down to the center of same; of course using care not to wound any of the important vessels or nerves. After the part has been incised, it is very necessary that we use all precautions in our after-dressing to see that the drainage channel is kept open, for, as I indicated in the paper at another place, the suppuration extends around the lobules in the reticulum, and no matter how much you curette and irrigate, it will continue to suppurate and discharge for several days. So I prefer to incise gland freely, curette out all the formed pus that is accessible, and leave the part open for free drainage of pus not accessible by the opening, and to keep drained the forming pus that is sure to follow.

CONCLUSIONS.

1. Suppurations in the parotid gland may take place in any inflammatory disease.

2. Suppurations of parotid gland are generally, if not always, due to septicemia.

3. Septicemia is not necessarily due to the so-called pyogenic germ.
4. Cases of mumps where the testicle is involved are always suffering from septicemia.

5. Nearly all cases with acute suppuration of this gland are delirious.

6. All cases can be relieved of the delirium in twenty-four hours by early incision.

7. Where suppuration exists in the parotid, death will probably follow if no incision be made to relieve same.

8. The incision should be made to include almost half the circumference of the gland.

9. It is not necessary to curette more than is necessary to remove what pus comes into view, for suppuration invariably follows for several days thereafter.

10. Where incision is made early the function of the gland is restored.

DISCUSSION.

Dr. Roberts—I wish to emphasize the importance of the statement the Doctor made in regard to erysipelas in one of his cases. It calls to my mind a case which I saw last spring, of suppuration of the parotid gland. This was operated on and a small amount of thin sanguineous pus obtained, which showed under the microscope only the streptococcus. The next day a small red spot appeared at the margin of the incision. This rapidly spread until it extended across the entire side of the head as a serious case of erysipelas. I think this an interesting case, as tending to prove the identity of the streptococcus of erysipelas with that of ordinary suppuration, and also from the fact that while cases of suppuration following erysipelas are of ordinary occurrence, cases of erysipelas following suppuration of a gland or other deep structure, as this did, are rare indeed. I have seen several cases of suppuration of the parotid gland originating from this same cause, namely the streptococcus, and for that reason it impressed itself on me as important.
HOW SHALL WE MANAGE OUR CASES OF MEMBRANEOUS CROUP?

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Some months ago I was called in consultation to see a child of about three years said to be suffering from an attack of simple croup. The patient had been sick for several days, and I found him greatly prostrated, with respiration so impeded that suffocation seemed to be imminent. In fact the symptoms were similar to those one would expect to find in a typical case of diphtheria, except that no membrane could be seen in the throat, and the cervical glands were not affected. To the attending physician I gave the opinion that the disease was what is usually called membranous croup and probably diphtheric in character, and further, that the child should be quarantined, but this suggestion was not acted upon. Intubation was suggested as the only means of saving the life of the child, but this, too, was refused, and the following day the child died. A day or two later another child in the same family sickened in a similar way, but after a severe illness finally recovered. A few days later the child of a neighbor which had been allowed in the room with the sick children took the same disease and died after a few days' illness. In none of these cases was there any membrane visible in the throat, and no bacteriological examination was made. How should these cases have been managed? It is admitted that there was no positive proof that either of the cases was diphtheric in character. But do not the symptoms and severity of the disease, together with its apparent contagiousness, point strongly in that direction?

It may be urged that a bacteriological investigation should have been made, which is no doubt true; but it must be re-
membered that such examinations cannot always be made with accuracy, especially by the general practitioner remote from the larger cities. I think no one will claim that this test is a positive one in diphtheria, for we know that the Klebs-Loeffler bacillus is sometimes found where there is no diphtheria, and that it is not always possible to find it in cases of true diphtheria. Some very good authorities believe that this disease is sometimes the result of a mixed infection.

Clinically there is considerable difference between true croup and diphtheria, but the distinction is far from being a positive one. In croup the constitutional symptoms are not usually prominent, the cervical glands are not often involved, the kidneys are seldom affected, and paralysis is an unusual sequel. But these symptoms may all be present in membranous croup and may all be absent in diphtheria. Furthermore, it is generally admitted that diphtheria is more contagious than true croup.

If it is claimed that the germ causing the two diseases is the same, how shall we account for these differences? It seems clear that the explanation is found in the fact that the pharynx and larynx differ greatly in their histological structure. The pharynx is lined with pavement epithelium and is supplied with numerous absorbents, while the larynx is covered with columnar epithelium and has few absorbents, so that in diphtheria the toxins produced by the disease are readily absorbed, and in croup they are absorbed but slowly. Finally, the membrane is much more abundant in diphtheria and is more readily thrown off, thus accounting for its greater contagiousness.

Admitting all these clinical differences, the duty of the physician is none the less imperative to give his patient the benefit of modern treatment, and the community the benefit of modern means of protection.

Most authorities agree that the cause of the two diseases is the same, yet a great many physicians and a large majority of the laity believe that they are entirely distinct in all respects, and strenuously maintain that membranous croup is
not contagious. In a paper before this society three years ago, Dr. McClanahan cited numerous prominent authorities to prove the identity of the two diseases, and while I have not made a list of those who have contributed to this subject since that time, yet all I have read bearing on the question has confirmed me in the opinion that the two diseases should be managed in the same manner.

It seems to me the time has come when the name membranous croup should be banished from our list of diseases. I use it here only to condemn it. In its stead let us use the term diphtheric croup, or better yet, laryngeal diphtheria.
## List of Members of the Nebraska State Medical Society

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