W. B. ELY, M. D.,
President Nebraska State Medical Society, 1901-1902.
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.
OFFICERS AND COMMITTEES, 1902-3.

OFFICERS.
A. B. ANDERSON, Pawnee City ......................................................... President
A. D. NESBIT, Tekamah ................................................................. First Vice-President
B. B. DAVIS, Omaha ................................................................. Second Vice-President
A. D. WILKINSON, Lincoln .................................................... Recording Secretary
H. W. ORR, Lincoln ................................................................. Corresponding Secretary
J. L. GREENE, Asylum ................................................................. Treasurer

COMMITTEES.
ARRANGEMENTS—M. H. Garten, Chairman, Lincoln; C. C. Moyer, Lincoln; E. J. Angle, Lincoln.
CREDENTIALS—A. D. Wilkinson, Chairman, Lincoln.
First Congressional District—W. H. Wilson, Table Rock.
Second Congressional District—J. P. Lord, Omaha.
Third Congressional District—F. A. Long, Madison.
Fourth Congressional District—I. N. Pickett, Odell.
Fifth Congressional District—J. D. Hare, McCook.
Sixth Congressional District—H. S. Bell, Kearney.
NECROLOGY—A. D. Wilkinson, Chairman, ex officio, Lincoln.
First Congressional District—A. Fitzsimmons, Tecumseh.
Second Congressional District—W. O. Bridges, Omaha.
Third Congressional District—Thomas Grant, North Bend.
Fourth Congressional District—G. L. Pritchett, Fairbury.
Fifth Congressional District—W. B. Kern, Hastings.
Sixth Congressional District—H. D. Boyden, Grand Island.
GRIEVANCES—J. V. Beghtol, Chairman, Kearney; R. C. McDonald, Fremont; C. L. Burchard, Falls City.
MEDICAL LEGISLATION—H. Gifford, Chairman, Omaha; D. J. Reymish, Burchard; J. A. Andrews, Eustis; O. Grothan, St. Paul; Claude Watson, Nebraska City.
AUDITING—G. H. Brash, Chairman, Beatrice; W. F. Conwell, Neligh; J. S. Butler, Superior.

CHAIRMEN OF SECTIONS.
PRACTICE OF MEDICINE—W. L. Ross, Omaha.
OBSTETRICS AND GYNECOLOGY—Georgiana Grothan, St. Paul.
NERVOUS AND MENTAL DISEASES—F. A. Butler, Harvard.
ANATOMY AND PHYSIOLOGY—H. M. Hepperlen, Beatrice.
OPHTHALMOLOGY AND OTOTOLOGY—G. H. Bicknell, Omaha.
MEDICAL JURISPRUDENCE, CHEMISTRY, AND TOXICOLOGY—C. S. Minnick, Palmer.
MATERIA MEDICA AND THERAPEUTICS—W. F. Milroy, Omaha.
PATHOLOGY AND HISTOLOGY—T. P. Livingston, Plattsmouth.
PUBLIC HYGIENE AND MEDICAL LEGISLATION—E. M. Whitten, Nebraska City.
DERMATOLOGY—H. C. Sumney, Omaha.
ARYNGOLOGY AND RHINOLOGY—J. A. Haggard, Nebraska City.
ASBIS OF CHILDREN—I. C. Philbrick, Lincoln.
PROCEEDINGS.

MORNING SESSION.

TUESDAY, MAY 6, 1902.

Meeting called to order by the president, Dr. W. B. Ely, at 11:00 a. m.

Rev. Fred Hatch, of Omaha, delivered the following

ADDRESS OF WELCOME.

It is my privilege and honor to say a word of greeting to another profession closely allied with my own, and very closely allied to the interests of this broad commonwealth. When we want to see a doctor we want to see him badly, but when they want to see us, we are apt to be reticent. This difference is a very interesting theme for study. Why it is that men and women are willing to take something and give nothing in return is beyond my reasoning. It is human nature to try to get something for nothing.

Your coming here and paying your own expenses in the interest of that profession, without which this world of ours and this state of ours would be a dreary sort of a place indeed, shows how much you care for it. I cannot give you a welcome like the mayor of the city, who can throw open the city to you and who would say you could do anything you please. Of course, these things have no interest to you, for you are here for business. It gives me a great deal of pleasure to see gentlemen of business with such a program as this. It shows the intellectual directions of the day and your ability to absorb good things.

Our profession is on the same basis as yours; we share the rude jokes and jests of the daily paragrapher.
and we have a good deal of sympathy with you for all the jokes that are perpetrated.

But coming down to your own. For years, for decades, it has not been possible for a physician to receive the credit he deserves. I count it a great thing in the last years there has come a very pointed example of what the physician has been capable of doing, but had just missed his chance. An island in the southern sea has long been a menace to our whole gulf coast. It has been the home of pathogenic bacteria. It has been the home of all kinds of germs, politically and morally. A physician has changed all this, and not many years hence the title of general will not be able to overswamp the title of doctor. It would be a good thing if the doctor of the community could be the chief magistrate of the community. I am glad to welcome you here because of what you have done. It is you that have to do with sanitation. You are a conservative profession. It takes time to get your mind made up. When once it is accomplished, what marvels have been attained by this medical profession! I rejoice in the progress of the eastern states and its coming to the west and to our own state, making Nebraska the sanitarium of this broad republic of ours. Last night I was talking with a number of clergymen. They all said that they had found Nebraska one of the most healthful of states. As I look upon our state board of health, I see how much there is due to the medical profession. You may see fit to take up an interest that lies nearer our own home; that is, promoting a law which will make it necessary for applicants who intend to be married to procure from their physician a certificate which will at least show that there is no probability of a transmission of apoplexy, insanity, scrofula, or cancer. They may well have the aid of your powerful influence.

One of the most necessary characteristics of the physician must be a cheerful disposition. I note here that you have one paper on Suggestion and Auto-suggestion. These things are coming to the front on the psychical
side. Of this I am certain, it takes a great strain upon the mental and nervous make-up of the gentleman who but owns self to carry a smile into all the homes which you visit. It takes a great deal of grace to look upon the face and form of a woman who has been the victim of the brutality of a man, which is worse than death itself. It is hard to hold one's self in such a case and upon every heart and every conscience the effort to keep your mouth shut is very difficult. What helps the physician is to let the happy side-lights shine on these sad cases.

There will not be much said of your meeting, but the influence of what you will do will go far beyond the noisy conventions which are frequently held in this city. There is nothing on our part to make us seem that we are the whole thing. Remember that our city is a part of your own domicile. The world belongs to you and we are glad to open our city to you.

I greet you and say "welcome," and I also say "well done," and I hope that in the days to come you will receive adequate return for your professional trials for all that comes to man. Again I say, welcome.

Dr. J. L. Greene, of Asylum, responded in behalf of the society.

The report of the committee on credentials was called for, but there being none of the committee present, the report was deferred until further notice.

Moved and seconded that the reading of the minutes be dispensed with. Carried.

Dr. J. P. Lord, of Omaha, chairman of the committee on arrangements, reported as follows:

REPORT OF THE COMMITTEE ON ARRANGEMENTS.

Your committee on arrangements have provided for Tuesday evening a theatre party for the doctors, their wives and friends. For Wednesday evening, after the business session, the doctors will participate in a smoker in the meeting hall. The committee had thought it desirable to have the place of meeting within this
building. One reason why so small a room was selected was, that some of the larger rooms and more public ones are situated so near a noisy street that it would be very difficult for the reading of the papers to be heard. In regard to the expense of the trip into Omaha we have made arrangements that a railroad charge of a fare and one-third be placed upon the members.

The ladies of the party have been provided for as regards entertainment. They will view the art collection at Lininger's Hall and also the art collection at the Public Library.

Dr. A. D. Wilkinson, of Lincoln, recording secretary, then read his annual report, as follows:

**ANNUAL REPORT OF RECORDING SECRETARY.**

My report is brief. The membership of our society remains about the same; we have between 350 and 400 members on the list. I am informed by Dr. Orr, of the Western Medical Review, that he is sending out 250 copies of the transactions, showing that there are 250 in good standing. The reorganization of the society should at least increase the membership to 1,000.

In February I sent return postal cards to every county in the state and have received replies from sixty. The postal, after giving town and county, had the following questions:

"1. How many physicians in your county?
"2. How many regular physicians in your county?
"3. How many physicians in your county belonging to the state society?
"4. How many physicians in your county are eligible to membership in county and state societies?
"5. Is a county organization possible in your county?"

Of the sixty responses, eighteen said a county organization is possible, fourteen regarded it as possible, thirteen "I hardly think so," and fifteen said "No." I noticed among the possibilities that the number of phy-
sicians were about nine to twelve, and some of those who answered "No" have fifteen to twenty physicians in their county with a total membership in the state society of only five or six. From this report I infer that we could have a good working organization in at least sixty or seventy counties in the state, and I hope that the subject will be carefully considered in our business session Wednesday evening.

FINANCIAL REPORT.

1901.

RECEIPTS.
May 9, Received from treasurer for expenses of office.$100 00
May 7, 8, 9, Received membership fees.................... 265 00
Received pro rata from eclectic, homeopathic, and pharmaceutical secretaries ..................... 12 00

1901. DISBURSEMENTS.
May 9, Cloth sign........................................ $1 00
May 9, Merchandise, Harry Porter.......................... 80
May 28, Mailing ............................................... 2 50
Dec. 16, Mailing, Wilson & Hall............................ 75

1902.
Jan. 13, Envelopes and circulars............................ 6 00
Mar. 1 and 15, Printing and postal cards.................. 8 75
April 3, Postal cards........................................ 3 25
May 3, Programs ............................................. 22 50
May 5 to 8, Stamps, express, and incidentals............. 40 82
May 5, Memo.-heads .......................................... 2 75
May 6, Secretary's check to balance ........................ 22 88

1901. $112 00
May 20, Paid to Dr. Greene, 53 membership fees........ 265 00

$377 00

Respectfully submitted,
A. D. Wilkinson, Secretary.

Moved and seconded that report of secretary be adopted and referred to auditing committee. Carried.

Dr. H. W. Orr, of Lincoln, corresponding secretary and librarian, read his annual report, as follows:

REPORT OF CORRESPONDING SECRETARY AND LIBRARIAN.

Mr. President and Members of the Society: In submitting this report I wish to say that practically all correspondence with other societies, except such as pertains directly to the library, has been conducted by
our general secretary. My report, therefore, resolves itself simply into a report of the progress of the library for the year and its present condition. In accordance with a resolution adopted at the last meeting, I received on May 21, 1901, from Dr. J. L. Greene, the treasurer, the sum of $30. This amount has been expended as follows:

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>May 21, 1901, Received of Dr. Greene</td>
<td>$30 00</td>
</tr>
<tr>
<td>For catalogue supplies (cards, etc.), and assistance in cataloguing</td>
<td>$16 85</td>
</tr>
<tr>
<td>For stamps and stationery</td>
<td>$9 62</td>
</tr>
<tr>
<td>Express and delivery</td>
<td>$2 50</td>
</tr>
<tr>
<td>Balance on hand</td>
<td>$1 03</td>
</tr>
</tbody>
</table>

Total: $30 00

Until one year ago the library had no shelf arrangement and no catalogue, but now has both and presents a very attractive appearance. The bound volumes have been carefully arranged and catalogued and all unbound volumes and pamphlets carefully grouped in pamphlet cases. The library now occupies sixty linear feet of shelf room and consists of about 250 bound and 425 unbound volumes, making a total of 661 volumes.

It must be remembered that many of these unbound volumes are volumes of state society transactions and are of equal importance with those which are bound. During the year there have been added to the library thirty bound and six unbound volumes of state society proceedings, and a number of other unbound volumes which cannot be mentioned here.

State society transactions have been added as follows: Alabama, California, Colorado, Louisiana, Nebraska (seven volumes), New Hampshire, New Jersey, New York, New York Medical Association (five volumes), Ohio, Pennsylvania (four volumes), Tennessee, Texas, Vermont, Washington and Michigan State Board of Health (two volumes). Unbound volumes of the following states have been received: Arkansas, Maine, Massachusetts Medical Communication and West Virginia.
During the year, as a result of special correspondence, I have been able to add to the library about 500 numbers of current medical journals, which, when classified and bound, will make a valuable addition to the contemporary literature of the library.

I have two recommendations of considerable importance to make to the society at this time. The first is that the sum of $150 be granted for the purpose of adding to the library or of improving by binding, etc., the material now on hand. The second recommendation is of even greater importance. It is that the library shall be removed from its present abiding place in the University library building and placed in the new Carnegie library at Lincoln. A room can probably be secured which is one of several to be devoted by the board to so-called special libraries, and every facility in the way of shelving, cataloguing, binding, etc., can be secured with a minimum of difficulty.

As an inducement to accept this proposition, I have to submit that already the library of the late Dr. Luther J. Abbott has been offered as a contribution to the state society library if it can be placed permanently in this location. The room where it is to be placed is large enough and the facilities such that it might even be used as a meeting place for the Nebraska State Medical Society. The library is at present a very creditable beginning, but in its present location and under its present conditions is of very little value, because it is accessible with difficulty on account of its location in the library building. These defects could be largely remedied by the means suggested and I believe the beginning made for a library which would be of use and a credit to our society.

All of which is respectfully submitted,

H. W. Orr,

Corresponding Secretary and Librarian.

Moved and seconded report of corresponding secretary and librarian be referred to auditing committee. Carried.
Dr. J. L. Greene, of Asylum, treasurer, then read his annual report, as follows:

TREASURER'S REPORT.

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

1901.

May 3, To cash balance ................................ $443.66
May 20, To cash from Dr. A. D. Wilkinson, secretary, fees of fifty-three new members .................. 265.00
May 20, To cash from Dr. A. D. Wilkinson, secretary, unexpended balance of his 1900 expense appropriation 3.45

1902.

May 1, To cash collected from members on account of dues from May 7, 1901, to May 1, 1902............. 556.00

$1,268.11

1901. CONTRA.

May 20, Amount paid Order No. 15.............. $100.00
May 20, Amount paid Order No. 16.............. 100.00
May 20, Amount paid Order No. 17.............. 100.00
May 20, Amount paid Order No. 18.............. 25.00
May 20, Amount paid Order No. 19.............. 30.00
May 20, Amount paid Order No. 20.............. 17.10
May 20, Amount paid Order No. 21.............. 30.00
May 20, Amount paid Order No. 22.............. 5.00
May 23, Amount paid Order No. 23.............. 70.00
May 29, Amount paid Order No. 24.............. 11.23
May 30, Amount paid Order No. 25.............. 40.00
June 16, Amount paid Order No. 27............ 30.00
Sept. 10, Amount paid Order No. 26............ 150.00

1902.

May 1, Cash to balance ......................... 559.78

$1,268.11 $1,268.11

May 1, To cash on hand.......................... 559.78

Your attention is called to the fact that there remains unpaid about $200 of our last year's obligations, for which orders have not been presented, this being the amount due the Western Medical Review on account of the publication of the Proceedings; and incidentally, that the balance now on hand and unappropriated is but about $350, showing a falling off of almost $300 in two years.

This fact is mentioned for the reason that there is
now due the society from its members on account of unpaid dues about $400. I suggest that some action be taken to empower the treasurer to collect these unpaid obligations.

I now hand the president a cashier’s check, drawn by the cashier of the First National Bank of Lincoln, for the amount now in my hands belonging to this society.

All of which is most respectfully submitted,

J. L. Greene, Treasurer.

Omaha, Neb., May 6, 1902.

Moved and seconded report be referred to auditing committee. Carried.

The report of committee on grievances was called for, but there being no member of the committee present, the report was passed for the time being.

The committee on necrology were not ready to report. Referred to another time.

There being no further business to come before the society at the present time, society adjourned until 2 p. m.

AFTERNOON SESSION.

TUESDAY, May 6, 2 p. m.

Meeting called to order by the president. There being no business to come before the society at the present time, the reading of papers was begun.

SECTION ON SURGERY.

1. Tendon Surgery, A. I. McKinnon, Havelock. Discussed by Dr. B. B. Davis.


Dr. WILKINSON: Mr. President, will you call together the members of committee on credentials.
Only four of the members of the committee being present, Dr. F. E. Coulter, of Omaha, was appointed on the committee for the second district and Dr. J. G. Roberts for the fifth district. The committee retired to committee room.

4. The Best Suture to Use in Repairing Hernias, H. P. Hamilton, Omaha. Discussed by Dr. B. B. Davis, and closed by the essayist.


8. Some Practical Points in Rectal Surgery, R. D. Mason, Omaha. No discussion.


10. A Consideration of Local Infections, B. B. Davis, Omaha. Discussed by Dr. H. H. Everett.

REPORT OF THE COMMITTEE ON CREDENTIALS.

About twenty-seven names of applicants for membership were presented and recommended for affiliation, as follows: J. F. McNulty, Calloway; Amy Robinson, Lincoln; H. E. Burdick, David City; J. G. Smith, Wahoo; J. M. Mayhew, Lincoln; R. G. Henderson, Rulo; J. A. Wagner, Dawson; D. D. Leeper, Verdon; M. J. R. Ryan, Union; Wm. Pruner, Kennard; A. O. Peterson, Omaha; C. O. Rich, Omaha; Le Roy Crummer, Omaha; S. J. Byers, Snyder; A. P. Overgaard, Fremont; J. P. Feese, Franklin; C. Lucas, Glenville; W. S. Bellwood, Alliance; B. F. Bettelhence, Alliance; A. L. Muirhead, Central City; H. N. Morrow, Tekamah; G. A. Birdsal, Alexandria; A. J. Kaufman, Sutton; H. B. Lemere, Central City; C. F. Richardson, Omaha; F. C. Little, Bloomfield; C. B. Little, Bloomfield.

Moved and seconded that report of the committee on credentials be accepted and adopted. Carried.
Dr. J. P. Lord, of Omaha, offered the following:

The Omaha Public Library has the proceedings of the Nebraska State Medical Society from 1885 to 1891. It would be a good plan to secure these transactions and also a copy of the report of the library, which is issued annually.

Moved and seconded that this resolution be referred to library committee. Carried.

SECTION ON LARYNGOLOGY AND RHINOLOGY.

2. The Middle Turbinate, H. B. Lemere, Omaha. No discussion.
3. Three cases of Intra-Nasal Sarcoma, G. H. Bicknell, Omaha. Read by title.

SECTION ON OPHTHALMOLOGY AND OTOLOGY.

2. Ulcer of the Cornea in Smallpox, D. C. Bryant, Omaha.
3. Two Cases of Brain Abscess. F. S. Owen, Omaha. No discussion.

Society adjourned until 7:15 p. m., May 6.

EVENING SESSION.

TUESDAY, May 6, 1902, 7:15 p. m.

Meeting called to order by Dr. W. O. Bridges in the chair.

The program consisted in the reading of the president’s address.

Moved and seconded that the address be referred to a committee. Carried, and the following were appointed: Drs. A. D. Nesbit, Tekamah, chairman; R. Woods, Shickley, and H. W. Francis, Bancroft.

Society adjourned at 8:30 to attend theatre party at Orpheum Theatre.
MORNING SESSION.

Wednesday, May 7, 1902.

Meeting called to order at 9:20 a.m. by the president.

SECTION ON NERVOUS AND MENTAL DISEASES.

1. Auto-Intoxication, in Relation to Mental and Nervous Diseases, Jay G. Roberts, Hastings. Discussed by Drs. Aiken, Coulter, and closed by the essayist.


3. Cerebral Thrombosis, F. E. Coulter, Omaha. Discussed by Drs. Mayhew, Ross, and closed by the essayist.

PRACTICE OF MEDICINE.

1. Our Duties in Acute Infectious Diseases, A. D. Nesbit, Tekamah. No discussion.


3. Acute Suffocative Pulmonary Edema, Le Roy Crumner, Omaha. Discussed by Dr. Mayhew and closed by the essayist.

4. Rubbish in Medical Literature, J. Lue Sutherland, Grand Island. Discussed by Dr. Orr and closed by the essayist.

AFTERNOON SESSION.

Wednesday, May 7, 1902, 2 p.m.

5. Diagnosis and Treatment of Chronic Gastritis, A. O. Peterson. No discussion.


9. Smallpox and Vaccination, W. H. Slabaugh, South Omaha. Discussed by Dr. Mansfelde and closed by the essayist.

Dr. Wilkinson called for committee on credentials who reported as follows:

The following applications are recommended for membership: M. A. Ames, Sargent; C. O. Eigler, North Bend; J. L. Brannon, Greeley; R. H. Wolcott, Lincoln; C. F. Clark, Omaha; J. A. Cummings, Omaha; P. J. Waldron, Rapid City, S. D.; P. C. Smith, Swanton; J. A. Inks, Shelby.

Moved and seconded secretary be instructed to cast the ballot of the society for the applicants for membership. Carried.


Dr. Mansfelde was appointed on the auditing committee and the members retired to committee room.

14. Experiences with Some Unusual Cases of Appendicitis, W. O. Bridges, Omaha.

Moved by Dr. Bullard, that the discussion of the paper of Dr. Bridges be discussed jointly with that of Dr. A. B. Anderson. Seconded and carried.

15. Intestinal Obstruction, W. J. Pinkerton, Mead. No discussion.

16. Acromegaly, with Case and Autopsy, W. F. Milroy, Omaha. No discussion.

17. Some Cases of Appendicitis, Operation and Otherwise, A. B. Anderson, Pawnee City. The papers of Drs. W. O. Bridges and A. B. Anderson were discussed jointly by Drs. Bullard, Clark, Moore, Davis, Mitchell, Coffman, Hamilton and closed by the two essayists.
BUSINESS SESSION.

WEDNESDAY, May 7, 1902.

Meeting called to order at 8 p. m. by the president.

REPORT OF COMMITTEE ON CREDENTIALS.

The following applicants are recommended for membership: D. J. Smith, Rising City; A. P. Condron, Omaha; W. H. Reed, Valley; C. H. Campbell, Clarks; S. J. Miller, Greenwood; C. A. Hull, Omaha; C. O. Robinson, Blair; I. W. Porter, Omaha; S. N. Hoyt, Omaha; M. M. MacVean, Nebraska City; E. Holovetchiner, Omaha; J. C. Bishop, Omaha; G. C. Armstrong, Cambridge.

Moved and seconded that rules be suspended and secretary cast vote of society for these applicants.

Dr. A. D. Wilkinson, ex-officio charman of the committee on necrology, reported as follows:

REPORT OF COMMITTEE ON NECROLOGY.

Mr. President and Members: Your committee has but three deaths to record since our last meeting.

Dr. E. C. Blackburn, Atkinson, died March 19, 1901.

Dr. JOSHUA M. DOAN was born near Danville, Hendricks county, Indiana, February 16, 1874. He lived on the farm until he was sixteen years of age. His high school work was done in the Friends' Central Academy, Plainfield, Ind., from which he graduated in 1893, entering the Medical College of Indiana in the fall of the same year. In 1896 he received the degree of M. D. and began the practice of medicine in Clayton, Ind.

In July 1898, he enlisted as nurse in the hospital service, serving in Tampa, Fla., and Huntsville, Ala., with the Fourth Army Corps Reserve Hospital. The
last four months he had charge of the surgical operating room, thereby gaining much valuable experience in this, his favored branch of the work. After his muster out he located in Thorntown, Ind., until February, 1901, when he was called to North Bend, Neb., where he resided at the time of his death, January 6, 1902.

He was married October 23, 1901, to Miss Winifred Jordan, of Fremont, Neb.

He was raised a Quaker, but later united with the M. E. church and was a zealous Christian, ever working for the interest of the church and the good of humanity.

Dr. U. D. Stone, Steinauer, died April 17, 1902.

Respectfully submitted,

A. D. Wilkinson,
Ex-officio Chairman,
E. M. Whitten,
R. C. Moore,
Chas. Inches,
T. C. McCleery,
G. W. Wilson,
Alexander Bear,
Committee.

Moved and seconded that the report of necrology committee be accepted and placed on file. Carried.

Dr. P. L. Hall, chairman of the auditing committee, reported as follows:

REPORT OF AUDITING COMMITTEE.

Your committee begs leave to report:

They have examined the books of the secretary and treasurer item by item. They find a balance of $22.88 in the hands of the secretary which has been duly handed over to the president by endorsed check; they also find in the hands of the treasurer the sum of $559.78, which has been duly delivered by check to the president; and finally, they find that the accounts of the secretary and treasurer are correct, and are hereby
approved. Your committee further recommends the adoption of the following resolutions:

Resolved, That the treasurer of this society be instructed to notify each member who is now in arrears for dues that the same should be paid at once. In the future, under our new plan of organization, membership in the county society, the state society, and the American Medical Association will be dependent upon payment in full each year of all dues, and upon failure the member will lose membership in all these societies.

Resolved, The sum of $150 be granted for the purpose of adding to the library and of improving by binding, etc., the material now on hand.

Finally, your committee respectfully moves the adoption of this report.

P. L. HALL, Chairman.
A. S. V. MANSFELDE.

Moved that the society adopt the report as read. Amendment by Dr. A. R. Mitchell, that the sum appropriated to the corresponding secretary and librarian shall read: "For the appropriation of $150, or so much of that sum as is necessary." Motion and amendment seconded. Carried.

Dr. A. S. v. Mansfelde, of the committee on grievances, reported no breach of etiquette.

Dr. M. L. Hildreth offered a resolution that the Nebraska State Medical Society library shall be placed in the new Carnegie Library at Lincoln.

Moved and seconded that resolution be adopted. Carried.

None of the committee on medical legislation being present, report was deferred.

Dr. F. A. Butler moved that all members of the Nebraska State Medical Society who have paid dues for twenty-one years continuously shall become life members and be exempted from the payment of dues.

Dr. W. H. CHRISTIE: In case that motion should prevail I should like to know in regard to the payment of our dues to the American Medical Association.
Dr. A. D. Wilkinson: Business of this sort should be done away with until the adoption of our new constitution.

Dr. A. S. v. Mansfelde: I will say a word in regard to that motion, for it concerns me directly. The motion comes from a kind heart, but you know if we adopt our new plan of work, all dues will be paid by the members to their county society and from there the dues will be transmitted to the national association. Therefore the financial matter will originate in the county societies.

Dr. McCoy: I should like to inquire about how many active members of the society this motion would affect.

Dr. Butler: About twelve members.

Dr. A. R. Mitchell: I think I have been a member of this society for twenty-one years, or nearly that long. While I appreciate the motive which prompts this motion, I would like to see its suppression. So long as I am able to practice medicine I hope to be able to pay the small dues required by the society each year. I do not want to see this motion prevail. If men are able to attend these meetings, they should be able to pay their dues.

Dr. J. P. Lord moved that this matter of business be laid upon the table. Seconded and carried.

Dr. A. S. v. Mansfelde: I would like to hear from that committee that was to be appointed by the president last year and who were to fight the osteopaths. This committee was awarded $200 for this purpose. I have never heard a word of this committee.

Dr. A. D. Wilkinson read the report of that matter of business from transactions of 1901.

President: I do not think there was a special committee appointed.

Dr. A. S. v. Mansfelde: The president should have appointed this committee, but I had a letter from him a few months afterwards and he had not done it then.

Dr. A. R. Mitchell: How long would this committee have served?
President: One year.

Dr. A. D. Wilkinson: I find there was such a committee appointed, with Dr. M. H. Garten as chairman. Dr. Garten being absent, the report was deferred.

Dr. J. L. Greene: I move that the publication of the transactions of this society be awarded to the Western Medical Review on the same basis as last year; that it be paid $1.35 for each volume and one year's subscription to the journal, which will be sent to each member of this society. Seconded by Dr. Bullard.

Dr. A. D. Wilkinson: One of the papers that has been read here today has been solicited for another journal. I would like to know, if the Western Medical Review should again publish our proceedings, whether they would have a claim on the papers and wish to print them in the Review before being published elsewhere?

Dr. H. W. Orr: I should like to say in regard to this that the custom of the publication of papers of this society by the Review demands that they become the property of the Review and should appear in that paper first. But I am not a stickler as regards that custom and think it would be a good thing if some of the papers could be printed in some other paper than the Review before appearing there, as some of them would necessarily have to wait some months for publication.

Motion of Dr. Greene seconded and carried.

Dr. A. D. Wilkinson: I should like to ask the permission of the society to draw on them for $10 to cover a warrant for an attorney I have employed. I will explain: Dr. Haslam last year applied for membership in this society and his name was not accepted. Afterwards I received a letter from an attorney in his town asking me to give up the matter of what had occurred in the transactions, and even what occurred in the committee room when the names were acted upon. I refused to do this and I saw fit to employ an attorney. I do not know what this attorney's fee will be, but think possibly $10.
Dr. A. S. v. Mansfeld: When the bill is presented to the society then it will be time to draw upon the society for that amount. I would like to say that Dr. Haslam is now a member of the Elkhorn Valley Medical Society and is entitled to membership in this society.

Dr. A. D. Wilkinson: I have here a letter and resolutions from Dr. Kyger of Kansas City.

The Kyger Resolutions for the Abolition of the Newspaper Publication of Personal Medical Advertisements.

In a paper read by Dr. J. W. Kyger before the Kansas City Academy of Medicine on "The Decadence of the American Race," it was deemed of sufficient importance to appoint a committee to draft resolutions expressing the feeling of the regular medical profession in regard to the abatement of one of the causes of this condition, and also asking for the co-operation of the profession throughout the United States.

Whereas, It can and has been shown, by ample statistics, that the American race is rapidly decreasing in its birth-rate, thereby threatening ultimate and complete decadence of the race, and

Whereas, Such decadence has become so apparent that it should claim the serious attention of those of influence and power to in any degree lessen this evil, and

Whereas, Without a special effort to investigate, it must have been observed by the most indifferent with what flagrant violation of all sense of delicacy the public press gives place to advertisements of nostrums and means intended to prevent or cut short pregnancy; these advertisements appearing in a column of the paper set apart for such purpose under the name of "Personal Medical Advertisements," and referred to as "Guarantees," "Sure Relief," "Sure Prevention," etc., occupying in some Sunday editions of reputable papers as much as two columns destined to fall into the hands of all classes, and
Whereas, We recognize the press as a most potent factor in the education of the masses: Be it

Resolved, By the Academy of Medicine of Kansas City, Mo., That we respectfully recommend that a censorship over the public press should be exercised to the end of correcting such practice of publishing advertisements as those referred to in our whereases. Be it further

Resolved, That it should be deemed of sufficient moment for the attention of the Post-Office Department of the United States of America restricting or prohibiting the distribution of such papers, periodicals or magazines through the United States mail if they continue to so prostitute their columns with such matter. And be it further

Resolved, That a copy of these resolutions be sent every state medical association in the United States urging their co-operation in this movement by the adoption of these resolutions.

Resolved, That we request the secretary of every state medical association adopting these resolutions to forward two copies, one to the American Medical Association and the other to the Postmaster General petitioning for relief from this destructive influence.

John W. Kyger, M. D.,
H. C. Crowell, M. D.,
B. H. Zwart, M. D.,
Committee.

Dr. J. B. Hungate: I move the adoption of these resolutions. Seconded and carried.

Dr. A. D. Wilkinson presented a communication from H. L. E. Johnson, of Washington, D. C., as follows:

Washington, D. C., April 26, 1902.

Dear Doctor: The Third Annual Conference of the Committee on National Legislation held at Washington, D. C., April 10-11, decided to publish in the Journal of the A. M. A. a synopsis of its work, and each delegate was requested to present the same to his
society at the earliest opportunity. Please refer to Journal of April 19th, pp. 1023-25, for said report, to which I hereto add the special recommendations for the U. S. Navy, which were approved by the conference, but which by error do not appear in the synopsis published, viz.: S. Bill 4112, providing for an increase in the medical corps of the navy, H. R. Bill 8194, equalizing the pay of officers of the line, medical corps, pay and chaplain corps, of the navy with officers of corresponding rank in the army and marine corps: the bill providing for a navy hospital at Annapolis, and the bill increasing the naval hospital corps. Your attention is especially called, and that of your society, to the bill proposed by the conference, which promotes and honors Surgeon General Sternberg, ex-president of the American Medical Association, known as S. 5213, and H. R. 13725, the Gallinger Grosvenor Bill, providing for the selection and retirement of medical officers in the army. The Committee on National Legislation hereby requests each member of your society to write immediately to his own senator and representatives, and also to Senator Gallinger and Congressman Grosvenor, urging the immediate passage of S. Bill 5213, and H. R. Bill 13725. Very truly yours,

H. L. E. JOHNSON, M. D., Chairman.

DR. A. D. WILKINSON: There is a bill before the society from the treasurer of $8.75.
Moved and seconded that same be paid treasurer. Carried.

DR. W. O. BRIDGES: This communication was directed to the President of the Nebraska State Medical Society and came directed to me because of the fact that probably the record from which the name was obtained was the one in which I was named as president. The communication is from the secretary general of the International Medical Congress, which is to meet at Madrid, Spain, April 29, 1903. Communication consists of articles and rules governing the congress. The character of the rest of the communica-
tion is to the members or delegates, defining the rules and regulations of said congress. Any one desiring to attend the congress from Nebraska should be accompanied by one of these papers, and all that would be necessary would be for one to present it to the secretary general at Madrid. The articles state that the congress convenes April 29 and 30, 1903.

Dr. A. S. v. Mansfelde: In connection with this communication I move that Dr. W. O. Bridges and Dr. A. F. Jonas be made delegates to the International Congress, to meet at Madrid, Spain, April, 1903. Seconded and carried.

Dr. W. O. Bridges, in the absence of the chairman of the committee on medical legislation, reported as follows:

REPORT OF COMMITTEE ON MEDICAL LEGISLATION.

There is only one matter I wish to report. In reference to the question of whether anything was done in regard to fighting the osteopaths, nothing has been accomplished, and the only thing I would recommend would be to stir up the matter and expend the money, if it is advisable.

Dr. A. S. v. Mansfelde moved that the money that has been appropriated to this committee be recovered into the treasury of the society. Seconded and carried.

REORGANIZATION.

Dr. Wilkinson: I have the articles of reorganization here and will read them, if the society wish it.

Dr. Mansfelde: The proper motion would be that if the secretary has notified that it is an amendment to the constitution that is to be made, the matter should be laid on the table for one year.

Dr. Wilkinson: Do you move the amendment be laid on the table for one year?

Dr. Mansfelde: I move, as an amendment to the last motion, that the officers of this society govern themselves by the new constitution.

Dr. Henry: It seems unreasonable to say that the
officers are to be governed by a constitution which will not be voted on until next year.

Dr. Mansfelde: The point is this, to empower the officers of the society to take such preliminary measures as is necessary to work in harmony with the American Medical Association.

President: The motion stands, whether the officers of this society shall govern themselves by the constitution which is to be passed upon next year.

Dr. Andrews: What is that constitution?

President: The constitution of reorganization.

Dr. Andrews: I want to know what the constitution is. I am not willing to bind myself to anything about which I know nothing.

Dr. Wilkinson: For the benefit of Dr. Andrews I will say that this is a constitution that was proposed by a committee from the American Medical Association to govern state societies.

Dr. Andrews: What is that?

Dr. Wilkinson: This constitution should be known by all. The whole constitution and by-laws is printed in the Western Medical Review for May.

Dr. Andrews: I have not seen a copy of the Review for some time.

Dr. Orr: The copies of the Review which lie distributed on all the chairs here contain a copy of this constitution.

Dr. Andrews: I have not noticed the Reviews lying around; I have been busy with other affairs. I want to know if this is the constitution which demands that every member of the American Medical Association and the state society shall belong to a county and district medical society. If it is, I want to object to it. In the western part of the state there are many physicians who are living thirty-five miles from any other physician and who come with great sacrifice to their own interests when they come to the state society meeting. How do you think it would be possible for them to meet often in the county or district society
when they live so far apart? How are they going to get together and have a county society? They would have to drive across the country thirty-five miles one way and thirty-five miles back. Do you think they could do that without a great sacrifice to their business? When we come here to Omaha or Lincoln, the Mecca of civilization, riding 200 or 300 miles, do you think that is not sacrifice enough?

Dr. Mansfelde: I would like to say that the members of the state society and American Medical Association, as long as they pay their dues, will remain members and no new constitution will affect that matter.

President: Dr. Andrews, do you not understand that the question before the society is not upon the adoption of the constitution, but whether the incoming officers are to govern themselves according to it?

Dr. Andrews: No, it is whether we shall bind ourselves to this.

President: It is the question of whether the officers of the society shall bind themselves.

Dr. Andrews: Are we not bound by what our officers do, and anything that falls upon the officers is shared by the members?

Dr. Moore: I wish to make a motion which will cover everything: Moved and seconded that the whole matter be laid upon the table. Carried.

Dr. Bridges: I desire to offer a motion that the new constitution be acted on at the next meeting as the first matter of business.

Dr. Lord: We are bound to do that by the regulation of business.

Dr. Mansfelde: I move that a committee of five be appointed by the incoming president to consider the new constitution and recommend such amendments which will seem good for the society. Seconded and carried.
REPORT OF THE COMMITTEE ON PRESIDENT’S ADDRESS.

To the Members of the Nebraska State Medical Society: We, the committee on the president’s address, wish to submit the following report: That we feel indebted to Dr. W. B. Ely for his able and instructive address and for his untiring efforts in the advancement of this society in the past year.

Resolution 1.—The faculty of any medical school or college in this state not having received formal recognition by this society shall not be eligible to membership in this society, and any member of this society who shall accept a position of any kind in any such unrecognized school or college shall stand expelled from the moment of such acceptance, and because of such acceptance shall render himself ineligible to future reinstatement.

Resolution 2.—The prerequisites for membership shall be a liberal education, according to the standard in vogue at the time of the individual’s graduation, and honorable, gentlemanly, and professional conduct. The school of graduation shall be no bar to membership, provided the applicant does not profess to practice any exclusive system of medicine.

Most respectfully submitted,

A. D. NESBIT,
H. W. FRANCIS,
R. WOODS,
Committee.

DR. MANSFELDE: I move that the report of the committee be referred back to the committee to report at the adjournment of this society, to-morrow.

DR. MOORE: As there was no second to this motion, I move that this report be divided into two parts, and that the first part ending with the two resolutions be adopted and that the two resolutions be laid upon the table. Moved and seconded. Carried.

DR. BRIDGES: I would like to suggest that we time the meeting of our State Medical Society so that we can meet here in Omaha at the time the Iowa State
Medical Society meets in Council Bluffs and we can then perhaps hold a joint session.

President: Your suggestion conflicts with the constitution.

No further business to come before society, election of officers was next in order.

ELECTION OF OFFICERS.

Informal ballot for president resulted as follows: A. B. Anderson 55, B. F. Lorance 1, Link 1, Nesbit 3, Allison 3, Bridges 1, Davis 2.

Informal ballot made formal by the secretary casting the entire vote of the society for Dr. A. B. Anderson, of Pawnee City, for president.

Informal ballot for first vice-president resulted as follows: Ensbacher 2, Pritchett 6, Miller 2, McDonald 3, Allison 4, Davis 12, Christie 10, Nesbit 17, Aikin 1, Mansfelde 1, Long 1, Hildreth 2, Grothan 1, Gibbs 1, Rosewater 1, Pickett 1, Butler 1, Crummer 1, Ely 1.

First formal ballot for first vice-president resulted as follows: Nesbit 36, Allison 1, Christie 9, Miller 3, Pritchett 4, Davis 15, Sutherland 2, Bridges 1, Grothan 1, Pickett 1, Boal 1.

Vote of society cast by secretary for Dr. A. D. Nesbitt, of Tekamah, for first vice-president.

Informal ballot for second vice-president resulted as follows: W. S. Wilson 2, Davis 30, Crummer 5, Wiser 1, Peterson 4, Smith 4, Hall 2, Aikin 3, Benton 1, Christie 6, Pickett 1, Stone 1, Lord 4, McDonald 1, Sundberg 1, Greene 1.

Secretary casts vote of society for Dr. B. B. Davis, of Omaha, as second vice-president.

President casts vote of society for Dr. A. D. Wilkinson, of Lincoln, for recording secretary.

Secretary casts ballot of society for Dr. J. L. Greene, of Asylum, for treasurer.

Secretary casts ballot of society for Dr. H. W. Orr, of Lincoln, for corresponding secretary and librarian.

The election of officers for the year 1902 resulted, therefore, as follows: President, A. B. Anderson;
first vice-president, A. D. Nesbit; second vice-president, B. B. Davis; recording secretary, A. D. Wilkinson; corresponding secretary and librarian, H. W. Orr; treasurer, J. L. Greene.

Dr. Wilkinson: According to the reorganization of the American Medical Association, we are entitled to one delegate to the House of Delegates.

Moved that Dr. Moore be named for candidate as delegate to the A. M. A.

Dr. Moore declined to accept.

Moved and seconded that the secretary cast the ballot of society for Dr. McClanahan to act as delegate from the Nebraska State Medical Society to the House of Delegates of the American Medical Association.

As alternate to Dr. McClanahan, Dr. Jonas was proposed. This was declared out of order, as any member holding office in the A. M. A. cannot serve.

Dr. B. B. Davis was then named and the secretary was instructed to cast the ballot of the society for Dr. Davis as alternate delegate to the House of Delegates of the American Medical Association.

Adjournment of society until 9 a. m. Thursday.

MORNING SESSION.

THURSDAY, MAY 8, 1902.

Meeting called to order by president at 9:10 a. m.

SECTION ON OBSTETRICS AND GYNECOLOGY.


3. Premature Labor and Septic Infection in Same, J. A. Andrews, Eustis. Discussed by Drs. Mansfelde,
Anderson, Butler, Berry, Davis, and closed by the essayist.


5. Atypical Cases of Ectopic Gestation, C. C. Allison, University Park, Colo. Read by title.


SECTION ON MATERIA MEDICA AND THERAPEUTICS.

1. Therapeutic Tendencies, R. C. McDonald, Fremont. Read by title.


Adjournment of society until 1:30 Thursday afternoon.

AFTERNOON SESSION.

THURSDAY, MAY 8, 1902.

Meeting called to order by president at 1:30 p. m.

SECTION ON DISEASES OF CHILDREN.


3. Cretinism, Report of Two Cases, H. M. McClanahan, Omaha. Discussed by Dr. Holovtchiner and closed by the essayist.

Dr. Hildreth moved that the following resolution introduced by Dr. Mansfelde be adopted:

Resolved, That the committee of five upon revision of the constitution are hereby instructed to do all preliminary work which can possibly be done to bring the organization of the profession of Nebraska into harmony with the spirit and letter of the new constitution of the American Medical Association by the time of the meeting of the Nebraska State Medical Society in 1903.

Motion seconded and carried unanimously.

SECTION ON PUBLIC HYGIENE AND MEDICAL LEGISLATION.


SECTION ON PATHOLOGY AND HISTOLOGY.


Dr. Ely vacated the chair and turned the same over to the new president, Dr. Anderson, who immediately appointed the following committee on reorganization: A. S. v. Mansfelde, Ashland; A. D. Wilkinson, Lincoln; M. L. Hildreth, Lyons; H. M. McClanahan, Omaha; R. McConaughy, York.

A motion to adjourn until next year, made by Dr. B. B. Davis, was seconded and carried.
NEW MEMBERS, 1902.

Ames, M. A., Sargent.
Bellwood, W. S., Alliance.
Bettelhence, B. F., Alliance.
Birdsall, C. A., Alliance.
Bishop, J. C., Omaha.
Brannon, J. L., Greeley.
Burdick, H. E., David City.
Byers, S. J., Snyder.
Campbell, C. H., Clarks.
Clark, C. F., Omaha.
Condron, A. P., Omaha.
Crummer, Le Roy, Omaha.
Cummings, J. A., Omaha.
Eigler, C. O., North Bend.
Feese, J. P., Franklin.
Henderson, R. G., Rulo.
Holovtchiner, E., Omaha.
Hoyt, S. N., Omaha.
Hull, C. A., Omaha.
Inks, J. A., Shelby.
Lemere, H. B., Omaha.
Leeper, D. P., Verdon.
Little, C. H., Bloomfield.
Little, F. C., Bloomfield.
Lucas, C., Glenville.
McNulty, J. F., Calloway.
McVean, M. M., Nebraska City.
Mayhew, J. M., Lincoln.
Miller, S. J., Greenwood.
Morrow, H. N., Tekamah.
Muirhead, A. L., Central City.
Overgaard, A. P., Fremont.
Peterson, A. O., Omaha.
Porter, I. W., Omaha.
Pruner, W., Kennard.
Redfield, W. J., Union.
Reed, W. H., Valley.
Rich, C. O., Omaha.
Richardson, C. F., Omaha.
Robinson, Amy, Lincoln.
Robinson, C. O., Blair.
Smith, D. J., Rising City.
Smith, J. G., Wahoo.
Smith, P. C., Swanton.
Waggener, J. S., Dawson.
Waldron, P. J., Rapid City, S. D.
Wolcott, R. H., Lincoln.
REGISTERED MEMBERS, 1902.

Adams—J. W. McKibben.
Albion—A. J. Clark.
Alexandria—C. A. Birdsall.
Asylum—J. L. Greene.
Auburn—V. M. Boal.
Aurora—I. W. Haughey.
Bancroft—H. W. Francis.
Bassett—H. J. White.
Beaver Crossing—C. W. Doty.
Benson—H. F. McCoy.
Blair—C. A. Robinson.
Bloomfield—T. C. Little.
Bloomington—E. P. Sumner.
Brock—B. F. Lorance.
Clarks—C. H. Campbell.
Clarkson—G. P. Clements.
Clatonia—B. M. Deardorf.
Columbus—B. Tiesing.
Crete—E. Bates.
Elmwood—J. M. Neely.
Eustis—J. A. Andrews.
Fairbury—G. L. Pritchett.
Falls City—F. C. Wiser.
Fort Crook—P. F. Straub.
Fremont—R. C. McDonald, F. H. Brown, W. J. Davies, A. P. Overgaard, L. B. Smith.
Gibbon—J. W. Miller.
Grand Island—J. Lue Sutherland.
Greeley—J. T. Brannon.
Greenfield—Chas. Lucas.
Greenwood—N. D. Talcott.
Harvard—F. A. Butler.
Hastings—C. V. Artz, J. G. Roberts.
Havelock—A. I. McKinnon.
Holdrege—P. A. Sundbury.
Hooper—W. T. Zellers.
Juniata—W. Ackley.
Kearney—J. J. Cameron.
Kennard—W. H. Pruner.
Lindsay—D. H. Westfall.
Lyons—M. L. Hildreth.
Madison—F. A. Long.
Mead—W. J. Pinkerton.
Millard—H. Link.
Murdock—J. D. Jones.
Nebraska City—M. M. MacVean, S. S. Wilson.
Neligh—W. F. Conwell.
North Bend—Thomas Grant.
North Platte—V. Lucas.
Odell—I. W. Pickett.
L. Swoboda, Geo. Tilden, F. Tornholm, S. R. Towne, J.

Osceola—L. M. Shaw.
Palmer—C. S. Minnick.

Pawnee City—A. B. Anderson, J. W. Bullard.
Plattsmouth—C. W. Cook.

Ragan—D. R. Rogers.
Randolph—A. E. Cook.
Rapid City, S. D.—P. J. Waldron.
Red Cloud—Rob't Damerell.

Roca—E. W. Demaree, H. C. Demaree.
Sargent—M. A. Ames.
Shelby—C. A. Allenburger, J. A. Inks.

Shickley—R. Woods.
Snyder—S. J. Byers.
South Bend—C. O. Eigler.
South Omaha—W. Berry, W. H. Curtis, C. E. Sapp.

Strang—J. Bixby.

Sutton—A. J. Kaufman.
Swanton—P. C. Smith.

Table Rock—W. H. Wilson.

Tecumseh—A. P. Fitzsimmons.


University Place—Wm. B. Ely.

Wahoo—J. C. Smith.

Wakefield—R. J. Rowse.

Weeping Water—J. B. Hungate, M. W. Thomas.

West Lincoln—L. B. Warmsley.

West Point—H. L. Wells.

York—G. W. Shidler.
THE LIMITATION OF MEDICAL COLLEGES.

W. B. ELY, M. D., UNIVERSITY PLACE.

The physician is a highly complex organic body, yet a chemical paradox, in that two chief elements of his composition are totally without affinity for each other; so far are they, indeed, from the exhibition of affinity that they are reciprocally incompatible, viz.: abstract science and science applied—applied to the solution of the bread-and-butter problem. The fact of this incongruity creates an economic situation embarrassing in the extreme; i.e., embarrassing to the great majority of us. The problem would be greatly simplified if the general public possessed as clear and intelligent ideas concerning the legitimate demands for, and the requirements and limitations of, our art as they do upon other general subjects. But the utter apathy, well-nigh universal among the laity, concerning the simplest elements involved in the details of our special work complicates the matter past all hope of successful solution and renders the doctor's position in the social organism a most anomalous one.

The laity are limited to a single criterion, viz., the ultimate result, by which to judge of the excellence—or otherwise—of the details of our service. If the patient recovers, it was the doctor that cured him; therefore, blessed be the doctor and all he is supposed to represent. If the patient dies, the doctor is at fault in some way or other; either his "pathy" or his "system" or his "method" is lacking, or he himself is deficient in knowledge or skill or care. Hence it is, since but a minute fraction of the illnesses which come under the doctor's care ever would end fatally under any form of treatment,—or no treatment at all,—that any and every sort of medical service can count with reasonable certainty upon a vastly larger measure of praise than of censure and condemnation. Still, it is unquestionably true that, in the long run, really com-
petent service gets a smaller death-list charged against it than incompetent and unscientific blundering or blind trust to unaided "vis medicatrix naturae." But it is only in the long run that the difference becomes sharply visible—a very troublesome matter, occasionally, to the individual doctor, though it bears lightly enough upon the shoulders of the profession at large. The time requisite to the individual's justification in a given case not infrequently is so discouragingly long, compared to the length of his bank account, that he is compelled to seek his daily bread in another vocation, with all the chances against his medical education counting for a dollar's worth of marketable value.

Devotion to science and art is a sentiment beautiful in contemplation, and delightful in real life—to the comfortably housed, the warmly clad and the well fed; but its beauties dissolve in disgust and its delights turn to loathing when the wolf stands howling at the door. Time vindicates the profession and ultimately kills off each pretentious fad—it may, and often does, kill off the deserving individual also, long ere his vindication comes.

In the peculiar relations which inevitably must subsist between the doctor and society, under conditions such as these, "elegant pharmacy" of our unpalatable science, to suit a finnical popular taste, is the indispensable requisite to its acceptance at all by those most in need of it, and diplomatic tempering of the necessary measures of relief to the shorn lamb of popular prejudice, the inexorable necessity to our being permitted to do anything whatever.

But the line which separates this legitimate diplomacy from charlatanism, not always as clearly defined within the body of the profession itself as our ideal, is absolutely invisible to the vast majority of the laity. Their conceptions of sickness and its causes, of cure and its details, and of health and the means of its maintenance, are so extravagantly out of all alignment with the simplest facts of pathology, etiology and phy-
siology; they are so blindly dogmatic in all their med-
cial prepossessions, and are so inflexibly determined
that the doctor shall play upon their ignorance, willy-
nilly, to the gratification of their whimsical vanity
and his own pecuniary profit, that the situation be-
comes confusing in the last degree to the most con-
scientious devotee of science and enlightened ethics.

That such conditions should breed an increasingly
large class of depraved charlatans is precisely what
might be predicted; nothing short of the miraculous
could prevent it. Considering the drastic commercial-
ism of this 20th century, and of the United States in
particular, a real cause for wonder is that any re-
spectably large body of medical men could exist to in-
sist, even in theory, that medicine owes to the com-
community the obligation of common honesty. In the
words of an intelligent and discerning lay acquaint-
ance: "With the same opportunities for reputable
fraud always present before them, and not only pre-
sented but pressed upon them, there is not another
class of men in all the community that would resist
the temptation so rigorously as do the doctors."

The emoluments of successful quackery are so enor-
mous in proportion to the investment required, and
the distinction between it and legitimate medicine so
totally erased from the lay mind, that there is little
cause for wonder that the ranks of medical student-
dom should be crowded to repletion. As a matter of
fact, there are in this country to-day probably nearly
30,000 medical students; a larger number than in all
other technical schools combined, and more than six
times as many as are supplied by any other equal pop-
ulation in the world.*

*The latest accurate figures are for 1899. These give a
total of 24,199, exclusive of graduate schools, in attendance
upon 156 medical schools, divided as follows:

<table>
<thead>
<tr>
<th>Schools</th>
<th>Students</th>
<th>Per cent.</th>
</tr>
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<tbody>
<tr>
<td>Regular</td>
<td>125</td>
<td>21,619</td>
</tr>
<tr>
<td>Homeopathic</td>
<td>21</td>
<td>1,833</td>
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<tr>
<td>Eclectic</td>
<td>7</td>
<td>582</td>
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<tr>
<td>Physico-Medical ......</td>
<td>3</td>
<td>85</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>24,119</strong></td>
<td><strong>100.0</strong></td>
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Between that legitimate diplomacy which is requisite and necessary to win and hold enough of the laity’s confidence to enable us to give them the benefits of our art, and that which seeks only to loosen its victims’ purse-strings, there is a wide middle ground where one shades off into the other by insensible gradations. It is unfortunate, but a fact nevertheless, that the limitations of our nature are such that a moral perception acute enough to determine just when and how the line of separation is overstepped, is not a universal possession among us. Hard and fast rules of conduct within this region are, and of necessity must always be, wholly inoperative because absolutely impossible of enforcement. Each situation is to be judged by its own peculiar attendant circumstances, and, of necessity, each one’s conduct must be guided by his own individual sense of the proprieties of the time and occasion. And it is right here, in my judgment, that our Code of Ethics has done positively mischievous work. Under its cloak the commercially inclined have always been, and, by the very necessities of our nature, will always continue, able to live in habitual violation of its spirit and intent while yet in perfunctory conformity to its bald letter. And because of the facility with which this may be done, it becomes an active incentive, among the too “enterprising” ones, to the practice of essential quackery.

But how is it that the line of demarcation between quackery and legitimate medical business methods has become erased from the lay mind?

It is one of the business aphorisms of medicine that the appearance of prosperity and well being is indispensably requisite to the doctor’s financial success. Though he sees never a patient from week’s end to week’s end, he must manage in some way to seem busy. Though his income be less than the wage of a common laborer, it must be so spread out as to give the impression of a comfortable balance at the bank. His office must be decked out with the most elegant and sumptu-
uous furnishings he can rent or buy upon the install­ment plan, and with all the paraphernalia of specialty work and pathological suggestion he can manage to buy or obtain gratuitously from those thoughtful and benevolent creatures, the makers and venders of proprietary mixtures, so as to strike the occasional visitor with astonished admiration at its unused—and many times unusable—appointments, though his family at home sit upon wooden chairs at bare tables standing upon uncarpeted floors.

Nor is it enough that his intellectual powers shall be centered in devising schemes for fooling the laity. He is dull beyond measure if he neglects to train himself into a yet greater refinement of subtlety in an application of his scheme, to seduce the very elect of his own cult. If he would fill out the measure of possibility in this direction, he will be so patronizingly cordial to the country doctors of his acquaintance who may happen in upon him, and so condescendingly superior in his bearing toward them, as to stamp deeply and indelibly upon their minds his own extraordinary skill and the immense experience he has had—in his mind—in certain special lines of work which the common, ordinary general practitioner will be wise not to undertake; there are potential consultation fees in all this.

And so the young and ambitious doctor's whole intellectual forces are concentrated in developing the arts of false pretense in a Machiavelian scheme for in­veigling the public, beguiling the initiated; aye! and fooling himself into the bargain.

Now the final resultant of all this is that thousands of the brethren, especially in the great metropolitan centers, are living and breathing embodiments of Tit­tlebat Titmouse, that classical creation of Warren's in his one-time popular story, "Ten Thousand a Year"; cases of "Back vs. Belly"; robbing the stomach to cover the body; starving themselves in order that they may be enabled to keep up tawdry external appearances of prosperity. The original Tittlebat's ideal of success,
the fool's paradise in which he lived and moved and had his being, was a forlorn hope that some day while he leisurely strolled the gravelled walks of Hyde Park, bejeweled in pinchbeck and paste and attitudinizing after his conception of easy elegance, and ogling each fair occupant of the carriages as the grand cavalcade of fashion dragged slowly by, he might be so fortunate as to attract the notice, and so win the heart, of some discerning and susceptible heiress of ancestral wealth or titled nobility. He never saw the fruition of his hope, but, through the machinations of Oily Gammon, of the legal firm of Quirk, Gammon and Snap, he was permitted to catch a momentary glimpse of what it might be to realize his fond dream. But it was only a transient glimpse, for the fictitious claim by which he came into actual possession of an almost regal estate was too shallow to hold water longer than was necessary to complete the legal investigation into his paternity. And it is a debatable question whether these modern medical Titmice accomplish more for themselves through the practice of their shallow wiles than did their fictitious prototype; but it is completely out of the realm of argument that the profession at large is made to suffer beyond measure because of them. Idle affectation! Ruinous pretense! Idiotic falsehood!

In plain words, and leaving metaphor aside, these unworthy representatives of the grandest vocation that ever has claimed the attention of humanity place the medical profession in an attitude of unceasing stage-play before the community, in the action of a perpetual lie, where the plain truth would better serve all their purposes. They deliberately scheme to impress upon the lay mind the idea that medicine is the king's highway to opulence,—a veritable bonanza of uncounted wealth; and by so doing they themselves do all in their power to create the drastic competition which is the only excuse for, and temptation to, their fatuity, when, in plain truth, the average neophyte, with nothing but his diploma and high hopes for capital upon which to
commence business, has before him nothing but years of penury and enforced self-denial whose greatest probable reward, if he proves an average success, will be a few years of comparative material comfort on the down-hill side of life.

What percentage of the doctors, dying, leave estates behind them more than sufficient to pay their funeral expenses? It is small indeed. An examination of the surrogate's records would surprise one who had never given the subject his attention before. Of the number buried at the expense of their immediate friends, or of the public, no records are kept, but they are not a few. And yet the public has been hoodwinked into the belief that medicine is a money-making business; a nice easy job, with nothing but its broken night's rest for a draw-back. Heaven save the mark! Every young man in the community imagines the doctor to be a rich man, or at all events a man of ample income whose failure to accumulate wealth is due only to his extravagant mode of living. And herein is the reason that the medical schools are so crowded and the medical profession so surfeited. We see in this preposterously short-sighted policy the key to the seeming paradox that added difficulties in the way of entrance into the profession have no effect whatever in diminishing the yearly matriculations, but, on the contrary, seem only to give greater and yet greater zest to the insane rush to the college doors. By every wily art at our command we are coaxing and cajoling and seducing and inveigling the ambitious innocents of society—or its innocent avarice—to come into the crush with us.

Words fail utterly of adequate condemnation of such a policy. We are barbarously cruel to the misguided youth of the land that we present before them such speciously gilded inducements to start upon a course that will consume five to seven of the best years of their lives in work which, to much the largest portion of them, will be preparation for nothing but disappointment and failure; and failure the more disastrous
in that the education received will be little likely to have a dollar's worth of material value in any other vocation they may afterward adopt.

The extraordinary and uncalled-for multiplication of medical colleges in this country during the past twenty years (an increase amounting to 142 per cent.) is the natural and necessary product of this imbecile policy of ours, and their redundancy, directly and indirectly, is responsible for the rapid increase of that most damaging and damning form of business "enterprise" within our own ranks, reputable, "ethical" quackery.

Quackery has come to mean something quite different from what it stood for in former times. Then it meant the "ignorant pretention to medical knowledge" of the dictionaries, though the modern dictionary-makers seem oblivious to the fact that that old definition has become obsolete. The quack of to-day, usually, is a well educated doctor, the graduate of a reputable medical school; the "ignorant pretender" still met with occasionally cuts little figure in quackdom nowadays. The great body of the cult is well trained in all the details of medical science and art; as well trained—and quite as resourceful—as any within the pale of reputable medicine. Quackery now stands, not for ignorance but for unscrupulous business methods, specifically in the business of medical practice, the sole end and aim of which is to play upon the gullibility of its victims for the single purpose of increased pecuniary returns. Its center and soul is a perversion and degradation of legitimate medical diplomacy; degraded with deliberate design to toy with the medical prepossessions and foibles, and to play upon the ignorant hopes and blind fears of suffering humanity; they whose confidence in their doctor places them hopelessly helpless at his mercy with nothing but his innate sense of honor for a shield against imposition, by methods in nowise different in principle from the brutish wiles of the confidence-man, the bunco-steerer and the monte-man.
And this it is which our redundant medical schools are manufacturing.

But do not misunderstand! Far be it from me to underrate the sterling worth of the members of our medical faculties, or to impugn their conscious motives. I bow to no man in my admiration for them as men, for their abilities and achievements, and for their contributions to the advancement of medical science. The exceptional opportunities incident to their position, for widely extended experience, for accurate observation and legitimate experimentation, have been utilized to their fullest limits, and to the imperishable glory of American medicine. As investigators and teachers, and as practitioners and operators, they have proven themselves the peers of the best that Europe, with all its prestige, can boast. On that theme the whole lexicon of eulogy could be exhausted without fulsome adulation. But, admitting all this, while the enormous reduplication of medical colleges in this country has contributed immeasurably to the advancement of medical science, it has been carried on to a point where competition between them for students to give visible excuse for their existence, becomes detrimental in the very last degree to the best interests of medicine in general, and, unless it be checked, will become a retrograding force of tremendous power.

It is detrimental in the allurements which they scatter broadcast to induce the youth of our country to seek this imaginary road to easy opulence; detrimental in the consequent multiplication of doctors far beyond the most extravagant demands of a world of medicine habitues for perfunctory medical service; detrimental in the useless competition created by a multiplication of candidates suing at the feet of a coy public for its confidence and favor; detrimental in the character of the competition so created,—competition not in the excellence of the services rendered, but in vilely ingenious devices for winning public favor; detrimental in the consequent lapses of the less successful ones into
secret or openly avowed quackery, with all its dam-
ing chicanery; and detrimental in the basely commer-
cial motives which prompted the erection of all too
many of them.

Reputable, "ethical" quackery, thanks to the redund-
dancy of medical schools, at last has become so uni-
versally recognized by the public as the accepted busi-
ness method of the medical profession, that the line of
demarcation between frank charlatanism and legiti-
mate medicine has become completely erased from the
lay mind.

Thanks also to our superabundance of medical
schools and its consequent engorgement of the Ameri-
can profession, the doctor, such as the Code of Ethics
contemplates, has no existence. In the commercial
tenesmus of this day and age, and especially in this
country, such a creature as he is an impossibility. Un-
less blessed with an ample competence at the beginning
of his career, he would starve long ere his abilities met
their just reward, crowded out of standing room by
his more astutely "enterprising" brethren. In the so-
cial atmosphere of to-day he is an ideal being, having
about the same status as the politician "waiting for
the office to seek the man"; a very pretty thing to
glorify in grandiloquent platitudes before a confiding
public, but which cannot be mentioned between doc-
tors without a laugh. Imagine, if you please, a doctor
of to-day waiting for an "honorarium" voluntarily be-
stowed and commensurate with his own idea of the
value of his services! Conceive the infantile innocence
of the attempt to support a family upon an income de-
rived from such a source! How many of you gentle-
men ever in your lives were the recipients of such a
recompense, a voluntarily bestowed honorarium as
large as the fee you would have charged? Speaking
for myself, I have received that sort of a shock just
once. I doubt if there be a score of you who can make
the same boast truthfully. Again, try to picture to
yourselves the career of one who should sit 'passively
in his office waiting for the tide of popularity to set in his direction!

Our Code of Ethics was made for other beings than the average doctor of to-day. Perhaps they existed once—I don't know—it must have been long before my time, so I cannot testify on that point; but if they ever did, the genus has long since become extinct, and the "survival" of their code in this materialistic age is only another act in that stage-play which has become part and parcel of the profession's real ethics.

The ethics of medicine to-day is the ethics of business pure and simple, in that the doctor is a business man, and is so classed by all the community. He charges fees for his services and collects them—when he can—just as other business men do; not infrequently at the end of a lawsuit. He seeks to enlarge his business in precisely the same manner, if by different means, as do the department stores. He employs every art at his command to impress his abilities upon the public mind and to magnify the value of his services to the very limit of the possibilities. In this latter matter he is guided by the same rule as the railroads: "Charge all that the traffic will bear." The absorbing question before the "enterprising," up-to-date doctor's mind is not, as our anachronistic Code presupposes: What do the suffering people need? but, What do they want, and how much service will they take and pay for? And he makes it his business to supply it to them to the extent of their desires and the limit of their ability to pay. And it is a question that calls loudly for answer: What is to be the ultimate outcome of all this? Will the profession of medicine finally brush aside all pretense to the ethics of honor and probity and philanthropy, and go bodily over to loud-mouthed, brazenly bragging quackery? God forbid! I am too much an optimist not to have an abiding faith that we shall be saved that unspeakable degradation. But existing conditions demand, and urgently, too, that we look the matter squarely in the face and cease calling a spade
by sententious euphemisms, merely to tickle our ears and flatter our vanity.

In order to stem the tide setting so strongly toward the reeking slough, doubtless there are many evils, universally confessed, which demand correction. But, as the subject presents to my mind, the center of gravity of the whole matter is that idiotic business policy which places medicine in such an utterly false light before the lay mind, as a solution of the bread-and-butter problem. But radical change in that sphere at once and immediately is probably impossible. In all likelihood, whatever of amendment is accomplished therein must be wrought through the slow process of evolution. But the immediate product of that vicious policy, and the most manifest present evil that confronts the profession, competition between medical schools for students, can be checked, if not wholly eradicated, by a measure, effective in its operation, of certain enforcement and easily within our reach.

Individual doctors may continue their make-believe that medicine is the royal road to certain affluence, and in doing so inveigle the confiding lambs of society into its fold in the hope of sharing its supposedly immense material benefits; but if raised standards of entrance examination and lengthened preparatory course be supplemented by the destruction of competition between rival schools for larger classes, many, very many of the deluded ones will be saved the temptation to nibble at the gilded bait.

Limitation of the number of medical schools is the remedy; limitation to such a number as the united voice of the profession determines to be necessary. Obviously it is beyond our power to cut off a single school now in operation, but it is entirely within the scope of the general profession, if it but decides to use its inherent authority, to determine whether or not an additional school is called for, and to put an effectual estoppel to the erection of another unnecessary one. The adoption by the state medical societies of a
rule in substance like the following will certainly accomplish the result:

"The faculty of any medical school or college in this state, not having received formal recognition by this society, shall not be eligible to membership in this society; and any member of this society who shall accept a position of any kind in any such unrecognized school or college, shall stand expelled from the moment of such acceptance, and because of it shall render himself ineligible to future reinstatement."

A rule of this character put in force would place the charter of each new medical school in the hands of the general profession, as represented by the state society, and take it completely out of the hands of each little clique of doctors in the country to inflict upon an already suffering public and a surfeited profession as many medical schools as their ambition may dictate and their means permit; and, adopted by all the state societies in the country, it would put a complete stop to further increase for many years to come.

You will say that the rule is drastic. Admitted; but no man can show it to contain a single element of injustice to any one, or loophole for injurious abuse of power, and it is no more stringent than existing conditions demand and the abatement of the evil aimed at requires. And it is my hope that Nebraska will take the initiative in this most important of all movements looking toward the upbuilding of the medical profession, and which, once started, I have the assurance of representative medical men from all over the country, will spread till every state has adopted it.

THE UNITY OF SCIENTIFIC MEDICINE.

A year ago I called the attention of this society to the subject of the union under a single organization of the whole world of scientific medicine. The result of another year's thought upon the theme has served but to impress its importance yet more deeply upon my mind; importance not alone to ourselves, but to general science and to society at large as well.
The world of medicine is composed of three great primary classes: First, the body of general medicine represented by ourselves and usually denominated "regular" by medical men; but, stigmatized by Hahnemann as "allopath," the name has clung to us in the popular mind and is the one by which we are best known to the laity; the body without articles of faith or tests of orthodoxy, whose sole bond of union is its catholicity, whose only guide in all its work is the resultant of the observation and experience of all the medical men of all the world through all the ages, and which exhausts the realms of science in its search after facts which may contribute to greater accuracy of observation, added perfection of technique and enlargement of the field of experience. Second, the two chief sectarian bodies, which also are devoted to science in their search after knowledge that may contribute to increase the effectiveness of their bedside work. Third, an heterogeneous conglomeration of idealists and dreamers, without bonds of coherence or community of any sort, but whose distinguishing characteristics are their disregard, or ignorance, of the essential fundamental medical sciences and their blind devotion to fanciful, when not fantastic, hypotheses of the intimate nature of disease, of drug action or of modes of cure; the world of faddism and ignorant quackery as distinguished from that educated quackery hanging upon the skirts of the two classes first named which, taken together, make up the body of scientific medicine.

The lines of demarcation which separate the sectarians from general medicine, sharply defined and difficult to cross as they may have been two or three generations ago, have now become so nearly obliterated that, to the eye of philosophy, it seems little short of egregious folly that they are permitted to perpetuate the old division of scientific medicine into antagonistic and, upon occasion, undignifiedly warring factions.

In all that pertains to our relations with society at
large this division constitutes an element of weakness, injurious alike to ourselves, to the sectarians and to society. It inspires contempt in the mind of the laity for us all alike and for the art which we represent, and is the chief reason for their readiness to run after each recurring medical fad and their eagerness to elevate it, for the time being, into another "pathy" having equal prestige and legal rights with ourselves. It ties our hands at the moment when united action is of paramount importance, as is painfully realized the moment that legal regulation of medicine comes up for consideration. True it is that the act of separation was not ours; they went off from us, not we away from them. But equally true is it that, the separation having been made, we adopted rules which put an almost insuperable block in the way of the recalcitrant ones ever returning, in that they imposed conditions clearly impossible for any to comply with except the few unusually prosperous ones. But, for the past quarter of a century, homeopathy and eclecticism have existed more as empty and meaningless names than as virile actualities. Both represent theories which, loyaly carried out to the bitter end as they may have been by their early propagandists, in these days of larger knowledge and wider experience are thrown to the winds the moment grave emergency or serious sickness confronts their nominal adherents. The time, then, appears opportune for us to make the overture that shall ultimately erase the last trace of the lines of division.

It may be asked, Why should the overture come from us rather than from the sectarians themselves? I answer, because, first of all, we can abundantly afford to take the initiative. We represent probably nine-tenths of the scientific medical world. The advance, coming from us, is merely the courtesy which the strong can always well afford to extend to the weak; not because we need them, but because the best interests of the profession call loudly for union of the world of medical science.
The educational reasons for repugnance to the sectarians have long since ceased to exist. The homeopath or eclectic of to-day is as deeply grounded in the fundamental medical sciences as are we. The preparatory course required by both these sects, in all that is primarily essential, is scarcely distinguishable in all its details from the requirements of general medicine. In all else than that which relates directly and specifically to their therapeutical dogmas, the course of study required for graduation from their schools is identical with that required by our own; and in many of them, more especially those which stand pre-eminently as the best, the same text-books upon materia medica and therapeutics as are used in our schools are included in their curriculum. There is, therefore, no difference whatever between the preliminary education of the sectarians and that of general medicine except an inconsequent and harmless supplement.

Within the body of this society, and between ourselves as individuals, we neither demand nor expect assent to generalizing theories of any sort of kind whatever. “Orthodoxy” and “heterodoxy” are words nowhere to be found in all the lexicon of general medicine. Among us, the great historic body which has kept alive and carried forward the torch of medical progress, each individual doctor holds to and puts in practice such theories of drug action and of the intimate nature of disease as convince his reason and understanding, his judgment guided by the light of his scientific knowledge and determined by the weight of fact upon which they stand. His brethren may all agree with him or they may all dissent, but whether they agree or dissent in nowise affects his standing among us; he remains a doctor with us, universally recognized as such and entitled to all the consideration and respect due to wide scientific attainment and earnest thought and purpose. And not only this, his freedom to advocate his theories in our journals and before our societies is absolutely untrammelled. There
is neither let nor hindrance to the perfect intellectual liberty of our membership. It is a well known fact that differences in therapeutic theory, as widely irrec­oncileable as those upon which the sectarians separated themselves from us, obtain between members of this society in good standing; differences so great as to render consultation, if agreed to, a mere perfunctory formality. Yet their status as scientific doctors is in nowise affected thereby, neither is their right to continued membership with us called in question. The great body of general medicine is absolutely eclectic, and the only truly eclectic body of medical men that ever has existed.

And what is the foundation upon which this unre­stricted liberty in thought and practice rests? Gradua­tion from one particular sort of medical school, and which, unfortunately, has come to be denominated “regular.” It is the loud boast of this enlightened age that science is democratic, broad-minded, liberal, catholic in its best sense. But in the light of limitations such as these, by what rule of logic or ethics can the representatives of medical science lay claim to the proud distinction? Is the untrammelled liberty we so freely accord within the limits of the society, as a natural and indefeasible right, any less the natural right of all other men laboring in the same field with us, our equals in education and in honesty and sincerity of purpose? Yet this is the absurd attitude in which we are placed by our rules of eligibility. For, let his scientific attainment be what it may, and though he renounces every name and title of exclusiveness, if the applicant’s diploma be one granted by any except a “regular” school, we cannot consider his application, and by our Code of Ethics we are forbidden to hold professional intercourse with him.

It may be urged that, since their isolation is of their own choice, it will be time enough to open the door to them when they signify a desire for affiliation. But such a suggestion comes from a total disregard of all
that is most fundamental in cultured human nature. Pride, business expediency, every consideration, would forbid manifestation of such a desire though felt never so earnestly. But, as a matter of history, the present membership of the sects did not isolate themselves. Their isolation is the legacy of former generations. The present generation is composed of those who, in their fealty to parental prejudice, entered upon a course which our rules compel to be irrevocable for all except the very ones least likely to desire affiliation, those who are well established in a lucrative business.

But the olive branch has been held out to us. It was generally conceded by the "regulars" all over the country that the resolution adopted by the homeopathic societies of New York county and state in 1878 was a peace offering to general medicine. Note its language:

"Although firmly believing the principle 'similia similibus curantur' to constitute the best general guide in the selection of remedies, this belief does not debar us from recognizing and making use of the results of any experience; and we shall exercise and defend the inviolable right of every educated physician to make practical use of any established principle of medical science, and of any therapeutical facts founded upon experiment and verified by experience, so far as in his individual judgment they shall tend to promote the welfare of those under his professional care."

This resolution is the platform of American homeopathy. For, though the American Institutes of Homeopathy declined to ratify the exact form of words adopted by the New York society, it has expressed precisely the same idea in language a little more concise and diplomatic:

"The homeopathic physician is one who adds to his knowledge of medicine a special knowledge of homeopathic therapeutics and observes the law of 'similia.' All that pertains to the great field of medical learning is his by tradition, by inheritance and by right."
The only essential difference between the two statements is that the first is frank, outspoken, unequivocal, while the second is made up of carefully studied phrases, diplomatic and susceptible of “explanation” to meet the views of both the “high” and “low” potency factions of homeopathy.

These declarations by those who speak authoritatively for the sect are a public announcement by homeopathy of its abandonment of the only pretext it had ever had for separate and independent existence as a medical sect; in practice, it had fallen into desuetude years before. Henceforth homeopathy, by its own authoritative avowal, was to stand upon observation and experience as the ultimate foundation of all its therapeutical work; the foundation that Hahnemann and his disciples despised and forsook to shut themselves in and bind themselves down in devotion to a single narrow dogma. The prefatory statement that it still believed “the principle ‘similia similibus curantur’ to constitute the best guide in the selection of remedies” is but a meaningless phrase thrown in as a sop to satisfy the qualms of the homeopathic laity, and in no wise weakens the force of the declaration which follows.

The announcement by the ostensible followers of Hahnemann of their adoption of the ultimate foundation upon which general medicine had stood through all the ages, the foundation which till that time they had despised as useless and condemned as criminal, and had vilified by every epithet of scorn and derision in the category of opprobrium, carried homeopathy completely over the line onto the ground of general medicine. Not an iota would have been added to the completeness of the revolution had the sect dropped its distinctive name and disbanded its organization. For, henceforth its hitherto exclusive guide in the selection of remedies was to be one guide merely; whether it was to be “the best guide or a valuable guide, or a useful guide, or a guide, or a serviceable
hint merely upon occasion,” is totally irrelevant to the question.

At the time that resolution was adopted and ratified and then reaffirmed, there was a very general feeling in the profession that it was deliberately designed as an overture looking toward affiliation with us and to the ultimate dissolution of the sect as such. Probably its authors would deny that. Pride would interpose its emphatic veto to such an acknowledgment, more especially since it met no kindly response from general medicine at the time nor since. Nevertheless, I have never seen reason to change the opinion formed at the time that, in that resolution, homeopathy came the full length of its cable-tow in a peace-offering to general medicine; and the belief amounts to a conviction with me that, had the offering been accepted in the same spirit in which it was tendered, the twentieth century would have dawned upon a practical union under one organization of the whole body of scientific medicine.

The mantle of general medicine is broad enough and long enough and expansive enough to cover under its ample folds every gradation of opinion in the realm of therapeutic and etiological theory. No great man nor body of great men is permitted to dogmatize to us. We recognize no authority but the authority of fact and our own individual deductions. There is no reason why individuals among us may not believe that the principle “similia similibus curantur” is “the best general guide in the selection of remedies,” or in the “specific” or “direct” medication of the eclectics. As a matter of fact, I have personal acquaintance with brethren who do hold opinions which are tantamount to both these dogmas, yet no one has ever suggested their exclusion from the society; nor would he dare to do so,—the proposition would be laughed at in derision.

There is nothing in “eclecticism” itself to justify the organization of a separate “school” to represent it. That its founders became enamored of vegetable drugs
and devoted themselves to investigation of their "specific" or "direct" indications in the treatment of disease on their pet theory that "for every disease there is a plant provided by the Creator for its cure," was no fundamental departure from general medicine; and very many—I think a majority—of its nominal adherents have come to accept this view. And it is my judgment that, with the removal of our arbitrary bar against their admission to membership in our societies, this alleged "school" would rapidly become extinct.

That these two sects still continue their visible existence is evidence, not of innate virility, but of the inherent inertia of the human mind. Coming into being as they did, more especially homeopathy, amid the heat and turmoil of one of the most rancorous controversies between dogmatic bigotry and bigoted intolerance that the world has ever witnessed, antagonisms were engendered which have come down to us an intellectual legacy of former generations, but which exists to-day as a reminiscence merely, the absurdity of which we are all conscious but which we still cling to from force of habit. The controversy was carried to the point of persecution of Hahnemann himself, with the necessary result that homeopathy was persecuted into popularity, so that general medicine, quite as much as homeopathy itself, is responsible for homeopathy's perpetuation,—another reason why the overture looking toward reconciliation logically should come from us.

But though all this be true; though both the sectarian bodies have abandoned every thinkable pretext for continuance as separate organizations and have frankly returned to the foundation which they despised and vilified in former times, for us to insist, as has been suggested, that, therefore, they should disband and come to us bodily, is to demand the impossible; impossible because we have made it so. Our rules for eligibility impose a property qualification upon them. For, though we may recognize them as our
equals in all that pertains to the fundamental medical sciences, though their therapeutic theories are entirely tolerable within our organization, and though they renounce their exclusiveness and every name and title indicative of it, we cannot admit them unless their wealth is sufficient to maintain their families while they spend a year at least in such a medical school as we are pleased to dictate, and have money enough left over at the end of the course to re-establish themselves in a new business.

The objection, then, which we raise against fraternizing with these medical men rests upon other ground than their educational qualification; neither is it their therapeutical hypotheses nor their theories of the intimate nature of disease; furthermore, it is not upon the fundamental basis of their methods, their bedside work, nor their moral character. What, then, reduced to its last analysis, is the reason that we continue to hold them off at arm's length? Let us be candid with ourselves though we deceive all else in the world. We are compelled to confess that it is because their diploma Latin is not quite up to our standard of criticism; it contains a single solecism. That is the length and breadth and the height and depth of their offending.

Does the American Association for the Advancement of Science demand of its applicants for membership: At what college did you learn your science and by what specific name was it known? Where did you learn your chemistry? At what observatory did you study astronomy? Who was your teacher of physics, and what was his theory of the Cosmos? Who drilled you in mathematics, and what particular set of textbooks did he use? Never! And neither is there any other scientific body that exacts such puerile conditions of eligibility save medicine alone. We stand stark and solitary in all the world as the one body of men devoted to science, which demands the shibboleth of a particular educational institution as the one in-
dispensable credential to membership and fraternity. It is a blotch upon the fair face of science, rank with the stench of medieval bigotry, a disgrace to our modern civilization which cannot be wiped out too soon.

But it may be urged that, though union is very pretty as a matter of sentiment, there are practical reasons why it cannot be effected. It has been said that business reasons would prevent the great mass of the sectarians abandoning their exclusiveness, and that, therefore, any action we might take in the premises would utterly fail of any useful product, and it is feared by some that the old sectarian antagonisms would crop out on the floor of the society, and so create dissension and disturbance.

In regard to the first of these objections, it is purely hypothetical, since no test has ever been applied which could afford the slightest hint as to the extent of any disaffection that might exist in the sectarian ranks. The operation of our rules for eligibility puts an effectual block in the way of its expression from the only ones most likely to feel it, or, feeling it, to make the attempt to correct the error of their lives; those whose lack of material success places them in a position where they cannot, if they would, comply with our requirements. It could scarcely be expected that the exceptionally prosperous among them would care to jeopardize their business prospects by seeming to their clientele to have abandoned their accustomed modes of practice. It requires a strength of moral conviction, well-nigh heroic, to abandon a reputable course that puts money in one's purse. Such as these are unconscious of their circumscription, they have no realization of the utter narrowness of their sphere. The ethics of twentieth century commercialism, "whatever succeeds is right," and, "the size of the dividend is the measure of success," argue convincingly with all such. But he who, struggling with adversity, sees the wolf skulking upon his dear ones and feels the brand of fate burning "failure" upon his brow, feels the night-
mare that binds him down and curses the luck that steered him into the quagmire in his blind race after imaginary wealth and phantom honors,—to such a one our rules interpose an insuperable bar.

How many of these are there in sectarianism? I don't know, but there is good reason to think there are a good many. One straw upon the current is the rarity with which sectarianism descends from father to son. The usual course is for the sectarian doctor to advise his son to take the "regular" course of preparatory study. Who ever heard of a regular doctor sending his son to a sectarian school? This fact, taken together with the other fact that, notwithstanding the hardships imposed by our rule, there are very many of our present membership who have complied with its rigorous conditions, abandoned their exclusiveness and came to us, points unerringly to a much wider feeling of unrest in the sectarian ranks than appears upon the surface.

Considering the problem in all its phases, I do not hesitate to recommend to this society the adoption of a rule of eligibility that will remove the present arbitrary bar, so as to permit all whose scientific attainments are equal to those adopted by the American Association of Medical Colleges, irrespective of the school of graduation, to come over the line and become one with us. Illinois took the initiative last year and adopted the following rule:

"The prerequisites for membership shall be a liberal education, according to the standard in vogue at the time of the individual's graduation, and honorable, gentlemanly and professional conduct. School of graduation shall be no bar to membership, provided the applicant does not profess to practice any exclusive system of medicine."

This rule lets down the last remaining bar to the union of scientific medicine and places the odium of division and exclusiveness, if it be permitted to continue, upon the shoulders of the sectarians themselves.
But, the substance of this rule adopted by all the “regular” societies in all the states, the division cannot long be maintained. I dare predict that another quarter of a century would not elapse, after its general adoption, till the whole body of scientific medicine would be united under a single organization.

The practical results which will follow upon the complete union of the scientific medical profession will be beneficial beyond calculation. It will give added impetus to the advancement of medical science, and raise the profession in the esteem of the laity. It will improve the ethics of the profession. It will give increased effectiveness to our opposition to faddism. It will help to educate the laity in things medical, and hence to enlarge the sphere of our usefulness. It will widen our intellectual horizon, and it will limit the erection of medical colleges and thus save thousands of wasted lives.

The time is propitious for us to join the van of this great movement, for from all over the country comes the word that its ultimate realization is sure and is rapidly approaching. Let us of Nebraska stand in the forefront of the advancing column.
TENDON SURGERY.

A. I. M’KINNON, M. D., HAVELOCK.

In presenting a paper to this society on tendon surgery I have nothing new to offer in the way of treatment, but merely desire to emphasize the importance of practicing more thoroughly the methods we already know. The frequency of our meeting patients with one or more fingers immovably flexed upon the palm, due to untreated wounds of their extensor tendons, is my chief reason for bringing before you the necessity of giving as careful attention to this seemingly minor branch of surgery as we do to the various major surgical operations; e. g., suturing a torn bowel or anastomosing a cut ureter.

My experience in tendon surgery, though limited, has been very satisfactory and has led me to the conclusion that in immediate repair of these injuries union as readily takes place as in wounds of other tissues. As injuries of tendons, particularly of the hand and fingers, are of very frequent occurrence among mechanics of all kinds, farmers, housewives, etc., it is something that every general practitioner, whether in the city or country, should be familiar with the method of treating.

I would suggest that you be on the lookout among your patients for a finger contracted upon the palm, and I think you will be surprised how many cases you will find; I know I have been, and I have concluded that they did not go to the doctor at the time of injury, or if they did, that they did not get their money’s worth. And it is more particularly for the treatment of these seemingly insignificant injuries of the hand, where but one tendon is cut, that I write upon this subject. Where there are two or three or more tendons cut, the wound will generally be of such a nature that more care will be exercised and proper treatment more likely to be instituted; but when one tendon alone is
cut, it is apt to be overlooked, the function of that finger thereby destroyed, impairing the usefulness as well as the beauty of the hand. If the patient happens to be a laboring man, the condition will frequently demand amputation of the finger.

As to treatment: It is of the utmost importance to get all the parts in as nearly a perfectly aseptic condition as is possible. This is more essential to a perfect result than in almost any other operation, except perhaps it be a hernia or brain operation.

In abdominal operations the peritoneum will take care of a goodly number of germs without causing any grave disturbance to the general result, but I doubt the ability of the tendon-sheath to dispose of any without disaster. The parts having been made surgically clean—and I find gasoline an excellent thing to use where there is much dirt and grease, as is usually the case with machinists—if but one tendon is cut a local anesthetic will suffice. Pick up the ends of the cut or torn tendon, enlarging the skin wound if necessary; bring the ends together with catgut, using one or two stitches as is necessary, according to the width of the tendon; then sew up the wound in the tendon-sheath, when it is possible, with very fine catgut. Close up the external wound in the usual way, using a dry dressing, and put the finger on a splint in such a position as will relieve tension. Do not disturb the dressing for a week unless indicated. At this time passive motion, very gentle at first, should be instituted and continued daily until perfect voluntary motion is secured. Soaking in hot water will help materially while making passive motion. Generally speaking, about three weeks will cover all the requisite time for securing full mobility of the finger. And here I might suggest that the emergency tubes put up by some of our surgical supply houses are very convenient for this class of cases.

Where there is more than one tendon cut, it is advisable to use a general anesthetic and proceed with deliberation, using an Esmarch bandage if necessary. Great care must be used to get the right tendons to-
gether. When the muscular end of the tendon is very much retracted, it is better to make button-hole incision over the retracted end and draw it down with a threaded probe than to slit up the tendon-sheath from the original wound. The after treatment is just the same as though only one tendon was cut.

I will report a case I had some seven or eight years ago. The patient was a machinist, 21 years old, who had a compound forward dislocation of the wrist received while running his machine. The extensor tendons of the index, middle, and ring fingers were all completely divided at that point. He was given an anesthetic, dislocation reduced and the parts made surgically clean. The wound was enlarged up the forearm to find the retracted ends of the tendons—I would make a button-hole now instead; they were carefully united with catgut sutures; the skin wound, with silk-worm-gut; the usual dry dressing was applied, and the hand was put on a splint in position of extreme extension on the forearm. In one week the dressing was changed and the wound was found perfectly healed. Slight passive motion of the fingers was made and repeated daily for several weeks, and in the course of a few months the normal motions of the wrist and fingers were perfectly established.

Another case in point is as follows: In the spring of 1901 a girl, 6 years old, while at play, thrust both hands through a glass door. The result was an incised wound in front of each wrist. In one the tendons of the palmaris longus and flexor sublimis digitorum were entirely divided, and in the other those of the palmaris longus and flexor carpi radialis. She was given an anesthetic, immediate repair done, and the same line of treatment followed out as in the other case, with the same result of the normal function perfectly restored.

I might report several cases further, but it would be only a repetition as to details of these two, which suffice to show what gratifying results may be obtained in this class of accidents by being careful and clean.
In injuries where the tissues are badly lacerated and parts hopelessly destroyed, when it is impossible to bring the divided ends together, grafting the tendon to a neighboring one of similar action gives very good results. Grafting may be done by opening the tendon-sheath, making a slit in the tendon, inserting the graft therein and stitching with fine catgut; then treat as an ordinary case of tendon suture. Grafting may also be practiced in cases of old ununited tendons, where there is so much cicatricial tissue that it is impossible to bring the ends of tendons together, or bridge over the space, by splitting a piece of one tendon and turning it over for attachment to the other end.

Closely allied to the subject under consideration is the grafting of tendons of paralyzed muscles to that of a contiguous healthy muscle, which gives very satisfactory results.

This subject is one that ought to be of special interest to the general practitioner, more especially they who live at a distance from the cities and the surgeon specialists, for the reason that these accidents are of rather frequent occurrence, and, unless promptly and efficiently treated, result in hopeless deformity and loss of usefulness of that most useful of our members, the hand.

DISCUSSION.

DR. B. B. DAVIS, Omaha: I heard only the latter part of the paper, but such a subject as this is worthy of discussion by this society. The doctor has endorsed the idea of grafting tendons when we have a loss of a tendon or paralysis of a muscle connected at a part where we can attach a sound tendon. My experience has been so exceedingly gratifying that I believe the subject is worthy of a great deal of attention. A good many cases of paralysis occur where we have one group paralyzed and the other sound muscle in a part where the tendons can be brought over. The results are so good that we ought to adopt that method when it is possible. I had one case, a child who was unable to walk, but after grafting the tendons the child could get around with a good deal of freedom, and from last reports is increasing very much in ability to walk. It seems to me that the subject of tendon grafting has not received enough attention on the part of the medical profession.
MY FIRST YEAR'S WORK IN ABDOMINAL SURGERY.

H. H. EVERTT, M. D., LINCOLN.

I present to you to-day a review of the forty-two operations which comprise my first year's work in abdominal surgery, together with a short history of one of the most interesting cases.

My first operation was performed the last week in May, one year ago (1901). Before that time I had merely assisted my father in his work. During the past year, besides my own cases, I have assisted him in over one hundred of his. The percentage of recoveries in all the above is 100 per cent., no cases being lost. The work has been varied, such as one meets in the ordinary gynecological and abdominal surgical work.

It may not be amiss to give some idea of the technique pursued. It is neither elaborate nor complicated, but to the contrary it is as simple as can well be made.

The patient is required to come into the sanitarium at least two days before the operation, and is given 2 grains of the mild chloride in divided doses in the evening, followed the next morning with an ounce of Epsom salts. The day before the operation he or she is given a Turkish bath, and a soap dressing applied to the abdomen. If the condition is too precarious, an ordinary bath is given and a soap dressing applied. If necessary, strychnia, gr. 1-60 to 1-30, is given three or more times a day.

The anesthetic used is invariably ether; no complications from ether have been noted either in my own or in my father's practice. Post-operative or post-anesthetic pneumonias, from whatever may be the cause, do not average one a year, and none of those that have occurred in the past ten years has proved other than annoying. When the operation is nearly completed, inhalations of vinegar are substituted for the anesthetic and are continued until the patient is in bed. This prevents much of the post-anesthetic nausea.
The sterilization of the hands and the abdomen is simple, consisting merely of scrubbing with a stiff brush, green soap, and hot sterile water. The hands are scrubbed a full fifteen minutes, the abdomen for three or four (using only for the abdomen a gauze sponge). After scrubbing, the abdomen is washed with ether and then with alcohol. The hands are frequently rinsed with sterile water throughout the operation.

The suture material used is most frequently catgut of our own sterilization; sometimes silk is used, silver wire or kangaroo-tendon less frequently. Chromicized catgut I have abandoned, for the simple reason that the gut I can obtain in the open market is absolutely worthless, in very few instances is it sterile. I can trace several annoying cases of infection to its use.

Drainage is seldom used, and then only where an abscess cavity is to be drained, or where great oozing surfaces are present, or where much trauma has been used, thus opening a way for infection. Gauze is used, protected by rubber tissue.

Cases which were formerly drained are now closed with less anxiety than when drainage was used.

Pus when present is wiped away with gauze sponges or flushed out with large quantities of normal salt-solution. Hydrogen peroxide is sometimes used to clean out pus cavities. Where the pus is well walled off from the general cavity, solutions of carbolic acid, ranging from 2 per cent. to 20 per cent., are used to flush out with; this is always followed by copious quantities of plain sterile water.

The wounds are closed, usually by means of the suture-layer method, plain sterilized catgut being used. If there is too much tension a few sutures of silver wire are taken. The through-and-through method with silkworm-gut is also often utilized. Dry dressings are applied and the wound not disturbed for eight or nine days.

If gas pains are troublesome, an alum enema of an ounce of alum to a quart of water is given.
I find I have, on tabulating the 42 cases,
13 appendectomies.
  3 with a gangrenous appendix and perforation.
  10 chronic recurrent, with adhesions and enteroliths.

In this class the appendices were all thickened and had an eroded mucous membrane, some contained a teaspoonful or more of pus.

1 abdominal hysterectomy for fibroids.
2 cases of abdominal tuberculosis.

One case of which was complicated with a right labial omental hernia. The right tube and ovary were removed through the hernial incision, together with the tubercular omentum.

3 hernias in the male.

One case of which had a tender thickened appendix removed through the hernial incision.

1 large parovarian cyst, much larger than a football.

21 ovariotomies in which a whole or a part of both ovaries were removed together with the tubes.

The tendency in ovarian work has been to save as much of the ovarian tissue as possible, to separate all adhesions and to restore the lumen of the tube if possible.

1 case of generalized pelvic peritonitis following curettage, an account of which follows:

Mrs. B.; married, aged 32; three children; no miscarriages. Gives a history of previous frequent attacks of pelvic inflammation. Gives a history of a constant vaginal discharge. Lacerated cervix. She came into the hands of a practitioner in Lincoln, who did a curettage and repair of the perineum. The operation was performed on Saturday; I saw her on the Wednesday following, on return from the hospital where the work was done. I found her with a generalized peritonitis, abdomen greatly distended, tender, tympanites, intense pain and prostration. She complained of severe chills and high fever. While in the hospital she
said she was allowed to walk from one room to the other on the second day after the operation.

On examination I found she had a temperature of 105°, a pulse of 120. Perineal stitches were suppurating. Vaginal examination showed great tenderness, uterus fixed and pushed to left side. Ovary in mass, tube enlarged. On the right side of the uterus was a large bulging tender mass extending across Douglas' cul-de-sac and merging with smaller mass on left side. Abdominal examination showed large tumor on right side, visible on inspection. Her condition was such that operation was inadvisable, so I ordered ice-bag applied to abdomen. I also advised alum enemata as required to relieve the gas pains.

Saw her the next day; her condition was much improved; temperature 103°, pulse 100. She then came into the sanitarium and was operated on the next day, one week from her first operation. The condition found was a large tumor of the right ovary occupying the whole of the right side of the pelvis and filling Douglas' pouch. This was accompanied by a very large pus tube. A smaller pus tube was found on the left side, together with an abscess of the left ovary which was in contact with that of the other side. Both tubes and ovaries were removed, the pus sacs were enucleated and cleaned out. The uterus was but slightly enlarged and was not removed. A small amount of gauze drain was used and was removed on the third day. Patient went on to an uninterrupted recovery.

This case illustrates two main points: first, the absolute contra-indication of the use of the curette in cases where there is and has been a history of severe pelvic trouble, a history of severe tubal involvement; second, the necessity of a thorough examination of the patient before a curettage is made. The patient's former history should be closely inquired into also. If this had been done in the first instance the patient would not have been placed in such a dangerous condition. The early indication would then have been a
simple removal of tubes and ovaries and not a highly dangerous, in this instance, curettage. The fact that her nurse permitted her to walk from one room to the other need not be commented upon—the result is too apparent.
CONGENITAL HERNIA OF THE LIVER INTO
THE UMBILICAL CORD, WITH REPORT OF
A CASE.

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

This developmental deformity is very rare, many
prominent surgeons never having seen a single case.
Jonathan Macready\(^1\) cites a table containing the records
of forty-seven cases of congenital hernia of the umbili
cal cord, in twenty-eight of which the entire contents
of the sac consisted of intestine only, in nine of liver
and intestine, and in ten of liver only. In a very exhaus
tive paper\(^2\) by Dr. Homer E. Safford, read before
the Detroit Medical Society in October, 1900, are tabu
lated 126 cases of congenital hernia of the cord. His
first table, that of Lindfors, contains thirty-six cases;
supposed to be all the cases reported cured up to 1882.
He gives, also, Lindfors' second table, comprising all
reported cases of hernia of the cord from 1882 to 1891
—31 cases; Berger's table, completing the record to
1893—12 cases; and the remaining cases in Hallet's
table reported to 1900—43 cases, to which he adds four
more not hitherto reported, making the total 126. To
these cases I will add the case of Dr. Kessel reported
in the Medical Record,\(^3\) Dr. A. L. Muirhead's case re
ported to me by private letter, which occurred in his
private practice at David City, Neb., and has not been
reported, and my own case, which makes a grand total
of 129 cases. In the 126 cases tabulated by Safford,
the liver was included in the hernial sac thirty-four
times, twenty-three times with other viscera, and in
the remaining eleven cases it was the only viscera in
the sac. Dr. Muirhead's case, cited above, contained
both liver and other viscera; Dr. Kessel's case, also cited
above, contained only intestine, while the case I wish
to report contained only liver. Of the 129 reported
cases, the liver was the only viscera in the sac in only
twelve cases, and was included with other viscera in
twenty-six other cases. In a recent letter to the author,
Dr. W. B. Coley says that during his twelve years of service at the Hospital for the Ruptured and Crippled in New York city he has only seen two cases of hernia of the cord, one of which contained the liver with other viscera. Coley says it has been estimated that hernia of the cord occurs once in about 5,184 births. Chadwick, cited by Warren, describes several museum specimens, in which not only the liver and intestines were in the cord, but the heart as well.

_Etiology._—The study of embryology teaches us that, physiologically, the cord next to the body of the embryo, till about the sixth to the twelfth week of intrauterine life, contains portions of the intestinal tract. At this time the umbilical vesicle should atrophy, the intestines recede into the abdominal cavity, the umbilical ring contract and the omphalomesenteric duct be closed. Should this physiologic process be interfered with, hernia of the cord is likely to be the result. Chadwick thinks at this period there may be a failure in the proper development of the abdominal plates and this be a partial cause for the deformity, the contents of the undersized abdomen being of too great volume to be embraced by the deficient walls. Warren here suggests that "If the umbilical vesicle persists till a later period than usual, that portion of the intestinal tube to which it is attached is anchored outside of the umbilical ring." Just why the liver should occupy this abnormal position we are not told. The prognosis of hernia of the abdominal viscera into the umbilical cord is necessarily grave.

Of the thirty-six cases of all classes of hernia of the cord reported cured prior to 1882, as tabulated by Lindfors, eight contained the liver, two together with other viscera, and six the liver only. The six containing liver only were treated as follows: Four by simple protective dressings, one by compressing bandage, and one by radical operation. In this latter case, which occurred in 1846, it is said a protrusion the size of a fist remained. The two containing other viscera were both treated by reduction and ligature of the sac. One
of these is said to be the largest cord hernia ever reported, measuring seven inches in diameter. This case was reported in 1820 by Bal, in Tiel, Holland.

In Lindfors' second table, comprising all reported cases from 1882 to 1891, there are reported six cases of hernia of the cord containing liver and other viscera, and one case of liver only. The six cases containing liver together with other viscera were treated as follows: Two by simple incision of sac, reduction and suture; both cured; one by incision of sac, reduction, freshening of wound-edges and deep and superficial sutures, resulting in a cure; two by radical operation, both cured; and one by simple protective bandage, resulting in death. This case, however, was not seen till ten days after birth and died next day from peritonitis. The one containing liver only was subjected to radical operation and died seven hours afterwards. In this case the liver was strangulated and adherent to the sac.

In Berger's table of twelve cases, all reported cases occurring from 1891 to 1893, there are the reports of four cases of hernia of the liver in which other viscera were also contained in the hernial sac, and none of liver only. Of these four cases one was subjected to radical operation, with a resulting cure; two were operated on after the method of Olshausen and a cure was the result. The remaining case was operated on by the per cutaneous ligature with resulting death.

In the forty-three cases in Hallet's table, occurring between 1893 and 1900, there were fifteen cases in which there was hernia of the liver into the cord; twelve times with other viscera and three times the liver only being involved. The twelve cases containing other viscera besides the liver were dealt with as follows: Eight were subjected to the radical operation, with five cures and three deaths; one was treated with simple moist dressings and died on the fourth day from peritonitis, one was reduced and the ring sutured with catgut, resulting in a cure; one was subjected to the radical operation, together with resection of the sus-
pending ligament of the liver and removal of Wharton's jelly. "Result unknown, but it does not seem that a favorable result could have followed." The remaining one was operated on by the radical operation, the left lobe of the liver resected from the sac, the cystic duct ligated, and the gall-bladder excised, with resulting death after thirty-six hours. The three cases containing liver only were treated as follows: In one an attempt was made to suture the resected membrane over the reduced liver, but the sutures would not hold, the edges of the skin were vivified and the abdominal walls sutured en bloc, and the child was pronounced cured after six months. In another, in which the entire liver was in the sac and irreducible, the radical operation was done and death followed in a short time. In the other case, that of Warren, of Boston, in which the entire liver was in the sac, the radical operation was done and a cure effected. Of the four cases reported by Safford as not having been previously reported, one contained liver only and one liver and small intestine; the latter was operated upon by reduction, resection of sac, and suture of the abdominal walls, and resulted in cure. The hepatocele was subjected to the radical operation and the child died in four days. In the case of Dr. Muirhead, above referred to, the radical operation was attempted, but owing to the feebleness of the child and the liver being badly adherent to the sac, had to be abandoned. The child died. In this case the contents were half liver and half intestine.

The case I have to report contained liver only, and is as follows: The child, a boy, weighing three and one-half pounds, was born on the morning of February 22, 1902. The father is healthy. The mother has an old choroidal trouble and an interstitial keratitis in the right eye, and has a history of having one miscarriage. There are four living children, all healthy. My friend, Dr. H. L. Akin, of Du Bois, Neb., who was in attendance at the birth, asked me to see the child the same evening. In the tissues of the cord was a tumor as near the size and shape of a hen's egg as could well
be imagined, the small end being attached at the umbilicus with a base one inch in diameter. The tumor was in the tissues of the upper side of the cord, as the vessels passed over the lower part of the tumor and up to its apex. The tumor had a pinkish color, was semisolid, could not be reduced, and the contents seemed adherent to the coverings. The coverings of the cord were opaque, so that the contents could not be seen through them as is sometimes the case. There was no impulse transmitted to the tumor when the child cried, though it seemed slightly more tense.

The baby was so small and weak, and as its kidneys and bowels were performing their proper functions, it was thought advisable to watch the case for a few days till the baby grew stronger. The doctor gave the case his personal attention and noted that in about one week the cord proper, as it passed down over the lower part of the tumor, was undergoing its usual changes and the amnion covering the tumor was becoming desiccated. The child's functions were still properly performed and it was taking nourishment from the mother.

On the evening of the sixth of March, when the baby was twelve days old, Dr. A. phoned me that the mother had developed a pelvic trouble, the baby was not doing well, and he wished me to see them. On examination the child presented the following appearance: The cuff-like elevation arising from the abdomen around the base or pedicle of the tumor was red and its free border was losing its epithelial covering. The diameter of the pedicle was slightly increased, the amniotic covering of the tumor was dry and discolored, and at the cuff-line there was a well-marked line of demarcation. The child had not gained in flesh and had a pinched expression. It was quite evident that operative interference offered the only hope, though that was a forlorn one. Accordingly, the next morning the child was anesthetized with chloroform by Dr. Williamson of Du Bois, and, assisted by Dr. Akin, I proceeded to see what could be done. The field was cleansed and disinfected, and as it was evident that reduction without opening the abdominal cavity was impossible, the rad-
tical operation was attempted. The abdominal cavity was opened immediately below the tumor. It was impossible to determine the exact condition of affairs through this incision, so it was enlarged by carrying it up on either side of the tumor, when it was found that the contents of the hernial sac was composed entirely of liver, which appeared to be about half in the hernial sac, the anterior portions of both right and left lobes being involved. A loop of small intestine was adherent to the border of the ring on either side of the liver, but did not enter the sac. At the lower border of the sac, the liver was not firmly adherent, and I was able to separate it from the sac walls, almost to the fundus, but at all other points the adhesions were so firm that they could not be broken up, consequently there was but one thing left to do, close the abdominal wound and leave the child to its fate. This was done and the child died twenty hours later. No post-mortem examination was made, or else I might be able to give a more definite description of the pathological condition. It is possible, though I think hardly probable, that a favorable result might have been secured had the operation been attempted soon after birth.

In the above summary, cases are reported as cured when it was necessary to wear some kind of retentive bandage to retain the small hernia which protruded after the operation unless the pad was worn.

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DISCUSSION.

Dr. A. L. Muirhead, Central City: I have had a similar case which I should have reported, but I did not know the condition was so rare. The liver and the intestines were both in the tumor. I was not present at the birth of the child, and after sending for Dr. P. H. Salter, of Norfolk, we attempted operation, but the child stood the anesthetic badly and it was impossible to proceed with the operation. We did as much as possible for the child, but had to bind up the wound and leave. The child died a few hours afterwards.
THE BEST SUTURE IN THE REPAIR OF HERNIA.

H. P. HAMILTON, M. D., OMAHA.

In this paper it is not my purpose to deal with the causes of hernia or the best method of repairing or treating them. The subject is too long and important to undertake with the time at our command here. I will simply speak of the sutures we use and why I have a preference for a particular one or kind. Without going into the history of the use of different kinds of sutures I believe we are all agreed at present that sutures may be divided into three divisions, namely, those that remain permanently in the tissues, as metal sutures; those that remain for a considerable time in the tissues, as silk or kangaroo tendons; those that remain only for a few days in the tissues, as catgut.

Now, in order to arrive at a reasonable conclusion about the choice in selection, we have to decide either from clinical facts or from scientific investigation. As all clinical facts are based on scientific principles when properly understood we will speak of the latter first and the former last.

In discussing this subject from a scientific standpoint we must determine what we wish to accomplish with the suture. Do we wish to hold the parts in apposition to prevent the contents of the abdomen from escaping, or do we wish to repair the parts so that they will prevent their escape? All I believe agree to the latter, that we repair the parts so that they will perform their intended function. If this be true, we have no need for a permanent suture in the tissues, and if material can be found of sufficient longevity to repair the part securely and then disappear with as much certainty as the permanent one, it should have the preference, as there is no foreign body left in the tissues of the part and later to become itself an irritant and possibly a focus of infection. Having now determined that the permanent suture is not a
necessity or, in other words, does not perform a permanent function, the next question to decide is, how long is it necessary for the suture to perform its function? This proposition is not so easy of solution. If it was, the profession would be nearer together and all could agree on the particular suture to use in all cases and at all times. In order to arrive at anything like a scientific answer, we must investigate the changes that actually take place in the repairing part and the length of time necessary for such changes to take place. We all know, from our past experience and for scientific reasons, if a tension suture be placed in a part, no matter what tissues it be in, if the suture does not immobilize those tissues, its function will last only from three to eight days, depending on the amount of tension, for the greater the tension the shorter will the function of the suture be. If the parts be brought completely together and immobilized, there will take place immediately in those parts changes from the irritating suture and pressure of the parts that will cause proliferation of the cells of those parts in from four to six days regardless of the particular kind of soft tissue that may be involved. From this proliferation we will get the growth of an embryonic tissue from either side that grows into each other and forms a part of one and the same tissue of the two structures, and when this is changed to adult tissue or fibrous tissue, our patient is well (or as well as he will ever be) and the function of the suture has disappeared. The length of time required for such changes to take place in such tissues is anywhere from two to four weeks, depending on the thickness of said tissues and their blood supply. While it takes from two to four weeks for such repair to take place, there is complete adhesion of the two surfaces from the enormous infiltration in from three to four days. Some will perhaps reply to this by saying that those particular tissues have a deficient blood supply and the changes do not take place so rapidly as in other tissues. This is partly true, but it has
been my experience to see nature soon assert itself in those tissues and within a remarkably short time all the blood necessary for its repair will be there and the embryonic tissue is delayed but a day or two. If such be true, and from a scientific standpoint it certainly is the function of the suture, it need not remain longer than seven or eight days in any operative case and the life history of such a suture need not be longer than that time.

Clinical Experience.—The suture I have used in all cases is catgut and the size is what is called No. 1. I find that this holds sufficiently long to insure a perfect result in all forms of hernia.
SIGNIFICANCE OF NEPHROPTOSIS.

A. F. JONAS, M. D., OMAHA.

When Martin of Berlin extirpated a floating kidney in 1874, the possibility of relief from the distressing symptoms attending a malposition of this organ began to receive serious consideration. Many mechanical devices were tried but no operative progress was made until Hahn, also of Berlin, fixed a kidney by suture in 1881. Since then pathology, symptomatology and operative investigation have increased with each succeeding year until, at present, we occupy a more or less doubtful position, particularly in reference to the significance of a movable or a floating kidney. Floating kidneys are sometimes observed and movable kidneys are very frequently found. And since the movability of the organ is in nowise a guide as to the severity of the distress produced, it becomes a not altogether easy problem to decide the method of procedure in every case. Observers seem to differ, from those who occasionally recommend fixation, to those who insist on anchorage in every case where, by palpation, the organ can be felt to move, whether there are attendant symptoms or not. Like every new procedure, this one is passing through its developmental stage and we may hope that experience, based on a clearer pathology, will evolve definite and fixed rules for our guidance.

Let us for a moment consider the kidneys under normal conditions.

We find them situated in the posterior part of the abdomen, one on each side of the spinal column, behind the peritoneum, reaching above to the margin of the twelfth rib and downwards nearly to the third lumbar vertebra, the right one being about one-half inch lower than the left. Their lower ends are slightly less than two inches above the iliac crests. Their axes are downward and slightly outward, so that the lower ends are a little farther away from the spine than the upper
The main supports are their vessels, the peritoneum and the surrounding fatty tissue in which they are embedded. They are innervated by many branches of the sympathetic and chiefly by the splanchnic nerve. In their relations, we find the suprarenal capsules occupying the upper ends. Posteriorly are the diaphragm, the last rib, the quadratus lumborum and psoas magnus muscles. The anterior surface of the right kidney is behind the suprarenal gland, liver, duodenum, ascending colon, and jejuno-ileum. The anterior surface of the left kidney is behind the suprarenal gland, spleen, stomach, pancreas, splenic flexure, descending colon and jejuno-ileum.—(Gerrish). From these anatomical arrangements we can readily see that the kidneys are not fixed,—they have a natural movement. First, by gravity they descend from an inch to one and a half inches in the erect posture. Second, they ascend and descend with each respiratory movement. This movability is greater in women than in men because the renal fossa is not so deep and it is wider at its lower part in the latter than in the former. We find no special ligamentous restraints, the supports of the organs being the renal pedicle, the blood-vessels, the fatty capsule, perinephritic fascia, peritoneum and the intra-abdominal pressure.

From the above we note that we have no fixed kidneys under normal conditions; all healthy kidneys are movable kidneys. With careful bimanual palpation, in thin subjects, it is not difficult to feel the lower pole of the right normal kidney, or sometimes of the left. This being true, where are we to draw the boundaries between physiological and pathological movability? This question has been always difficult to determine. Some years ago the Pathological Society of London appointed a committee to determine this point. This committee reported that an abnormally movable kidney was one (1) that it had an exaggeration of the natural movements; (2) that it moved with its more firmly attached fatty or fibrous capsule, within the perinephritic fascia; (3) that the kidney within the fatty capsule
and that within the sheath of the perinephritic fascia were all extraperitoneal. The committee defined a floating kidney to be one that floats toward the abdominal wall. It has a mesonephron of its own and is congenital. A floating kidney may be acquired, following a traumatism, in the presence of a lax peritoneum.

In the author's experience, floating kidneys as here defined are not common. In the cases that have come for operation at his hands, he has seen no case that exhibited even the semblance of a mesonephron. And yet, clinically, some of the kidneys were so movable that they would be classed as floating kidneys. In one instance the right organ would fall beyond the median line when the patient assumed the left lateral position and would descend into the right iliac fossa during the erect posture. Yet the lumbar incision revealed a lax peritoneum behind which it moved and the adipose capsule was large and loose.

Since the views set forth in this dissertation are based largely on the author's clinical experience, the discussion will include all movable kidneys, meaning movable organs whose entire contours can be palpated, the upper as well as the lower pole. No kidney should be considered abnormally movable unless it entirely deserts its fossa to an extent where its entire form can be palpated.

Ordinarily the structure of a movable kidney is normal, except that in occasional instances the organ is flabby, due to a sacculation of the calices from moderate renal distention. According to Park, 90 per cent. of all the cases are found in women. It is a well-established fact that in routine pelvo-abdominal examinations every fifth woman has a movable kidney. They were found in young single women quite as often as in those of middle age and married. They were most frequent in spare subjects, where the paniculus adiposus is of moderate quantity. In some of those who came to operation the perinephritic fat was small and in two instances the perirenal fat as well as that of the entire
body seemed to have been absorbed, admitting of greater renal movements. By the kidney weight the peritoneal folds were elongated.

The causes, aside from local predisposition, in the author's experience, were, in order of their frequency: (1) Tight lacing; (2) traumatisms; (3) pregnancy; (4) splanchnoptosis. Clinically we must divide the cases into two general classes: (1) Those presenting no symptoms referable to the misplaced organs; (2) those who experience a train of manifestations resulting from renal prolapse. More than two-thirds of the cases are free from distress of all kinds, and yet some of these kidneys have a very great range of mobility. The misplaced organ is usually discovered either by accident or while an exploration for other affections is made.

**Symptoms.**—In considering the symptomatology we find that pain occupies the foremost place. So-called renal crises are not infrequent; digestive disturbances, cardiac and vascular irregularities, intermittent urinary secretions and various forms of neurosis are the leading subjective complaints. Becquet thinks there is an association between the plexus ovaricus and the plexus renalis, in the congestion which affects them during menstruation, increasing the weight of the kidney, favoring prolapse and explaining the renal pain. Edebohls believes movable kidney to occupy a causal relation to appendicitis.

The special complaints are usually a dragging weight, sometimes dull aching in the loins and side of the abdomen, pain between shoulders and back, stiffness of the neck, occasional sense of something moving in the abdomen, continual crampy abdominal pains and acute paroxysms of pain (renal colic). The symptoms are sometimes worse while standing up and relieved while lying down. Gastro-intestinal symptoms are not uncommon. Constipation is often obstinate. The dragging pain in the loins is due to a dragging and twisting of the renal pedicle. The kidney rotates on its transverse and long axes which will produce traction on the
renal vessels and nerves. The renal crises are attributed, in addition to the foregoing, to a bending and kinking of the ureter as the kidney descends, causing partial urinary retention in the kidney pelvis, producing renal congestion and influencing the digestive tract reflexly through the sympathetic plexus manifested by various gastric disturbances.

Urinary distress may express itself in sudden pain in the abdomen, hardening of the abdominal walls, faintness, giddiness and sometimes shock. During these attacks the kidney may be felt to be enlarged. The urine becomes scanty, may contain albumen, casts, and even blood, but becomes normal again. Polyuria may follow.

Constipation or diarrhea, which is a frequent condition, is often brought about, according to Manchester and Franks, by a dragging on the peritoneal folds at a point where the peritoneum passes from the kidney to the duodenum, in such a way that, when pulled upon, the lumen of the duodenum is narrowed or even occluded. Occasionally the gastro-intestinal disturbances may become aggravated, culminating in violent attacks of colic with nausea and vomiting, abdominal tenderness and rise of temperature.

It is plain to be seen that when we consider all the associated conditions that it is difficult to determine which is of primary importance. To recapitulate:

1. Pain in any portion of the abdomen.
2. Gastro-intestinal deviations and exacerbations.
3. Neurasthenia and hysteria.
5. Appendicitis.

To determine the relations of cause and effect one must lose sight for a moment, at least, of the prolapsed kidney. If one takes this organ for a starting point, he is in very much the same position as the gynecologist, who has set up the pelvic organs as the hub around which all other organs and functions revolve; or the gastro-intestinalist, whose habit of mind
has brought him to regard the gastro-intestinal tract as the point around which all else swings.

V. Kraft-Ebing calls attention to the error so often committed in assuming that gastric symptoms are the cause of neurasthenia when it is associated with gastric symptoms. This is not true unless the neurasthenic symptoms are relieved by a correction of the gastric symptoms. V. Kraft-Ebing also warns against the over-estimation of the importance of the floating kidney so often found in emaciated neurasthenic pluri-paræ. He says that in many instances this floating kidney becomes of importance when the attention of the patient has been directed to it. The author has for a number of years, in cases where a movable kidney was found, inquired after the symptoms which belong to renal displacement, and if none were present he has carefully refrained from mentioning the fact of the displacement. No sooner is a patient aware that a kidney is out of place than she becomes the victim of innumerable discomforts, mostly imaginary. The psychic element should never be ignored. While we may withhold this knowledge from the one concerned, it may be a good plan to inform a friend or relative, with the caution not to tell. Some colleague might discover the nephroptosis and he designedly might give the information you have withheld. The chief points to be made clear are: (1.) Is the kidney alone prolapsed? (2.) Is there associated a splanchnoptosis? Having settled these questions, then other problems arise. Was the kidney primarily prolapsed and did the splanchnoptosis become an attendant subsequently? Or was the splanchnoptosis followed by a renal prolapse? Or did all these organs descend together? We must call to aid all diagnostic means to determine the location of the abdominal viscéra. Gastric and colonic inflation will usually locate the stomach, the descending and sometimes the transverse colon; percussion and palpation can fix the hepatic boundary; inspection in the erect posture will determine the tone of the abdominal muscles.
The author has depended on a confirmation of the probable diagnosis, based on the history and subjective symptoms, by the following signs:

1. A movable tumor, with renal outlines, that can be pushed into its normal location.
2. A tumor in the abdomen, easily palpable at some point between the costal arch and the iliac fossa.
3. Percussion over the back on the side of the kidneys.
4. Palpation by Israel's and Guyou's method.
5. Palpation in different postures.

Errors may occur by mistaking a distended gall-bladder, or a movable right lobe of the liver, the spleen, cancer of the cecum, cancer of the stomach, tongue-shaped lobe of the liver, ovarian cysts, uterine myomata, tumors of the omentum or mesentery. By a process of exclusion, the diagnosis could in the majority of cases be made.

Movable kidney and enlarged gall-bladder were each more frequently met in women than in men, in the proportion of five to one.

The right kidney was more frequently movable than the left.

Movable kidney and enlarged gall-bladder sometimes occurred together.

A differential diagnosis between kidney and gall-bladder, in at least four instances, could not be made until an abdominal incision disclosed the real condition.

Having properly diagnosed a nephroptosis, and then having determined whether the displaced organ occupies the relation of cause or effect, the indications for the management of these cases seem plain although not always so easy of accomplishment.

A movable kidney of moderate degree, not attended by subjective symptoms associated with otherwise normal abdominal contents, needs no especial attention. More than one-half of the cases belong to this class. In spite of the fact that there are no attendant discomforts much is often made of it by the medical or rather sur-
A woman who has been fairly happy and enjoyed a comparative freedom from pain and distress, becomes a fretting, complaining, apprehensive individual and a nephropexy becomes a necessity purely and alone to relieve mental strain, which it does not always do.

We may exclude from treatment the larger number of these cases, provided the medical attendant has exercised proper discretion. The small proportion of them, perhaps one-third, require attention.

We should first note whether the abdominal walls are firm and properly sustain the weight put on them by the abdominal contents. Should they be found flaccid and relaxed, the probabilities are that the loose kidney is associated with a splanchnoptosis. The indications point clearly to abdominal support, by a band or supporter as advocated and successfully carried out by Macgregor. It is gratifying to note the relief often afforded.

If we can determine that all other organs have retained their normal position in the presence of a nephrophtosis producing undoubted symptoms belonging to it, we then have a case that requires permanent and definite support. Pads are out of the question. They are useless, give no support and not only cannot hold the kidney in place, but they are often harmful.

Nephorrhaphy by a well-defined technique is the operation of choice.
THE X-RAY TREATMENT OF CANCER.

JOHN PRENTISS LORD, M. D., OMAHA.

The early, ignorant, and, therefore, incautious use of the Röntgen rays quickly gave numerous demonstrations of their ability to produce harmful effects. It was found that this new form of light possessed other properties, and early attempts were therefore made to utilize, for therapeutic purposes, this something which was found capable of producing changes in the cells, from the slightest irritative effects to those causing more or less complete destruction of tissues. Various theories have been set forth to account for these phenomena, but none of them seem conclusive, and most observers admit a lack of wholly satisfactory explanation.

Stine\(^1\) attributes X-ray burns to "ultra violet light coming from the tube"; Thomson,\(^2\) that "the effects produced were not electrostatic in their origin, as had been suggested, but were due to the chemical activity of the Röntgen rays"; Tesla,\(^3\) that "X-ray burns were due to ozone that was generated on the skin, and possibly to a small extent by nitrous acid." He therefore interposed a screen of aluminum wire, that was connected with the ground between the tube and the person, and no burns occurred.

Rollin\(^4\) exposed his hand to a tube the resistance of which was so high that no current could be forced through it, with the generator used, and, therefore, no X-rays were produced; yet the hand was burned. This experiment showed that the so-called X-ray burns could be produced by electricity, but did not show that they could not also be produced by the X-rays.

Trowbridge\(^5\) stated that the "so-called X-ray burn is due to an electrification,—a discharge at the surface of the skin,—and this electrification may or may not be accompanied by X-rays." Trowbridge exposed his hand to the brush discharge of a generator that
was capable of making a spark 5 centimeters long, with the result that a typical X-ray burn was produced.

Elihu Thomson stated that burns were produced by the X-rays, and chiefly by those rays that are produced by a “soft tube”; that is, one of low resistance. Many experimenters have undertaken to bridle these forces, and, by having them under control and regulatable, apply them to the varying needs in the different cases, which have now come to include a large, increasing, and miscellaneous number of diseases, principally the cutaneous. The results in some diseases—lupus for example—are superior to any other treatment to date.

These encouraging results led to its use in epithelioma. Its effects upon superficial cancer were so encouraging that its continued use by numberless observers (many of whom are wholly trustworthy) have demonstrated its ability to destroy superficial cancer. Some cases of deep-seated cancer and sarcoma have been limited in their progress and symptomatic cures effected. Many failures are reported, but most of them have been cases where the disease had been so extensive that hopeless extensions had been made either before treatment was begun, or where it took place before sufficient time had elapsed for the slow results from the treatment to take effect.

Many cases reported are those too far advanced to warrant further surgical interference, and were refused operation by their surgeons, or shrank from further operation themselves. A few of these have been apparently cured. Many have been benefited by limitation or retardation of the growths, diminution of pain, and a much improved discharge (when present), cachexia lessened, and general conditions improved. Of course, revived and stimulated hopes might be a factor in these improvements.

In a preliminary report of twelve cases by Dr. Sequeira, on the treatment of rodent ulcer by the X-rays, the doctor says: "In no instance has there been a disappointing result. The treatment is painless, and
nothing further is required but to cover the part by a simple antiseptic dressing. It is, of course, too early to say anything as to the permanence of the cures in these cases."

Dr. Williams, in his work, recites these advantages for the X-ray treatment of growths about the face: "New growths attacking the lid of the eye cannot well be treated surgically without removing a considerable part, or perhaps the whole, of the lid. This would require a plastic operation also. By means of the X-rays, I have found it practicable to treat the disease, even when extending to the edge of the lid, without any irritation extending to the eye in consequence of this treatment; and the treatment can be carried on without interfering in any way with the usefulness of the patient's sight or his work." Dr. Williams also says that his experience in using the X-rays for treatment of cancer has demonstrated to him that in certain forms of cancer the pain, odor, discharge, and growth disappear, and that this can be brought about without pain, or inconvenience, or a burn.

The cases treated since January 10, 1902, by Dr. Rustin and myself number twelve.

No. 1. Man, 42 years. Lymphosarcoma of neck involving all angles, year and half standing. Disease so advanced that operation had been refused by Dr. Rustin two months previously. Patient weak and cachectic, breathing and deglutition difficult. Daily exposure of both sides of neck of ten to fifteen minutes duration were begun January 10. The treatments were crowded vigorously because of the advanced condition of the disease. Local improvement was noted in ten days and was continuous for about one month, when the patient was unable longer to come to the office, because of weakness, brain metastases having occurred producing diplopia, deafness, paralysis of the seventh, etc. The result in this case seemed to be only enough to show that the disease could be influenced by the treatment, the swelling in the neck having almost disappeared. The patient died four weeks later.
No. 2. Recurrent carcinoma of the breast in woman of 38. Operation nearly three years previously in which right breast and axillary lymphatics and pectorals were removed. Microscope confirmed diagnosis of cancer. Recurrence in skin and lymphatics above clavicle in less than a year. Disease in skin was removed and lymph nodes above the clavicle were excised. A third operation was done in about eight months for the removal of extensive skin involvement, with resulting defect so great as to necessitate extensive plastic work and skin grafting to remedy. Recurrence in skin in June, 1901, which was quite extensive. When X-ray exposures were begun January 11, 1902, there was marked induration in and about the grafted area which was breaking down. The lymph edema of the arm, which had been enormous from the first, had become so troublesome as to interfere with sleep and the arm was almost useless. Almost daily exposures were made from the start until an extensive burn was produced. During the healing of this, which required about one month, the patient had exposures to the axilla, posteriorly, because of the disease making its appearance out over the posterior axillary fold. After healing of the burn the induration was gone, the sloughing going on in the grafted portion healed, and the skin remains soft and normal. The disease has since involved the other breast, the axillary and supraclavicular lymphatics, and probably those in the mediastinum, and both patient and doctor are discouraged. It is interesting to note that the inner portion of the breast previously indurated, which was badly burned in treating the other side, remains soft and free from disease. (Died in July.)

No. 3. One of apparent atrophying scirrhus of breast in a woman of 45, case of Dr. Rustin's, seems to be uninfluenced in any way after prolonged treatment.

Another case, No. 4, of Dr. Rustin's, recurrent cancer in cicatrices and axillary lymphatics which had not been removed, and who suffered from lymphedema of the arm, is much benefited in every way. The indurated
scars and axillary nodes have largely disappeared, the lymphedema is markedly improved and there was lessened pain in indurated area and arm from the beginning of treatment. The treatment is now temporarily suspended because of incipient burns.

No. 5. Man, 46 years, recurrent epithelioma over mastoid; induration size of dime, with area of ulceration about one-fourth this size; began treatment January 20. At first daily exposures first week, after which about three times weekly, for nearly one month. Induration became limited after about three weeks, after which improvement was rapid; ulcerated area enlarged, but healthy. Treatment discontinued and balsam Peru used to stimulate healing, which has been complete for six weeks; no induration discoverable. This case suffered considerable loss of hair because of numerous small breaks in the tinfoil, through which the rays penetrated. The hair is now returning. Sheet lead is now used instead of foil, which is too destructible.

No. 6. Man, 65 years; same condition as preceding case, many years' standing; destroyed by caustics repeatedly, with recurrences in due time. Induration behind and above lobe of left ear about the size of half dollar, with commencing involvement of parotid and lymphatics below ear. Treatment began in March. Repeated from three to five times per week since. In three weeks there was considerable reaction, which gave appearance of aggravated conditions, but which have been followed by marked subsidence in swelling, pain, and ulceration, together with a greatly lessened area of induration, the parotid and lymph nodes being now apparently free from the disease.

No. 7. Woman, 55 years. Referred by Dr. Bryant. Diagnosis, sarcoma right orbit. Eye bulging one-fourth inch; growth felt beside eyeball and inside orbit. The recommendation for its removal by Dr. Bryant was refused because vision was not interfered with. Treatment was begun with a view of its trial for two weeks,

*Remains well July 30, 1902. Growth of hair fully restored.
inside which time marked improvement took place and she went home within a month, without a seeming trace of a tumor. The treatment was given with the eye closed and no inconvenience was experienced, though a hyperemia was noted at times, when the length of exposures were shortened.

No. 8. Man, 36 years. Case referred by Dr. P. H. Ellis. Epithelioma inside of right cheek which appeared in August, 1900. Excised in January, 1901, when it was about 2½ cm. in diameter. The submaxillary lymphatics required removal in June, 1901, and in following December a final operation was done with hope of eradicating recurrent disease in the neck. His surgeon, Dr. Davis, thought further operation useless and the patient came for a trial of the X-ray treatment April 1, 1902. The whole side of the neck and face were much enlarged and about to ulcerate. The disease was so far advanced as to be most unpromising for any treatment. The disease seemed to advance steadily, the enlargement increasing, the eye being closed from the swelling and edema. The pain, however, seemed to be lessened, and at times absence from pain continued for six or eight hours. Occasionally there was comparative freedom from pain for twenty-four hours. Within the past week there has seemed to be an improved condition, though the ulcerated area is larger. The growth seems more circumscribed and is lessened in size. There is also less pain and the morphia, which has been used throughout, is less often required. Cachexia is becoming marked, though it is our observation that it is not as great as it was. While the case seems most unpromising, yet there seems sufficient warrant for pushing vigorously the treatment, which seems to be doing some good.*

The remaining cases have been under observation too short a time for the influence of treatment to be manifest, and they will therefore not be discussed at this time.

All observers, who have made any considerable use of

*Since died.
the X-ray in the treatment of cancer, report cures of practically all epitheliomas and rodent ulcers, and cures of a few cases of carcinoma of limited extent, where metastases had not taken place. Also a few reports of deep-seated cancer, as of the pylorus and pelvic lymph nodes.

All hope for and expect, with increase of knowledge, experience, and a better understanding of the physics of the rays, to be able to deal successfully with the deeper and more extensive lesions. It is also expected that with the value of the treatment established that doctors and patients will resort to its use before the incurable stages are reached, before metastases have occurred, when results will be better, and the duration of treatment will be shortened. When it comes to be generally understood that this treatment furnishes a fair prospect of success, delays caused by dread of the knife will be less common. If it is urged that recurrences will take place, it can be answered that there are not the same limitations to repetition of the treatment, as obtain with the use of the knife.

Sufficient time has not elapsed to determine the actual value of the X-ray as a therapeutic agent, but sufficient is known of its value to give it a distinct place. With better knowledge more will doubtless be accomplished and its limitations better recognized. Sufficient value is placed upon its effects in cancer to at least recommend it as a prophylactic against recurrences after operations which should not be abandoned in operative cases, where considerable masses of tissue are involved. Its value is established in treating superficial cancer, and it may be used by those experienced in its application almost to the exclusion of other methods.

Earlier observers thought that the rays produced by a coil were necessary. It is now conceded that those produced by a static machine will do the same thing, but more time is required and it may be necessary to place the tube closer than when the coil apparatus is used.
Considerable experience seems necessary to secure the most successful results.

August 1, 1902.—The writer is able to report two cases of epithelioma of the nose cured, and one almost so. A case of extensive lupus of the nose and face and another case of the ear cured. Improvements are also noted in all cases of cancer under treatment. With increase of knowledge of its limitations hopeless cases have not been encouraged to take treatment. Hence more encouraging results.

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In this age of social advancement, an age when competition in the field of social accomplishments and attainments is equally keen with that of every other phase of life, the laryngologist is frequently consulted by those desirous of perfecting themselves, to some small degree at least, in the art of singing. The old village choir, once the goal of the ambitious youth bent on distinguishing himself in the world of song, has yielded to ideals far loftier and with this change have come requisites of a more rigid nature, indeed, exacting in demand on those who would be pre-eminent in their art. So many factors enter into the advice given such consultants, that it may not be amiss to review those conditions to be taken into consideration in examining patients for this particular purpose.

An understanding of the physiology of the organs concerned, with special reference to the delicate adjustments of these organs in the production of tones of varying intensities and pitch, is essential. In the interests of humanity at large, and the vocal instructor in particular, let us not encourage every fair maiden who thinks she can carry a tune, that a bright future awaits her in the operatic world, if she but persist. She persists, to be sure, in torturing all her nearest and dearest friends, including herself, and then awakes, after possibly years of effort, to a realization that she was not cut out for a singer, and might better have improved her youthful years along other and, to her at least, more practical lines.

Most of the great singers are born so, not made, and the years of study and training are spent in perfecting control of organs and muscles already under centers of high specialization. No other organ of the body, under voluntary muscular control, is capable of more exquisitely delicate changes than the larynx. It is
stated that the mind is able to execute a muscular change of not more than one seventeen thousandth of an inch, in this remarkably adjusted instrument. Such being the task before him or her, struggling to attain a singer's renown, let us consider the portions of the body that particularly concern us in the contemplation of this theme.

Grossly, the entire body is our field, for health, bounding health, not the kind merely that is able to keep its possessor out of the sick bed and about, each day of the year, but vigorous, romping, buoyant health is the desideratum of the singer. How quickly one can detect in the languid, husky voice that lack of vitality and energy that must make any singer and song, even under the moment of intense inspiration, a failure.

It is no small task to sing, judging purely from the physical standpoint, and the body as a whole must be equal to the task. Such an aspirant must have a firmness of carriage, an erect, well-developed body, a harmony of weight to height, and withal a muscular development that will stand the strain, and support the voice in the moment of test. How many we see about us, if we but observe, with voices that might have won them distinction, who have failed simply because nature has not endowed them with a sufficiently strong foundation upon which the superstructure may rest.

But to come to organs in detail, let us mention briefly those most remotely associated with the actual tone production, namely, the organs of the intestinal tract.

Apart from the general influence on nutrition, a direct special influence on the organs of the throat must result from any derangement of this portion of the anatomy. How can the tongue suffer from its thick insensitive coating, without surrounding structures suffering, at least to a degree? The resonance organs must be clean, and the small muscles must have clean surfaces, else a defective tone will surely result.

The pharynx cannot be expected to perform the functions of the abdominal excretory organs and remain in
a satisfactory tone-producing condition. And yet not infrequently just that class whose sedentary habits retard the function of the various excretory organs, are the ones applying themselves to vocal or instrumental pursuits. Next let us observe the thorax; its development, bony and muscular; the power of expansion and contraction. It is the resonant drum, the platform for the voice. Its muscles oppose the abdominal muscles, and on the delicacy of adjustment of these opposing forces not a little of the desired result depends. The larynx is essentially the organ of voice production. Within this organ are contained those delicately adjusted muscles that move with incredible accuracy in the execution of fine distinctions of pitch. The size of the larynx has much to do with the position of the voice in general as to its range and breadth. Between the short, delicate chords of the prima donna and the heavy, long chords of the basso profundo there is, of course, a wide anatomical difference: but this organ, important as it is, does not concern us to the extent that the upper resonant portions of the voice tract do. In its protected position it is not exposed to the injuries and insults that beset the naso-pharyngeal and mouth cavities. To be sure, the least pathological change of the pharynx shows itself promptly, and a slight disarrangement may suspend its function altogether; but the possessor of such a throat is immediately conscious of his condition and either abandons his vocal pursuits or seeks aid at the hand of the laryngologist.

The larynx will not permit the wide range of anatomical differences that may be permitted in the respiratory passages, and any deviation from the normal is quickly apparent. To what extent pathological conditions can be corrected by treatment, the laryngologist must determine in rendering an opinion in any given case. We must not fail to consider, while examining this organ, that slight irritation, of an apparent chronic character, may be the result of an improper method of using the larynx, either in singing or even in speaking.
The monotonous speaking pitch, together with the poorly-placed tones, is often far more trying than the more correctly placed singing tone. A course in elocution or primary instruction in the art of singing is of far more avail in the correction of pathological conditions of the larynx, induced by abuse of the voice, than any course in the office of a laryngologist. Our examination of the larynx should detect, naturally, any deviation from the normal in the development of the structures composing or contained within the larynx—adduction and abduction and irregularities of the chords; in fact, this organ must stand the most perfect test, and allows of but little, if any, failure from perfection itself.

With the consideration of the remaining structures concerned, we enter upon a field in which there is not a little contention. It is more with the purpose of eliciting and exchanging ideas of the members of this section, if there be those particularly interested in this phase of the work, upon the essential condition of the naso-pharynx, that this theme has been brought up. Two divisions of this section of our theme should be considered, namely, what changes in the structures of the nose are detrimental to singing; and, having determined this, to what extent may we safely interfere, with a fair expectation of an improvement in the quality of tone produced, and ease in its production. Since the post-nasal vault and its accessory sinuses are such an ideal sounding vault, in fact, a model of all architecture of its kind, it is obvious that any irregularity in its curved surface must result in a corresponding detrimental effect upon the tone. Hyper trophy of lingual and faucial tonsils, and particularly adhesions of the pillars to the tonsilar tissue, are a great hindrance to the progress of the voice student. It is difficult enough at best to instruct the pupil in the correct use of the throat; to train that mental control
of the throat that seems to the pupil at first, at least, an impossibility, and in fact may be an impossibility with muscles bound down by old inflammatory adhesions. Realizing all this, it is not, however, an easy task to advise our patient just what degree of improvement we may expect from operative interference. Such patients are always extremely anxious and inquisitive as to the results of our work, and rightfully so. They usually imagine that they can get along, as they express it, with existing conditions; but if we are sure that we can benefit them, they desire every possible improvement. With reference to the nasal and post-nasal spaces, the vault, we can safely assure them that the removal of all pathological obstructions can be, and should be, accomplished, with an assurance of marked benefit. It is not within the scope of this paper to consider how best to accomplish this, for that alone would be ample for a theme itself.

The hypertrophy of the turbinate, the nasal exostosis, and the post-nasal hypertrophy may and should be removed, that there may be free nasal resonance, an indispensable essential to voice culture. But as to the faucial and lingual hypertrophy we may not speak with such assurance. Here conservatism must check us. We must not forget that flaccid pillars, between which a deep cavity following removal complete of the faucial tonsils exists, may be of little improvement to their possessor over the conditions that first existed. Would it not be better to remove that portion of the tonsils protruding beyond the pillar margins, freeing by dissection the pillars from the remaining tonsil stump, leaving them this support, and thoroughly caring for these fresh surfaces until healed? As to hypertrophy of the lingual tonsil, it might be said that it should be reduced, by one of the various methods, until the epi-glottis rides free of all irritation, and until all sensation of fullness is relieved.

Deformities of the hard palate and lips may be, and usually are, insurmountable obstacles to the singer. One other organ may be merely mentioned in its rela-
tion to singing—the ear. Defects of this sense, from the standpoint of the singer, are more a question of mental interpretation, and as such fall without our sphere. It suffices to say that mental obtundities to sound constitute a hopeless condition, and, no matter to what degree of protection all other organs may be trained, the unfortunate possessor of such an ear can hope for no measure of success as a singer. I do not say that numerous instances of successful singers may not be cited, that fall far short of some or many of the requirements herein suggested. However, it is well for us in advising these patients to have an ideal before us, and to judge of their prospects for success by the degree to which they attain to or fall short of this ideal.
THE MIDDLE TURBINATE.

H. B. LEMERE, M. D., OMAHA.

The most important bone of the nasal cavities is the ethmoid, and of this bone the portion that causes most symptoms and most disease is the middle turbinate body. The reason for this is not that this body is more liable to disease than its fellows, but rather that from its peculiar anatomical relations any such disease is liable to cause very severe trouble. Even the most cursory glance at the surroundings of the middle turbinate body impresses one with its importance. Situated under its anterior third is the hiatus semilunaris, into which empty (1) the frontal sinus through the delicate infundibulum, (2) the maxillary sinus or antrum of Highmore through the ostium maxillare, and (3) around the end of the infundibulum the anterior ethmoidal cells. These openings are then between the inferior and middle turbinate bodies and in what is called the middle meatus. Above the middle turbinate but in almost direct continuity are the openings of the posterior ethmoidal cells into the superior meatus. The middle turbinate is thus related to the frontal, maxillary, and ethmoidal sinuses in the most intimate manner. When we consider that these openings, as shown in the skeleton, are very much diminished in the normal living individual by the mucous membrane which covers the nasal and accessory cavities, it will be readily seen that any undue pressure or irritation will very easily result in the occlusion of their openings.

It is well also to remember the structure of the mucous membrane covering the middle turbinate bone. This mucous membrane forms (1) the epithelial covering of this body, (2) the periosteum of the bone, and (3) between these two the schwell-körper, or swell bodies. The middle turbinate then can swell quite violently, causing pressure, on the one hand, against the septum, and on the other, against the body of the
ethmoid and against the openings of the above-mentioned sinuses. In order to understand the symptoms of pain following such pressure it is necessary to notice the delicate and rich supply of afferent nerve endings supplied to this region and ultimately finding their way to the main trunk of the trigeminal through the ophthalmic and superior maxillary divisions of that nerve and through the sphenopalatine, or Meckel's ganglion.

The enlargements of the middle turbinate may conveniently be considered under the heads (1) tumefaction, (2) hypertrophy, (3) degenerations, and (4) tumors.

Briefly, tumefaction is a temporary exertion of the erectile properties of this body and may be due to direct irritation, as hay fever, or to causes distant, as an ordinary cold in the head. In this tumefaction we may have severe symptoms resulting either from direct pressure of the middle turbinate on the surrounding structure, or from occlusion of the various sinuses and the pressure of their secretions or by the rarefaction of the air contained by them. These symptoms sometimes become so severe that it becomes imperative to relieve them. Cocain and adrenalin are both powerful contractors of the nasal mucous membrane. An application of either of these by a cotton swab will in a few minutes cause such contraction that sprays of water or of oil may be used.

When, however, instead of temporary swelling there is a permanent enlargement due to dilatation of the vessels and increase of fibrous tissue, these symptoms may not be relieved by such constricting agents, and it then becomes necessary to relieve the pressure by operative procedure. This may be done with the cautery or by amputation. Of these two methods I prefer amputation. This is performed by cutting forceps or the wire snare, the parts being cocainized by the application of a small cotton pledget saturated with cocain and left in contact with the surface to be operated on for about ten or fifteen minutes. The anterior portion of the middle turbinate is the part generally causing
the trouble and can be best taken off with the wire snare.

Prolonged catarrhal conditions also produce cystic and polypoid degenerations of this body. These increase to a marked degree the symptoms enumerated and especially the obstruction to respiration. The only relief is by abscession, preferably performed with the wire snare. In these cases it is often necessary to remove the whole of the diseased middle turbinate and cauterize or curette its base to prevent a return of the polyps.

Having made this resume of these different conditions of the middle turbinate, I want now particularly to call attention to the symptoms of pressure and differential diagnosis of these from the symptoms resulting from refractive errors and facial neuralgias proper. And as this is the object of this paper I will not discuss the section (4) outlined above as tumors. I will quote very briefly three somewhat typical cases.

Case I.—Mr. V., aged 25, teacher; presented himself for eye examination, complaining of severe headaches. Examination revealed a slight degree of compound hyperopic astigmatism. His previous glasses were adjusted and for some time his headaches were considerably relieved. A relapse occurred, however. Examination of the nose revealed the middle turbinate pressing on the septum. Patient complained of an annoying post-nasal discharge. A treatment of this condition resulted in a complete disappearance of the symptoms which did not return on the removal of the glasses.

Case II.—Miss P., teacher; complained of facial neuralgia left side. Examination of the nose revealed only slight catarrhal condition. Eye examination showed R. E. normal, L. E.—75 cyl. ax. 180. The teeth were in good order. Electricity and general tonic treatment failed to relieve the symptoms. The eye was considered at fault and glasses fitted. No relief was experienced. The suffering was so intense that treatment for the slight catarrhal condition was instituted and relief was obtained.
Case III.—Mrs. H.; was referred to me for intense frontal headaches and pain in the eyeballs. Examination showed both eyes without refractive or muscular error; fundus normal. She emphatically denied having any catarrhal trouble. Examination of the nose showed left nares filled with mucous polyps. Patient then recalled having had in childhood a foreign body, a glass bead, lodged in the left nose for three years and that this bead was finally expelled by her own efforts. Operation refused. Patient discharged.

In these cases the eye symptoms evidently resulted from the nasal trouble. In Cases I and II the astigmatism was of the form that often causes intense headaches. In Case III the patient insisted in the trouble being in her eyes, when it was very evidently caused by extensive nasal disease.

In cases of trifacial neuralgia in which there exists irritation of any of the three principal points of fifth nerve distribution, the eyes, nose, and teeth, the diagnosis is necessarily made by the relief concomitant with the removal of the irritation.

I deem it a good rule before saddling a patient with glasses for a slight refractive error to attack any disease in the nose and teeth primarily, and if when these organs are in a state of health the symptoms still continue, there is ample time to try the effect of weak cylinders and spheres. Pain on pressure over the point of exit of the nerve is generally taken as evidence of an idiopathic neuralgia of the supra or infraorbital branches of the fifth, but it must be remembered that there is increased tenderness also over these points in frontal and maxillary sinusitis. A symptom of ethmoiditis is a pain in the eyeball, while refractive errors cause an aching over the frontal sinus. Diseased teeth may cause pain over the antrum. Pain then is very often referred from the point of irritation and very often misleading as a guide to the diseased structure. In our efforts to locate its origin the diagnosis must necessarily be made by attacking the most apparent cause and by examination excluding the more healthy points.
As this differential diagnosis is the point I wish to emphasize particularly in this paper, I will conclude by quoting two more sources of error. A swelling of the middle turbinate may cause severe pain in the ear without any abnormal appearance in the drum whatever. An ethmoiditis complicated, as it frequently is, with middle-ear suppuration may raise the temperature to such a degree that mastoiditis is suspected. In closing I will venture the assertions that, as a rule, the middle turbinate is too little considered as the origin of neuralgias and headaches, and that many of our obstinate neuralgias will yield to a timely treatment of this somewhat neglected condition.
INTRANASAL SARCOMA—REPORT OF THREE CASES.

G. H. BICKNELL, M. D., OMAHA.

According to all available information upon the subject, malignant neoplasms confined strictly to the nasal passages are comparatively rare. Bosworth says: "Sarcoma of the nasal passages is by no means frequently met with and its literature is somewhat limited." He found only about fifty cases reported up to 1889 and cites three only as having come under his own observation up to that time. I have not made an exhaustive search of the literature, but my own limited experience, in connection with the testimony of others with whom I have spoken, inclines me to the opinion that sarcoma in this region is considerably more common than our leading writers would lead us to suppose.

The etiology of intranasal sarcoma is no less obscure than that of other regions. Agnew and Sajous believe that benign growths in the nose may, especially following rough or incomplete removal, undergo sarcomatous degeneration. To prove this would be a most difficult matter and the majority of the cases seem to have been primary in origin. Senn says that sarcoma of the nose is seldom seen excepting between the ages of 15 and 20. An analysis of the cases reported in the literature shows the average age at which this growth has been found in the nose to be about 35 years.

The pathology of intranasal sarcoma differs in no essential respect from that in other regions. The most important point in this connection is in regard to the lessened degree of malignancy which these tumors seem to exhibit as compared with those in other regions. Martuscelli says that the prognosis of sarcoma of the nose is not so grave as that of other regions. Hengst says sarcoma of the nasal passages shows no tendency to invade the pharynx and, as in other regions, does not invade the lymph glands. An analysis of the reported cases shows about 50 per cent. of
recoveries; but it must be remembered that in many of these cases the reports were made too early after operation to be of value as data. In children, however, the prognosis is much more grave, rapid recurrence after operation being the rule, and a fatal outcome almost certain.

The clinical diagnosis is fairly easy. A growth presenting a bluish or reddish-gray surface which is soft, flabby and friable and which bleeds upon slight provocation could hardly be anything but sarcoma. No pain is present unless caused by pressure. The most characteristic symptom is sudden and profuse hemorrhage, which may occur quite early in the disease, and is due to the great vascularity of the growth and the ease with which the fragile, newly-formed vessel walls are ruptured.

CASE I.—Mr. H., aged 38. First seen November 9, 1898. Patient said he had recently suffered from several severe attacks of nose-bleed which his physician had been unable to control. He was at this time almost exsanguinated and barely able to walk into the office. Examination of the nose revealed upon the left side, protruding from beneath the middle turbinate, a small tumor, bluish-gray in color, which was soft and flabby and which bled profusely when moved by a probe. It was at once removed by the cold snare and the base well curetted. All hemorrhage ceased as soon as the growth was removed. A clinical diagnosis of sarcoma, which was later confirmed by a competent pathologist, was made and the patient sent home with orders to return in two weeks if possible. He returned in two months, having had more attacks of severe nosebleed, and examination showed a recurrence also of the sarcoma, which was again removed as thoroughly as possible. One month later he returned with a slight recurrence, which was removed with apparently little reaction and in two days he returned home. This was the last time I saw the patient, but the following subsequent history was sent me by Dr. Hendrickson, of Loup City: The third day following the operation redness and swelling appeared on the left side of his
face and neck, and in three more days right arm and leg became paralyzed. The following day he became delirious and never regained consciousness, having repeated convulsions until he died, one week after the first onset of the symptoms. My opinion is that this patient died of an infective thrombo-phlebitis following the operative interference.

Case II.—F. W., aged 30. Seen four months following Case I. He had noticed a growth in his right nostril about one year previous. He had been twice operated on at his home in Oklahoma by traveling charlatans, who had, as he expressed it, twisted the growth off with a pair of tongs, the operation being followed in both cases by very severe hemorrhage. The growth at this time completely filled his right nostril and caused considerable deformity and pain from pressure. The attachment was just above the middle turbinate and quite extensive. It was dissected out in one mass and measured two and a half inches in length and an inch and a half in diameter. The patient was kept under close observation for two months, when he was sent home, no recurrence having taken place, and the last heard from him, almost four years following the removal of the growth, he was apparently free from recurrence.

Case III.—Mr. B. First seen about January, 1899. Patient had noticed a growth in his right nostril about three years before and had been in the clinics of both medical schools here, having been operated on at least twice. On account of a deformity of the septum it was not possible to operate satisfactorily through the natural passages and he was accordingly referred to Dr. B. B. Davis for radical operation, which was done under general anesthesia. The nose was split close to the septum as far up as possible and the sarcomatous tissue thoroughly removed. The patient was then lost sight of for about eight months, when he returned with a recurrence which had absorbed a large portion of the septum, and a second radical operation was done by Dr. Davis. The patient again disappeared for four or five months, when he returned for the third operation
under general anesthesia. This time the nose was split up and left open permanently in order that the parts might be kept under close observation. Since this time he has been seen twice each week and has had several recurrences. The right side of the nose, which was the first seat of the growth, is now entirely free, the recurrence which he now has being on the left side and being due to the growth from the opposite side protruding through the absorbed septum and adhering to the inferior turbinate. The growth is now much slower than at first and much more firm and containing much more connective tissue. The patient is in good health, and had he been under close observation from the first could no doubt have been cured.

The first case does not teach much in regard to intranasal sarcoma, but it does show that no operation, however slight, in a cavity which it is impossible to render aseptic, is entirely devoid of danger. The second case shows the value of complete extirpation of the growth and leads us to hope for a favorable outcome when the patient can be seen sufficiently early. Case III. is a living example of the comparative lack of malignancy of some cases at least, for during the six years since the tumor first appeared he has enjoyed continual good health, has had no metastasis, and the growth has shown no tendency to invade the pharynx or accessory sinuses. The rather alarming hemorrhage which sometimes attends the removal of these growths is at no time a source of danger, as it usually ceases spontaneously when the attachment is severed, and if not, it can be easily and quickly checked by pledgets of gauze soaked in pyrozone. It has been my practice to remove the packing soon after the operation as the reaction seems to be less than when a large mass of gauze is left in the nose. If hemorrhage should occur while the patient is not within reach of a physician, it can be checked by the use of hot water and pyrozone injected into the nose with a soft rubber syringe. The patient should be kept under observation a number of years, if possible, in order to avoid extensive recurrence.
SHALL THE EAR SURGEON OPERATE FOR BRAIN ABSCESS?

H. GIFFORD, M.D., OMAHA.

To those acquainted with the progress of modern otology this question may seem superfluous, and I should hardly put it in this way were it not that one of the best known surgeons in our state read a paper to this society a few years ago in which, after the discussion of a single successful case, he intimated strongly that the otologist had no business to operate on such cases and that if an ear patient requires any brain surgery, the general surgeon should always be called in. The intimation was made in all sincerity, and I take it up, not with any feeling of resentment, but because it raises a question of vital importance in the management of the most serious cases with which the otologist has to deal. If brain abscess were a disease which commonly developed independently of ear disease, or even if, in cases of brain abscess of a distinctly otitic origin, we could with accuracy determine when an abscess is present and where it is located, it might justly be claimed that the work of the ear surgeon should stop at the outer surface of the dura mater. But unfortunately the provinces in the practice of medicine and surgery do not allow the sharp demarcation which the names of the different specialties might seem to indicate; and it is a notable sign of the times that with an increasing tendency toward what, in one sense, is specialization, there is a marked disposition for specialties to overlap each other.

The general practitioner, especially in the smaller places, does much work which ten years ago he would have felt obliged to refer to some specialist. The gynecologist finds himself obliged to become a laparatomist, and once having acquainted himself with the details of abdominal surgery, what is more natural than for him to think that such an affection as floating kidney ought
to be included in his domain; or that he should occasionally operate upon appendicitis on account of the possibility of its being a salpingitis. The dentist tends to become an oral surgeon; the neurologist realizes the desirability of studying the eye; and the otologist, whose work not many years ago was, in Germany, confined strictly to the limits of the temporal bone, has been compelled on the one hand to extend his work into the nose and throat, and on the other, more and more into the domain of brain surgery. I use the word "compelled" advisedly, because the surgeon is certainly compelled to do that which in the long run will best serve the interest of his patients, whether or not this involves the overstepping of what might seem to be the limits of his specialty. To establish this necessity I think the following considerations are sufficient: Statistics vary as to the proportion of brain abscesses which are due to ear disease. Ivorner gives it as one-third, while von Bergmann estimates it as one-half of all; and if we add to these the cases where the abscess results from disease of the orbit or of the accessory nasal sinuses, which in this country, at least, generally come under the observation of the same men who do the ear work, it is evident that the ear surgeons have probably a better opportunity of studying the clinical symptoms of brain abscess than any other class of practitioners. But even granting this, if it were true, as was formerly taught, that a brain abscess generally occurs at some distance from the original bone lesion and could generally be located by the occurrence of focal symptoms, it might still be contended that when the diagnosis is made it would be proper for the ear surgeon to step out. But the investigations of Körner have shown that the great majority of otitic brain abscesses come, at some point of their periphery, into close proximity to the diseased portion of the temporal bone from which they take their origin; furthermore, that almost without exception, by opening the mastoid first, the diseased bone can be followed clear to that portion of the dura mater which lies nearest to the abscess. It
should also be remembered that the localization of an abscess by the focal symptoms is a most uncertain affair. The earlier operators for brain abscess who depended upon derangement of motor functions for this localization were grievously misled; and it is now recognized that such symptoms point less frequently to disease of the motor centers than to pressure produced by the abscess upon the internal capsule. In fact, one may have the most beautiful array of focal symptoms without any abscess being present, or, on the other hand, an abscess the size of a hen’s egg may exist for a considerable length of time without any such symptoms occurring. The opinion of Körner is that the surest way to reach a brain abscess is to open the mastoid thoroughly, following the diseased bone until the dura mater is reached, and to make the incision at the point where this membrane seems to be most affected; and this view has recently received strong confirmation by a brilliant series of cases reported by Preysing. When in addition to this we consider that, in many cases, symptoms of brain abscess have been relieved by a simple mastoid operation, by opening an extradural abscess, or even by a paracentesis; in all of which, the attempt to reach the supposed abscess directly from the outer surface of the skull might have been a fatal mistake, it is evident that the best interests of the patient in a case of suspected brain abscess from ear disease can only be secured by a thorough exploration of the mastoid by the surgeon best versed in this kind of work, who, I think it will be conceded, is, in most communities, the ear surgeon of wide experience. If this has been done, and the ear surgeon has discovered a diseased portion of the dura indicating the location of the abscess, he can hardly be expected to stop at this point and ask the general surgeon to make the incision into the brain. On the other hand, if the exploration of the mastoid has failed to reveal any clue as to the location of the disease, and it is deemed best to trephine the outer surface of the skull, I will readily admit that the training of the gen-
eral surgeon is a better preparation for this kind of work than that of the average ear surgeon, and where it is practicable to secure his advice and co-operation, I should agree entirely with the writer of the paper referred to and should be glad to have this part of the work done by the general surgeon. Unfortunately this division of the work is not always practicable. The ear surgeon is liable to be called into the country to do a mastoid operation and find a brain abscess needing immediate attention; and if in this or other ways he acquires as much experience in trephining as the average general surgeon, it seems to me that there can be no objection, thereafter, if he takes the entire charge of such otitic brain abscesses as may come in his way. The brain abscesses of traumatic origin will of course always remain in the department of general surgery, but a review of the literature of the past few years makes it evident that the treatment of otitic brain abscess is more and more becoming the work of the otologist.

We must now consider another point raised by the paper of Dr. Summers, namely, that the bulk of the work done by the eye, ear, and throat specialist does not tend to give him that familiarity with the details of aseptic surgery which operations on the brain should demand. The point is undoubtedly well taken. In most of the operations done by specialists of this class, good results can be obtained with clean instruments whether the operator has washed his hands within the week or not, and if the otologists accept the responsibility which the treatment of these cases throws upon them, they must keep thoroughly abreast with all progress in brain surgery and in the theory and practice of asepsis.
ULCER OF THE CORNEA IN SMALLPOX.

D. C. BRYANT, M. D., OMAHA.

Since the beginning of the history of medicine up to the time of Jenner's great discovery, smallpox was one of the chief causes of blindness in the human race. It is estimated that before vaccination became common from 30 to 35 per cent. of blindness, in civilized countries, was due to smallpox. This percentage has been greatly reduced, in fact almost wiped out, in countries where vaccination is common or is the rule rather than the exception. I was deeply interested, a few years ago, when making a trip through Old Mexico, in the great number of cases of blindness seen in every town, which I was told were due to smallpox. These cases seemed quite common, and upon further inquiry I found that as a rule the poor people—the peons—were rarely vaccinated and rarely employed a doctor when they were sick with smallpox, or any other disease for that matter. Probably Mexico, to-day, could furnish the largest percentage of cases of blindness, resulting from smallpox, of any of the civilized countries of the world. Fuchs claims that among the blind of his own country and Germany the number of cases caused by smallpox will not exceed 3 or 4 per cent. I believe in our own country the percentage is much lower still. However, during the past winter, while Omaha and this state were being visited by quite an extensive if not severe epidemic of smallpox, I had an opportunity of seeing a number of cases in which there were very severe eye complications. Although other diseases of the eye, as conjunctivitis, iritis, etc., arise in smallpox cases, ulcer of the cornea is the most serious, as the destructive nature of this disease often plays havoc with the eye as a visual organ, many times leaving such scars on the cornea as to completely destroy vision or reduce it to a point below that of any practical usefulness. Although, according to modern authorities, the cornea is never the site of actual pus-
tules still it is a fact that ulceration often begins here independently of any lid or conjunctival trouble apparently as a primary lesion. All of the cases coming under my observation during the past winter were those of ulcer of the cornea, the most of them apparently primary. A short history of three of these cases is here given to show that in spite of the mild or attenuated form of smallpox with which our country has been afflicted for the past three or four years, still it is capable of producing, and does produce, some very serious complications.

CASE I.—Male, aged 40; was taken sick with smallpox the latter part of December. He says he was not very sick at any time, though his head, face, and body were very densely covered with pustules. Some six weeks after the beginning of his sickness he came under my care on account of trouble with one of his eyes. At that time his face and forehead were very thickly studded with recent scars. Several of these could be counted on each upper eyelid, and also two or three on the lower lids of each eye. There was a very large ulcer of the cornea of the left eye covering the central portion and taking in more than half of the surface of that membrane. There was present also plastic iritis with posterior synechiae. The patient stated that the trouble in his eye had begun simultaneously with his general sickness and he had suffered severe pain all of the six weeks that he had been quarantined. Under the use of antiseptic lotions, atropine, and a bandage, the eye slowly improved so that at the end of six weeks more the patient was in a condition to be allowed to return to his home in the southern part of the state. At the time the patient was discharged the broken surface in the cornea had healed, leaving a large central leucoma which shut out all useful vision in that eye. Later on, when all irritation has disappeared and the opacity has cleared up as much as possible, an iridectomy may possibly again make this a useful eye.

CASE II.—Male, aged 32; began to feel unwell January 2, 1902, but did not consider himself sick enough
to call in a physician for three or four days after. On making an examination the doctor pronounced his trouble smallpox and placed the patient and family under quarantine. Some five weeks later the case came under my care. At this time patient was suffering severely with pain in the left eye, and said that from the very beginning of his disease the eye had caused much more trouble than the smallpox had. In this case the ulceration occupied the lower part of the cornea, extending somewhat above the pupil. The final result in this case was considerably better than in the first, as the most dense part of the scar resulting from the ulceration was below the lower edge of the pupil, leaving the portion of the cornea over the pupil fairly clear, so that the eye will be a comparatively useful one.

Case III.—Child, 2½ years of age. This patient, according to history given by the mother, was attacked with smallpox about the first of January. In this case the eye symptoms were the first to call the attention of the parents to the child's condition. From the very first the pain in the eye was very pronounced and continued for two months. The mother said the child was never sick enough to remain in bed, although very thickly covered with the pustules. This case I did not see until the suppurative process had stopped and the broken surface in the cornea was practically healed. At the present time a large, dense leucoma occupies all of the central part of the cornea, extending so close to the periphery as to preclude the possibility of vision being greatly improved at any future time by an iridectomy.

From what little I could glean from different writers on this subject (the literature not being very abundant) it seems that the corneal complications may arise in various ways. They may be caused by pustules on the ocular conjunctiva or by pustules situated on the edge of the eyelids. They may also be caused by a conjunctivitis without any pustules, and also from intense swelling of the lids, as sometimes happens where the eruption on the skin of the eyelids is very severe. They
may also arise, as has been stated before, apparently as a primary lesion without any lid or conjunctival complications. This is the most common way, and then the cause is claimed (by most writers) to be an endogenous inflammation due to germs circulating in the blood. It is also claimed by most writers on smallpox that the most severe forms of ulceration of the cornea do not present themselves until the last stage of the disease, and yet in all three of these cases just reported the corneal symptoms began at or before the time the eruption appeared upon the skin. But whatever the modus operandi by which the ulceration is brought about, or whatever the stage of the disease may be at which it is most liable to appear, the fact remains that it does occur even in the very mild cases of smallpox, and that wherever it does occur it is always a menace to the future usefulness of the eye.

For many years past and until the last three or four years extensive epidemics of smallpox have been so rare in this country that we as physicians had nearly forgotten that eye complications in this disease are liable to be serious. In the cases reported in this paper little or nothing could have been done in the way of treatment to prevent the eye complications, on account of the early period at which the ocular disease began, still I believe that in every case of smallpox, however light it may be, the care of the eyelids and conjunctiva should form a routine part of the treatment, so as to prevent as far as possible the more serious complications of the cornea. Two points have been strongly emphasized in these cases coming under my care during the past year: First, the early period in the disease at which the eye trouble appeared, which seems to be contrary to the experience of most observers; and second, the seemingly small reparative power left in these patients after an attack of what was apparently a very mild form of smallpox, so mild in most cases that the patients were confined to the bed for but a few days, if at all. The healing process in each and every one of these cases was prolonged beyond that of ulcer of the cornea from most other causes.
TWO CASES OF BRAIN ABSCESS.

F. S. OWEN, M. D., OMAHA.

The year ending in the spring of 1901 was notable to otologists in the vicinity of Omaha, not only for the unusually large percentage of mastoid complications of acute otitis media, but also for the number of intracranial complications of chronic suppurative disease of the ear. The frequency of the mastoid complications was without doubt due to the prevalence of epidemic influenza in a severe form, which seemed in an unusual degree prone to middle-ear complications and in the chronic suppurative disease to intracranial complications. It was the author's privilege to treat during that year four cases of intracranial abscess, two of which he has the honor to present in this paper for your consideration.

Case I.—W. H. D., male, aged 30, laborer, was seen by the writer in consultation with Dr. Edminster April 26, 1901. The following history was elicited from his wife and relatives: When twelve years of age had typhoid fever, during which a discharge occurred from the left ear, but ceased after a few weeks. Since then, at intervals of a few months or at the longest two years, pain in the ear, followed by a discharge, has recurred with attacks of coryza or exposure to cold. The discharge had always ceased after a variable length of time until about a year ago, when he suffered from a severe attack of influenza. Since then it had continued more or less copious. Family history negative.

Present Illness.—Four weeks prior to the above date he was seized with chills, several regular rigors occurring through the day. Chilly sensations continued for two or three days. During the time he perspired freely and complained of pain all over the body. Though too ill to work, the only treatment employed for the first week was in the way of simple home remedies. However, on the seventh day he became so ill that a physi-
cian was called who found him suffering from what he pronounced grippe. There was considerable fever, pulse high and bounding, headache and pain in the back and muscles of the body. Complained of being chilly and perspired freely. In two or three days these symptoms subsided and he was again able to go about. Had improved to such a degree that he engaged in a game of baseball five days preceding the date of the consultation. It was after engaging in this game that he first complained of pain in the left side of the head. This pain from day to day grew worse, and it was now noticed that he paid little attention to what transpired about him. He was very restless and slept but little on account of the pain in the head. After this pain had continued three days Dr. Edminston was called in, who at once recognized that the diseased ear was doubtless the prime factor in producing the conditions found. In spite of proper and vigorous treatment his patient grew worse and on the second day of his attendance his conditions became so alarming that he requested council.

The writer saw the patient about 5 o'clock in the evening and noted the following conditions: The patient, an unusually well built and apparently strong man, lay on the bed on his right side with his left hand to his head. When interrogated a painfully long pause would elapse before the answer came. If "yes" or "no" it was usually given correctly, but if it involved a sentence of a few words, he would commence the answer correctly, when his memory seemed to lapse and he would either not finish it at all or would turn to his wife and say, "you tell him." He manifested a strong desire to be left alone, and when so left would immediately drop off into a doze from which it took a sharp word or a vigorous shake to arouse him. He would, however, frequently start from this apparent sleep and complain bitterly of pain in the left side of his head. His pupils reacted sluggishly to light and were slightly dilated, the left being slightly larger than the right. Aside from this there was no oculo-motor paralysis.
Ophthalmoscopic examination showed marked optic neuritis in both eyes, more in the left than in the right. Besides the blurring of the disc common to both by exudation, which seemed to extend some distance beyond its margin and veil the retinal vessels at various points, there were present in the left minute hemorrhages of streaky form about the disc. Otoscopic examination showed a large perforation in the left membrana tympani through which a quantity of fetid pus issued. Hearing by both aerial and bone conduction was lost. The right ear was normal. There was no swelling over the mastoid region, nor was pain produced by deep pressure at that point. Above the auricle the tissues were edematous and pressure over this region produced severe pain.

There was no observable paralysis, though there seemed to be less power in the right leg, and it was observed that when he walked he turned slightly to the right. Knee-jerks were normal. The temperature was normal, pulse 60, respiration 18. A diagnosis of brain abscess was made and an immediate operation advised. He was removed to the Presbyterian Hospital, but, as it was late when he arrived there, his head was shaved and otherwise prepared for the operation, the time of which was set for the following morning at 8 o'clock.

At 8 o'clock on that morning a marked change had taken place. The patient lay profoundly unconscious, the face deeply livid, the pupils widely dilated and fixed. The respiration 56 per minute, labored and stertorous. The temperature in the axilla was 104°, pulse 100. Save a slight rigidity of the head and neck no motor phenomena were observed. It is to be regretted that the various changes in the condition of the patient which were so suddenly developed were not noted. From the symptoms present it was thought possible that there had been a leakage of pus into the lateral ventricle with supervention of general leptomenigitis.

It seemed apparent to the physicians present that the end was near at hand and as an operation offered
little or no hope, the relatives refused to have it performed. However, the patient's condition remained practically unchanged throughout the day and at 8 o'clock in the evening consent to operate was finally obtained. Although the procedure offered but a forlorn hope, it was proceeded with without delay. Dr. Allison kindly consented to be present at the operation, and rendered valuable assistance. The following operation was performed:

Operation.—The mastoid antrum and cells were opened and obliterated in the usual way. The antrum contained the smallest quantity of pus. The cells below the mastoid antrum were free from disease and secretion. The outer wall of the attic was removed and the tympanum exposed. The ossicles were found imbedded in granulation tissue and bathed in pus. After these were cleared out it was discovered that the bone extending outward and upward from the external wall of the attic and aditus was soft and its cancellous tissue filled with pus. On lifting the soft parts above the external auditory meatus a small quantity of pus was found between the periosteum and bone. It was determined to expose the brain at this point. The first incision was then extended forward along the zygoma for some distance and a second incision carried from this point in a half circle, with the convexity upward, to the occiput. This flap was then dissected up and turned down. With rongeur forceps the softened bone was easily removed, commencing at the upper margin of the external bony meatus and extending upward and backward about three-fourths of an inch beyond this point and inward, removing the upper wall of the auditory canal including the tegmen tympani. Through this large aperture the dura mater, which was soft and opaque, bulged with considerable force. No brain pulsations were visible. It was incised and no pus or cerebro-spinal fluid was observed in the subdural or subarachnoid spaces. The surface of the brain had a colorless appearance. The point of a pair of closed scissors was pushed into the substance of the brain
and when it had entered less than half an inch pus commenced to spurt out, and when the scissors were opened a great quantity continued to flow for some time, mingled with shreds and portions of necrotic brain tissue. At least five or six ounces escaped. A greater quantity than that was estimated by the observers. The cavity was then washed out with a saturated solution of boracic acid and a rubber drainage tube inserted and a thick dressing of sterile gauze applied.

The immediate effect of the operation was a marked improvement in the patient's general conditions. Six hours subsequent the temperature had dropped to 101.8°, the pulse to 90, and respiration, which had been 59, to 30 per minute. The lividity of the face had disappeared and he began to show some intelligence. He asked for water and recognized his wife when she called in the morning. However, the rigidity of the head and neck remained and after the immediate improvement his conditions remained unchanged for the next twenty-four hours. At the end of that time he rapidly grew worse. The temperature rose to 104.2° and his respiration to 84 per minute, and he soon sank into a deep coma and died fifty hours after the operation.

Case II.—Edward M., aged 16, came under observation May 1, 1900. Gave the following history: Right ear had discharged since childhood. Had suffered frequent attacks of pain in the left, followed by a discharge which always ceased after a short time.

On the above date the writer was called to see him on account of a severe pain in the left ear. The drum membrane was found to be bulging from pent-up secretions. It was freely incised and properly dressed. On the following day the pain, which on the previous day he had located in the ear, had ceased, but in its place he was suffering greatly from a general headache. As his temperature was considerably elevated and grave complications were feared, he was removed to the Presbyterian Hospital for more careful observation. From
day to day the pain in the head and the temperature gradually increased. Since the symptoms did not point to the ear as the prime causative factor, Dr. Gilmore was called in on the third day of his illness, who was on the following day able to pronounce the disease typhoid fever without doubt. It ran a protracted course typical of severe typhoid, with complications of epistaxis, severe hemorrhages of the bowels, etc. Convalescence was established in the tenth week of his illness. The discharge from the left ear had ceased promptly and the ear had fully recovered, but the right continued to discharge and was cleansed daily throughout the course of the fever.

On July 22, in the second week of convalescence, he had six convulsions, two in the morning and four in the evening. The convulsions in the morning succeeded each other at an interval of half an hour and lasted about ten minutes each. The convulsive movements commenced on the left side of his face and thence spread to the left arm and left leg. These were followed by loss of consciousness which lasted about an hour. He lay throughout the day in a stupor from which it was difficult to arouse him. He was unable to take food or medicine. It was found after the convulsions had passed off that the left side of his face was paralyzed and that he had but feeble power in the left arm. The convulsions in the evening affected as before the left side and commenced at 9:30 o'clock. They succeeded each other at intervals of fifteen to thirty minutes and lasted from five to ten minutes each. Again unconsciousness supervened, but it was not definitely ascertained how long he remained in this state as he seemed to pass into a quiet sleep which lasted until morning. The pulse during the morning and evening convulsions reached 120 and 140 successively. During the intervals it ranged from 95 to 101. Temperature and respiration normal. After the evening convulsions it was found that the paralysis of the arm was complete and it extended to the leg, which he could now move but little. There was little change in the
patient's condition for the next two days. Temperature was from 97.3-6° to 100°, pulse from 64 to 84 per minute. He was drowsy and slept most of the time. Frequently complained of pain in the right side of the head, at times of pain in the left arm. The second night following the convulsions, however, he became very restless, his fever slightly elevated and he slept but little. The next morning at 7 o'clock he had another convulsion which lasted five minutes. During this convulsion the pulse ran up to 150 per minute. Again at 1 and 3 o'clock other severe convulsions occurred, which were followed by unconsciousness which lasted about an hour, after which he seemed to doze off into a sleep which lasted until the next morning. It was on this morning, the third following the first convulsion, the writer saw the patient. The paralysis of the leg and whole left side was now complete. Drop-wrist was absolute. There was distinct optic neuritis in both eyes, the blurring of the disc and engorgement of the retinal vessels were more marked on the right fundus. There was no oculo-motor paralysis. The patient complained of pain on the right side of the head. He was drowsy and would immediately go off into a doze when left alone, but could be easily aroused and when interrogated answered questions correctly and without hesitation. The temperature was 98.3-6°, pulse 64, respiration 18.

The sudden onset of the symptoms, ushered in by convulsions which were followed by motor paralysis, the optic neuritis, slow pulse, low temperature, hebetude of mind and the history of chronic purulent otitis media, all pointed plainly to brain abscess; and since the motor phenonema were confined to the left side opposite the suppurating ear, the optic neuritis more pronounced in the right eye, and pain on the right side of the head, it was certain that the abscess was located in the right tempo-sphenoidal lobe. An immediate operation was advised, but his father, an ignorant man, would not permit it and no amount of persuasion could
gain his consent. Nothing further then could be done but to wait and watch the progress of the disease.

From now on the patient's condition rapidly grew worse. The pulse varied between 64 and 106. The variations were in cycles of a few hours. It would gradually increase to the maximum and then gradually decrease to the minimum. The temperature as a rule remained normal, never above, but several times registered subnormal. The optic neuritis increased at a rapid rate. Blurring of the discs became marked and the retinal vessels obscured to some distance, while here and there small flame-like hemorrhages could be seen. He was very drowsy and dozed most of the time. When aroused sufficiently he would reply to questions in a monosyllable, usually intelligibly. He was very fretful and wished to be left alone. Movements of the bowels were frequent and involuntary. His emaciation steadily increased and his face assumed an ashy pallor. His strength rapidly failed until the weakness in the unparalyzed side became so profound that he was unable to move the hand or leg and it was difficult to tell whether he was not also paralyzed on this side.

At 8 o'clock on July 30, eight days after the first convulsion, when approaching dissolution was evident, the father finally gave his consent to the operation. He was immediately removed to the operating room and prepared for it.

Operation.—The right mastoid antrum and cells were quickly exposed and cleared out. They were found to be filled with pus and granulation tissue. Before this step had been completed respiration suddenly ceased. Artificial respiration soon restored it, but normal respiration would continue but a moment when again and again it would cease and artificial means would have to be resorted to. The heart, however, continued to beat, but rapidly failed after the cessation of respiratory efforts. Under these unfavorable conditions, while an assistant carried on artificial respiration the remaining steps of the operation were
quickly executed. A second incision was made commencing above and a little in front of the auricle at the upper limit of the first incision and carried backward, describing an arc to a point a little below the occipital protuberance. The soft parts were dissected up and a large semicircular flap turned down and a large area of bone fully exposed. A disc of bone one-half inch in diameter was removed from the squamous portion of the temporal at a point one inch and a quarter posterior to and one inch and a quarter above the external auditory meatus. The dura mater was found to be normal. It bulged slightly into the opening. There were no cerebral pulsations observed. It was incised and an aspirator needle attached to a syringe was pushed into the brain tissue inward, downward and a little forward. When the point had entered the brain substance little more than an inch it was felt to enter a cavity and thin pus was seen to fill the syringe. The needle was held in situ and a bistoury was passed along it to the abscess cavity and the opening enlarged; more pus oozed out but not to exceed in all two drams. Thinking that such marked phenomena must have had their origin from a greater quantity of pus, the needle was thrust again and again in different directions through the brain substance in search of another abscess cavity in vain. The cavity was gently irrigated with a saturated solution of boracic acid, a drainage tube introduced and stitched in place. The wound was then dressed in the usual way and the patient placed in bed. During the short period which elapsed while placing the patient in bed when artificial respiration could not be carried on, breathing again ceased. The radial pulsations could not be felt, but the heart was still found to be beating faintly. It promptly arose to its former strength on resumption of artificial respiration. It was necessary to continue this procedure constantly for three hours after the operation.

The patient for the next twenty-four hours was very
feeble. Temperature from 97 to 100.2°, pulse 140 to 150 per minute. The temperature then became normal, but the pulse ranged high for four days, then subsided. The course toward recovery from now on was slow but uninterrupted. The restoration of his muscular power was in an inverse order to its loss. On the third day following the operation he had gained considerable strength in the previously paralyzed leg, could move it about and raise it from the bed. Then on the sixth day he had gained considerable strength in the arm, but the restoration of the muscular powers of the face was not complete on the fifteenth day. From the first convulsion he had passed his urine and all movements of the bowels involuntarily and continued to do so up to the sixteenth day after the operation. Within four days his normal intelligence seemed fully restored and he again took active interest in what transpired about him. The fundus of the eyes showed a gradual improvement from time to time, but there still remained traces of optic neuritis on the last examination six weeks subsequent to the operation. The wound at the trephine opening was completely healed at the end of two weeks, but the mastoid portion was more protracted. On August 17 his father, being dissatisfied with his progress, removed him from the hospital and refused further treatment, saying he would perform that function himself. Within a week, however, on the twenty-third day after the operation, to the writer's great surprise he appeared at his office walking unassisted and with considerable firmness. On removing a bundle of soiled cloths from the side of his head, a foul-smelling poultice was found covering the region of the ear. In spite of this the mastoid wound continued to do well and was healed at the end of six weeks, the date of his discharge.
AUTOINTOXICATION IN RELATION TO NERVOUS AND MENTAL DISORDERS.

JAY G. ROBERTS, M. D., HASTINGS.

Although the principle of autointoxication has been empirically recognized or assumed since a very distant time, it has only been at a comparatively recent date that anything like a definite or scientific conception of the subject has existed, and even now much of the information on the subject is in a very chaotic state and hard to classify. That it was recognized and even greater stress laid upon its correction than its importance demanded is evidenced by the universal practice of bleeding and purging resorted to by our forefathers in medicine. The time-honored custom among the laity of taking a blood purifier, always composed of cathartics and eliminants, is doubtlessly prompted by a vague and perhaps unconscious conception of the principle of autointoxication, and fact it is that many of these time-honored customs have accomplished results which our scientific scorn has not yet been able to relegate to oblivion. The influence of autointoxication upon nervous and mental disorders has been hinted at by the wide-spread tendency toward eliminative treatment, but, with the exception of Brower, Butler, Vaughan, and a few others, authors have laid little stress upon this factor in the etiology of this class of disorders.

The toxic effects upon the central nervous system of noxious gases and toxins absorbed from a sluggish alimentary canal are manifested by the attendant headache, vertigo, and general malaise, while in children, fever, rapid pulse, and even convulsions are very common. Nor are these the most pernicious of its effects. By its influence upon the general metabolism it contributes largely to that more important form of autointoxication, long known under that ambiguous and much abused term, the “uric acid diathesis.” As has long been known, uric acid itself is not a toxic sub-
stance, but a perfectly harmless one, nor are the manifesta­tions of the so-called uric acid diathesis due to the retention of uric acid in the system, but to the presence of certain products of suboxidation known as the allox­uric or purin bases, prominent among which are xan­thin, hypoxanthin, guanin, and adenin. These violently toxic substances are the products of the suboxidation of the worn-out body cells, leucocytes, etc., and certain articles of food, which by complete oxidation are converted into the harmless and inert uric acid, and thus eliminated. It may readily be seen, therefore, how anything which might interfere with the complete oxidation of the purin bases becomes at once a factor of supreme importance in the welfare of the neurotic individual. The effect upon the oxygen-carrying properties of the red blood corpuscles, of the absorption of toxic matter from the intestinal canal, is well known, but the effect of this diminished oxidizing power through the production of such highly toxic substances as the purin bases has not been properly estimated. It is evident, therefore, that the form of autointoxication usually considered, namely, that arising from morbid alimentary action, is secondary to that graver form due to suboxidation, in the production of which it may be and usually is a factor.

The beneficent effects of strychnia in the treatment of nervous disorders, which it might naturally be expected to aggravate, are to be explained on the basis that by stimulating metabolism and respiration it increases the oxidizing processes of the body, thus completing the oxidation of the alloxuric bases. Likewise the ill-effects oftimes noted upon the sudden withdrawal of tea and coffee from neurotic patients. As previously stated, the purin bases are also derived from certain articles of food, viz., those rich in nucleins, as liver, kidneys, spleen, thymus, sweet-breads, etc. In arranging a diet, therefore, for neurotic patients these articles should be carefully avoided.

In my article before this association last year I stated that autointoxication was the fundamental cause
of the majority of cases of neurasthenia. I wish to go farther now and say that in my opinion it is the primary cause in all cases. Unstable nervous equilibrium, heredity, etc., may be predisposing causes, but the underlying condition is a toxemia, and the various manifestations of the disorder simply the effects of the toxic substances upon the sensory nerves or centers. It is apparent, therefore, that the influence of overexertion, either mental or physical, in neurasthenia is not alone confined to its consumption of an already exhausted store of nerve energy, but by increasing nuclear debris always the product of activity mental or physical, it increases the alloxuric bases, which in turn exert their pernicious effects upon the nervous system.

A critical observation reveals in all but degree of intensity a startling resemblance between the various sensory manifestations of neurasthenia and those of many infectious diseases, notably influenza, in which the cephalalgia, backache, and other sensory symptoms are held to be the effects of the toxins of the causative germ. So in neurasthenia, the pains are undoubtedly due to the effects upon the sensory nerves of these self-manufactured toxins.

The influence of autointoxication in epilepsy is too well known to need mention, though it may be said that while epilepsy is essentially a habit spasm, autointoxication, through its influence upon the inhibitory centers, contributes to the formation of the habit.

The proneness of autointoxication to produce convulsions in children is evidence of its importance in disorders of the convulsive type.

In no condition perhaps is autointoxication a more pronounced factor than in migraine, and to this fact is due the success recently obtained in the treatment of this affection by oxygen inhalations.

Nervous dysmenorrhea is always found to assail women with sluggish and imperfect elimination, the so-called bilious type, while from the fact that menstruation is to some extent an eliminative function, the autotoxic state may be increased by mechanical in-
terference with its performance. To this cause also may be attributed the various neuroses and other manifestations of the menopause when the eliminative function of menstruation is suddenly thrown upon the other organs of elimination, and the subsidence of such manifestations when these organs have fully assumed this extra responsibility. So also the mental disturbances of pregnancy and the puerperium, where the organs of elimination carry on the work of two, which work constantly increases in amount up to the time of delivery.

Many operation neuroses are doubtless dependent upon autotoxemia due to sudden inhibition of elimination through fright, shock, or perhaps the action of anesthetics, the inhibitory effect of which, upon the various vital processes, is well known. It is likewise a factor of more or less moment in surgical shock, a fact which is borne out by the efficacy of transfusion or hypodermoclysis in its treatment, which effect cannot be entirely the result of stimulation of the heart or increasing blood pressure.

That the various neuroses resulting from psychic shock or insult are brought about to some extent at least through the agency of autointoxication is not to be doubted by any who have noted the pale, limpid urine with its almost total absence of solid constituents in these cases.

How far this factor of autotoxemia is concerned in the production of tabes and paretic dementia can at present only be surmised, but that progressive sclerotic changes may be due to the continued irritation of the products of chronic autointoxication is no more unlikely than that they may be due in syphilitics to the toxins of syphilis which is now generally conceded. When we remember that some of the severer forms of autointoxication often resemble very closely in their manifestations these two grave disorders, we cannot but be struck with the plausibility of the suggestion.

Many cases of temporary mental aberration, unconscious automatism, and acute confusional insanity are due to more or less acute conditions of autointoxica-
tion. As evidence of which I will submit a case which recently came under my notice. The patient in question had but recently made a considerable journey by rail, the influence of which in aggravating conditions of autointoxication is well known.

CASE.—Mr. P., age 52, a well-built, intelligent appearing man, of medium height, weighing about 170 pounds. Had just come a considerable distance to see a friend other than whom he had no acquaintance in the city. On the evening of the day following his arrival he began to act strangely, seemingly out of his head, with great restlessness, which rapidly increased in intensity until I was called at 8 o'clock. Found the patient in a state of great excitement, though not violent unless restrained forcibly. He seemed entirely oblivious to his surroundings and kept constantly moving about from place to place, reminding one very much of the active delirium of typhoid. He had lost all sense of propriety and would urinate wherever he happened to be, regardless of the presence of ladies or others. The pupils were moderately dilated, tongue coated, temperature 101° F., pulse 99, urine slightly acid, sp. gr. 1025; no sugar, albumin, or casts; large amount of phosphates. Inquiry of his friend developed the fact that he was badly constipated, his bowels not having moved for a week. No hospital being available he was taken to the county jail and placed in a cell. A mercurial purge and an enema were administered and a dose of bromides given, which, however, had little or no effect, as his restlessness and excitement continued until morning, when he was almost exhausted. The cathartic then operated thoroughly and was followed by almost immediate quiet and signs of returning reason. By noon he was quite rational, though very weak and somewhat dull. A saline was given and he was removed to his friend's home, where he made an uninterrupted recovery. Subsequent inquiry develops that he has absolutely no remembrance of anything that occurred during the night, and of course was greatly surprised at finding himself in jail the next day. He had never
had such an attack before, and there was no history of insanity in the family. He did not drink and used tobacco but sparingly. Denied absolutely any venereal history. Here then was a case of acute confusional insanity undoubtedly the result of autointoxication.

The element of periodicity in nervous and mental manifestations, causing a tendency to recurrence upon slighter provocation, makes it not unlikely that should the patient ever again become the victim of any such profound autointoxication that similar psychic manifestations will likewise follow.

It has not been my purpose to treat this subject exhaustively; indeed, such is not possible within the scope of a paper of this kind. I have endeavored, however, to emphasize the importance of autointoxication in the consideration of nervous and mental disorders and to draw attention away, in a degree at least, from the factors surgic, psychic, and gynecologic, which have so long held the attention of the profession to the exclusion of all things else.

DISCUSSION.

Dr. J. M. Aikin, Omaha: I want to compliment the doctor on the presentation of this subject. It has been to my mind a subject of great interest. The profession has neglected it. The paper covers the ground very nicely. Autointoxication certainly causes a great many cases of neurotic trouble. It is impossible to draw a mathematical line in cases of insanity and say where insanity begins and sanity ends. There are other conditions of intoxication with which the doctor has not dealt in this case. The case he cites is one of very common occurrence with every practitioner of medicine. In some cases when a patient of this kind reports, the physician calls the board of lunacy and the patient is hustled to the insane asylum. They should have early attention and many of them would not have to be taken to an asylum. The paper contains thought worthy of an intelligent consideration.

Dr. F. E. Coulter, Omaha: I was very much interested in the paper. It is a field that has been neglected in the past by general practitioners and by neurologists. I am not prepared to go quite as far as the doctor has in some of his statements in regard to autointoxication as an etiological factor; for instance, in tabes or general paresis of the insane I would not like to say we have an autointoxication as the primary cause. We must eliminate most
certainly and the tone of the cells of the nervous system as well as of the other portions of the body are affected if we do not. Autoinfection is not the main factor as to the etiology of neurasthenia in all cases entirely. We have all seen a good many cases of neurasthenic disturbance in which the history of traumatism was too apparent and too positive to lay it entirely to autoinfection, and I would not like to say that in all cases of neurasthenia a toxin was the etiological element solely. I say again, I was...very much pleased with the paper and it calls our attention to a field which has been neglected in the past.

Dr. J. G. Roberts (closing the discussion): I would like to say a few words. In regard to the doctor's reference to those patients who are sent to the asylum, the record of these cases bears out my idea of their cause. A great many of these cases are sent to Dr. Greene of the asylum, and under his eliminative treatment in a short time the patients are sent back as cured. The manner of treatment of these cases is what first called my attention to this subject. In tabes I do not say that it is the cause. I do not know what is the cause. We attempt at once to establish a syphilitic history when we get hold of a case of tabes. If we fail to do so, we are at a loss as to the cause. It is very well known that autoinfection produces changes in the various organs of a sclerotic nature. It is not proven, but there is no reason why it should not produce these to a sufficient degree to cause the various manifestations of the disease. There is a field here for investigation, and when it is thoroughly cleared up it will be found a factor of much importance. In neurasthenia I have never seen a case where there was not a degree of autoinfection. In a great many instances it is not all due to lack of elementary elimination. Many of these cases show, beyond a doubt, symptoms that indicate poisoning, and a great many of the cases of uric acid poisoning are very much like adenin poisoning. The symptoms are very much alike.

In regard to the doctor's reference to traumatism, it acts not only through the shock which causes some psychical effect, but also through its interference with elimination. No one has seen a case of profound shock but the elimination was interfered with.
ETIOLOGY AND TREATMENT OF MIGRAINE.

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

It is not germane to my theme that I should rehearse the text-book opinions you may all read on the etiology and treatment of migraine.

Of all the common and much-dreaded nervous diseases we recognize, none are less perfectly understood than migraine; nor is there any other nervous disorder which is so disastrous to the physician's ability for effectual treatment. Under the title migraine I wish to be understood as excluding neuralgia and neuritis; headaches due, proximately, to improper alimentation, nervous exhaustion, or brain fatigue. I would exclude the head pains as not migraine that are cured by merely correcting ocular or nasal abnormalities.

The causes for headache seen through the speculum of the gynecologist and proctologist are not a few; and the many radical cures effected by their rational treatment are glowing tributes to medical progress; but these headaches are not true migraine. The uric acid diathesis is a step in the right direction, but even Haig, its foremost advocate, has not reported his own case of migraine as cured by using alkalithia. It is easy to say what it is not, but difficult to define what it is.

By far the most frequent and constant individual etiological factor in migraine is heredity. Clinical facts teach that transmitted conditions continue throughout many generations and render easily possible the evolution of migraine under suitable conditions. Just what this degenerative stigma is we do not know, but there is a preponderance of evidence locating the disorder in the nervous system. I believe it has a pathologic entity susceptible to, and having an affinity for, certain toxic elements in the circulatory system. The nerve cells, bathed in the life current, hold out against these ptomaines until their cumulative
strength, overcoming the normal resisting powers of the individual, culminate in an explosion. These nerve storms are denominated migraine. They appear periodically, their frequency being determined by the vulnerability of the tissues, intensity of the ptomaines, and contributory influences known as reflex causes.

The transmissibility of conditions favoring migraine is evidenced by its appearance in early childhood and its unabating continuance till after the middle third of life.

As a result of tissue metabolism, toxins are a constant element in the system common to all. These become irritants only under conditions of improper elimination. Toxicity of the ptomaines is one of quantity rather than quality. Contributory causes arise from our indulgence of the palate, and the improper functional use of any part of the physical organism. The sufferer from migraine anticipates the onset, and very often designates the particular indulgence or incident that precipitated the attack.

For a short time after the nerve storm has passed, the system is comparatively immune; for the same causes that operated to precipitate the attack are indulged with impunity until the system is again surfeited with the ptomaines.

The interval between paroxysms varies with each person, and the same person may increase the frequency of attacks by the improper exercise of one or many individual privileges. The person who is normally accustomed to a migraine seizure once in four weeks may, by dissipation, mental strain, worry, or loss of sleep have an attack more frequently.

The etiology of migraine is quite as obvious, and the transmissibility of conditions favoring its development are more constant than the causes and conditions producing epilepsy, which we all recognize as closely related to migraine. It is not uncommon to see migraine and epilepsy transposed in the same individual, and often in members of the same family. The interchangeableness of these two disorders, indicated to us
by the masters in medicine, does not obliterate certain individual characteristics in which they are wholly different. Possibly the attacking forces are the same in each; but meeting different conditions, there results in one a sensory, and in the other a motor psychosis.

Alexander Wallace (Lancet, January 14, 1893) says: "Migraine is believed to be due to defective or insufficient excretion; partly of the liver, but mainly of the kidneys. The severity of the headache is directly proportionate to the acidity of the gastric fluids."

W. Heind (Provincial Med. Journal, October 2, 1894) says: "Migraine is attributed to two principal causes: (1) poisoning of gastric origin; (2) cerebral fatigue."

"Migraine is regarded as a toxemic condition, the toxins (probably albumoses) being absorbed from the gastro-intestinal canal."—C: E. Herter, Journal of Nervous and Mental Diseases, January, 1897.

"The occurrence in migraine of almost constant vomiting, frequent attacks of diarrhea, and polyuria or increase in other secretions is proof that many cases of this affection depend upon intoxication."—W. Stekel, Wiener Med. Woch., November 13, 1897.

These conclusions, from physicians in widely separated parts of the globe, show a growing tendency toward recognizing the germ theory of the disease.

Intelligent thought has isolated and classified many bacteria that originate external to the body, which, when introduced, develop specific diseases. Less has been said, however, about those originating within the human economy becoming disease producers when allowed to accumulate beyond certain proportions.

Treatment.—In the treatment of migraine, almost as many drugs have been used as equal the number of physicians who have treated the disorder. The principal drugs used are in the main motor depressants or cardiac stimulants. These have been used separately and in combination, often without any very definite therapeutic purpose, hoping only for relief from immediate conditions.

When all else fails, morphine will quiet the irritated
sensory nerves. Attacks are sometimes aborted, or their intensity lessened, by vigorous acceleration of the blood current during the prodromes. The good thus accomplished doubtless comes from the more frequent contact of venous blood with radiating tissues. Seeing good results from such treatment led me to believe that diuretics, diaphoresis, and hydrargyres would materially assist in the eliminative process. We have many well-known drugs that act quite promptly through these several avenues, but in each case their efficiency is greatly enhanced by water as a diluent.

From the inception to the conclusion of a migraine attack, digestion is practically suspended. This condition certainly demands the withholding of nutrients with immediate dilution and elimination of the gastric and intestinal contents. Emesis and lavage of the stomach are efficient, but often objectionable to the patient and inconvenient to the physician. Consent is much more readily obtained for emptying the lower bowel with a soap-suds enema, followed immediately by high irrigation with large quantities of hot normal salt solution. This, with small but oft-repeated draughts of hot water by the mouth, continued from six to twelve hours, has given better results in my treatment of migraine than any purely drug medication.

Between the attacks, daily and copious drinking of water will do more to lessen the severity, if not prevent recurring paroxysms than any or all drugs and a minimum amount of water ingested.

It would be quite irrational were we to neglect correcting any existing ocular, aural, nasal, gynecologic, or rectal defects. We must also teach the patients how to eat, and warn them against abuse of their already defective nervous system.

DISCUSSION.

Dr. Conwell: I was very much interested in this paper. I have a case under my charge at the present time. When the lady first came to me she complained of migraine, and on thoroughly examining her I found disease of the ovaries. The patient was brought into Omaha and was operated upon
by Dr. Summers, and we supposed we were going to get rid of the migraine. But the lady still has the periodical headaches. In fact they are more frequent. I have tried all the remedies the doctor has suggested, and the only thing I use that eliminates the suffering is morphine. I have told her I could do nothing for her. I am one of those who get tired of giving morphine hypodermically. I think my patient complains now so often of having the severe headaches for the purpose of getting this morphine. It is a question in my mind what to do with this patient. I would like some suggestions along the line of treatment to see if we could not establish a more definite one than we have been using. The morphine does not do the patient any good, and I have tried washing out the alimentary canal and have repeatedly recommended the taking of water in frequent intervals and in large quantities, but I get no lasting effect from any.

Dr. M. L. Hildreth: To my mind the removal of the cause is very much more important than the treatment of the paroxysms. In reply to Dr. Conwell, I have had some experience with the so-called Rashford treatment, and have never seen anything that has given more satisfactory results in so many cases as this treatment. It fails at times, but on the other hand I have better results from this than from any other treatment. It destroys the waste products that are not digested. Give dose of phosphate of soda and salicylate in the morning. According to the chologogue theory of a salicylate. Follow up this treatment two hours after the meals with a dose of peroxide of manganese or potassium permanganate which completes the destruction (by oxidation) of the residue. As far as the treatment of the paroxysms is concerned, we must know what the habits are. The drug stores are full of headache tablets, which are a relief for the time being, but they tend to aggravate the condition afterwards. We know they become very severe and may remain for a lifetime. This is a line of treatment from which I have had good results in selected cases.

Dr. Jay G. Roberts, Hastings: Perhaps we forget that these cases are deep-seated. Now it has been stated that this condition is very much like epilepsy and we all know what degree of satisfaction we get from treating an epileptic. This condition tends to disappear with age. My mother was subject to migraine and about the time antikamnia came out some doctor prescribed it for her. Her headaches were relieved, and nothing in the world will induce her to change her opinion as to the efficiency of antikamnia, but I think the headaches disappeared because she was nearing that age, about 35 or 40, when they disappear anyway.

The identity of uric acid diathesis and autointoxication is overlooked. One is nothing more than the other. Just how and where these conditions rise is not known. Autoinfection is not due entirely to deficient alimentary action. We must increase the oxidation. A bilious temperament and
also tight lacing are impediments to good lung action, and
so the body is not able to throw off its waste products. I
have quit morphine. I used it formerly, but now resort to
heroin, if I must use something of the kind. There is no
danger resulting from the use of this drug. I have used
strychnia somewhat in the treatment of migraine, which
often gives excellent results. All these eliminative measures
must be helped with treatment tending to increased meta-
bolism and oxidation.

Dr. F. E. Coulter: In regard to the subject of migraine,
the fact that we have so many theories as to the etiology
and so many remedies as to the treatment seems to me very
clear evidence that we have not found the real cause. The
paper reads very nicely, and recapitulates the theories well,
but these theories do not apply to each and every case. I
do believe that each case of migraine is a study in itself.
We will find when we study each individual case there are
certain etiological factors as well as certain remedies that
will affect and relieve that particular case that will have
no effect on any other. It has been my custom to make
each case an individual study and give each thorough exam-
ination. In the first place it is necessary to remove any
reflex disturbances, then we must get at the root of the
disease and relieve the imperfect excretions, etc. I have
used also as an eliminative the sulphate of soda. I like it
very well. I have used the phosphate of soda, but do not
like it as well as the sulphate in this class of case.

Dr. J. Lue Sutherland: I do not suppose that there is
any physician who does not have his share in treating
headaches; but at the same time there are a great many
cases that seldom or never call on a physician, but take
some form of the coal-tar products for relief. These prod-
ucts, which all druggists prescribe and dispense with such
reckless abandon, are not only detrimental to all who use
them, but a positive hindrance to the profession in the
treatment of such conditions as the doctor has prescribed.
They are recommended not only by druggists but the pa-
tients will tell one another their experiences, and their use
is an extensive affair. If we as a profession can do any-
thing that will result in the curtailment of the use of coal-
tar preparations, we ought to do it. The victim of head-
ache, especially if a woman, and in my experience most of
them are, is not satisfied with producing coma or insensi-
bility to her own sufferings, but must tell her neighbors,
or any one who will listen, of the good effects of antikamnia
or some of the hundred-and-one coal-tar preparations, and
in this way the quantity that is consumed daily is enor-
mous; and something should be done either to limit their
use or stop it entirely.

Dr. Ella P. Sumner: There is one remedy which has not
been mentioned that I have found to be very effective—the
Carlsbad Sprudel salt, given in teaspoonful doses, dis-
solved in a glass of hot water, taken before breakfast. In
all these cases there is a torpid liver, indigestion, and con-
stipation, which are always relieved by this salt, and if long continued has given better results in the majority of cases for me than any other drug I have used.

Dr. W. B. Ely: I had a case of migraine in my own family for thirty years. It was my mother-in-law. The only thing I found that would help this case and that did a great deal of good, was to keep her every day on a half-grain dose of calomel.

Dr. J. M. Akin (closing the discussion): Dr. Conwell's case is very well answered by what Dr. Hildreth has said. The patient has an hereditary stigma and is probably incurable. I would not promise a cure for many cases of sick headache. I spoke of an hereditary stigma as being the primary cause. There is a defective condition some place in the nervous system, in all cases of migraine.

I would warn every one against the use of morphine or any habit-forming drug in migraine cases. I am very much opposed to them. Dr. Roberts spoke of deficient oxidation. This is because of a defective condition in the nervous system. Just what the pathology is remains unknown to medical science. From defective oxidation and elimination it is an easy sequence, with a degenerated nervous system.

If we were to take an inventory of all we eat, we would find that we take in more than we need, and more than we are able to properly digest and assimilate. As a result, there is a defective oxidation. Then, if there is a weak spot, the ptomaines are sure to find it.

It is proper to examine and treat each case individually as the clinical history indicates. Perhaps some day we shall be able to isolate the migraine germ, as we now do the typhoid and other bacilli. The basis of the whole trouble is a defective oxidation and elimination. When there is a large amount of water taken it assists in the elimination. I know of no better eliminating organs in the body than the skin, kidneys, and alimentary canal.

Any treatment of the paroxysms would be only temporary relief. We must begin with the child and treat between the paroxysms. I exclude altogether the coal-tar products. Proper diet is very essential. Even intelligent people have very erroneous ideas concerning a diet suited to the individual.

The hospital treatment of patients with nervous or mental disorders is largely confined to proper feeding and thorough elimination. In migraine with its hereditary stigmata we should begin in childhood, to assist the weakened nervous system in its work of thorough elimination. I thank you for your courteous attention and favorable criticism of my paper.
CEREBRAL THROMBOSIS.
F. E. COULTER, M. D., OMAHA.

Of all vascular lesions found within the cranial cavity, thrombosis is the most common. This statement may not be accepted by some of the members present; however, statistics will verify it. This faulty idea concerning the frequency of thrombosis may in part be due to the teaching of some of the older authors who did not make a very clear division between thrombosis, embolism, and hemorrhage; in fact some of them state it is impossible to differentiate the conditions. We will grant in some instances this is probably true, but certainly not in the majority, and it is our duty to endeavor to draw the lines as closely as possible and make the distinction clear, before we are able to formulate an appropriate treatment, which is the main object to be desired.

Do not conclude from the statement just made that it is the purpose of this paper to give infallible guides in each and every case observed, but in order to discuss the title selected it will be necessary to call attention to those conditions that it most nearly simulates.

Those of us who have practiced medicine a few years understand well how futile the effort to place in some particular class every form of disease we meet. The variations are so numerous that to classify at times seems almost impossible, and under such circumstances we should not grow discouraged, but instead strive to make clearer the lines of separation, and eventually success will crown our efforts.

Time will not permit here to go extendedly into the etiology or pathology of thrombosis, it being sufficient to say one of two conditions, or possibly both, must be present as factors in every case; namely, an abnormal tendency of the blood to clot, or an alteration in the walls of the blood-vessels.

The former of these conditions is rare as compared with the latter. The changes referred to the circulat-
ing medium are most frequently encountered in the aged, the gouty, those who suffer from malignant disease, or those weakened much, as after childbirth, or following the course of serious and prolonged illness.

The changes found in the blood-vessels usually can be placed in one of three groups,—trauma, atheroma, or syphilis.

Thrombosis may involve any of the cranial vessels; the arteries perhaps are most frequently involved, but the veins and sinuses are not exempt by any means. When the veins or sinuses are involved, it is frequently a most serious, as well as interesting condition, but it is not our object to discuss that portion of the subject at present.

As to the arteries involved, any of them may become the seat of this disease, but those most liable to be affected are the vertebral, basilar, and the middle cerebral. The symptoms present in a particular case you will at once perceive depend upon the artery involved to a considerable extent. The following case serves to illustrate a thrombosis of the cortical branches of the left middle cerebral artery, due presumably to a syphilitic endarteritis.

History.—M. D., female, married, Canadian, aged 47; was admitted to St. Joseph’s Hospital, Omaha, February 28, 1902, suffering from right hemiplegia, and aphasia. Duration of present illness, four months. The family history disclosed that the patient’s mother had suffered a stroke of paralysis some years before death; otherwise there was nothing of material interest bearing on the case. The past history revealed healthy childhood, menses at 17, with some pain and more or less irregular. Married at 24; no children, but three miscarriages, all early and without apparent cause. No history of rash, but repeated sore throat. Pelvic and ovarian trouble in 1899, in bed five months, seriously ill, but no operation. Last menstrual show one and a half years ago. Some trouble, left tibia (lower one-third) following injury at 17; more or less trouble because of this condition until six years ago, when she
submitted to an operation, at which time a portion of the bone was removed, resulting in the healing of the wound, but the ankle remained stiff and weakened.

Present illness, October 28, 1901, during forenoon, suddenly, and while at work arranging the house, subsequent to moving previous day, lost speech, was not unconscious, and had no convulsion, could only say "yes" or "no," and a few other short words at that time; and has improved but little until the present. Suddenly, two days later right arm became limp and useless; but the right leg was not affected at this time, for she could, and did, walk without assistance. Four or five days later, following the second attack, suddenly the right foot began to drag, and has been paralyzed ever since. Was not unconscious, or convulsed, or sick, nor vomited at any time, neither vertigo nor headache present, so far as now able to recall history. Directly following last attack, right hand and arm numb, for four or five days only, but unable to get history of right leg similarly affected. Two weeks after onset described had a choking spell lasting two to three hours, and was unable to swallow anything during that time, but soon recovered from this portion of her affliction. Directly following paralysis, could not control the bowels or bladder; this improved some after one month, but has had a few accidents with both since. Has not made much general improvement up to time of examination, February 28, 1902.

On examination, one finds a woman of medium size, brown hair, expression rather anxious, fairly nourished, nervous and emotional, but sleeps well. Markedly aphasic, both motor and sensory; some word deafness, also word blindness; cannot write, but can copy easy letters.

Mental Condition.—Intelligence has never been of a very high order, but is attentive and memory does not seem defective; is lachrymose upon the slightest provocation and laughs as readily.

All special senses normal, fields not contracted, and no hemanopia.
Cranial nerves, third, fourth, and sixth.—Pupils equal, and react slightly to light, but normal to accommodation. On extreme lateral deviation to right and left, fine nystagmoid movements are observed, but are not sustained, none upward or downward. No diplopia, or definite ptosis. Right lid droops just a little more than left. Discs and fields normal. Fifth, normal. Seventh, upper face weakened on right, lower face markedly weakened right, more noticeable on voluntary than emotional movements. Ninth, palate, normal both reflex and on phonation. Tenth, no trouble with deglutition, and no dysarthrya, but markedly aphasic. Twelfth, tip of tongue protrudes to right.

Sensory system.—No subjective or objective alterations found.

Motor System.—Muscles of neck and trunk fairly good; right is a little weaker than left. Left upper extremity normal. Right upper extremity in position found usually in hemiplegia, partially fixed at shoulder, flexed at elbow to a right angle, semi-flexed at wrist, with the fingers and thumb almost closed and is carried across the chest. Motion limited at shoulder to 1.3 normal range, and general condition of contracture found throughout entire member which can be overcome by considerable force, but produces pain. Supination and pronation somewhat affected, only slight movement on voluntary effort wrist and fingers, but more upon associate. Left leg good power and range. Movements good at hip and knee, ankle weakened and stiff because of previous diseased condition. Right lower extremity markedly weakened, and range lessened, limited one fourth at hip and thigh, knee and leg more, most at ankle and foot. Unable to flex and extend ankle against but very slight resistance.

Reflexes are all plus plus (+ +) on right, while those on the left are plus or active. Ankle clonus on right, but absent on left.

Plantar.—Babinski extensor right, flexor left.

Organic reflexes.—Bladder slightly incontinent. Rectum, normal at present, but history is of being unable
to control contents following onset of present illness. All other organs normal. Vessels not in atheromatous condition.

Let us ask ourselves some questions in connection with this case.

1. Why do we call it a case of thrombosis? May it not have been a hemorrhage or embolism?
2. Why do we locate the lesion as one involving the cortical branches of the left middle cerebral?
3. Why do we say it is syphilitic?

First.—Let us determine if there are any differential points between the three conditions mentioned, namely, thrombosis, hemorrhage, and embolism. We find thrombosis preferably occurring in the aged, also in those who are suffering from vascular degenerations such as atheroma or syphilitic disease of the vessels.

The onset is usually rapid, but not sudden. Premonitory symptoms are frequent, tingling, numbness, headache, vertigo, etc. Often it occurs during sleep when the circulation is at the lowest ebb, and following some unusual fatiguing exercise the previous day. If occurring during the waking hours unconsciousness is but slight, or absent entirely as in the case just recorded. Usually no complications of the heart or kidneys are found. Debilitating influences, such as prolonged disease, or nervous depression may have been present. A great shock may cause it. Thrombosis as a rule does not result in immediate death at the time of onset. Coma is rare, and there is but slight temperature alteration, and convulsions are not of frequent occurrence at the onset. Hemorrhage, on the other hand, we find has a sudden onset, and occurs often during exertion. The patient is usually between 40 and 65 years of age or over. Unconsciousness, coma, and stertor are usually present and often convulsions. The pulse will be found full and tense, and usually the heart is hypertrophied. The arteries are frequently found diseased, and if the ophthalmoscope is used the characteristic silver wire vessels may be seen in some cases in the fundus, which is the condition that usually accompanies certain forms of kidney disease.
Dr. Williams, of Manchester, England, has reported on a number of recent cases, both of hemorrhage and thrombosis, as to the conditions revealed by the ophthalmoscope, and he found in the former, that is, hemorrhage, that the fundus on the same side was congested, and at times hemorrhages were present; and in the latter, thrombosis, that optic neuritis was not of unusual occurrence. While these conditions are not present in a great number of cases, yet they have been noted in enough to be of considerable diagnostic importance, and may render material assistance when one is called to a case in which a previous history cannot be obtained.

Premonitions are generally wanting in hemorrhage and there is found marked temperature alterations, especially the first few days following the onset. Death is often the result of such a lesion, especially in the second or third decades of life.

If embolism be the condition we have to deal with, we will find the patient usually younger, and the onset sudden, confined to a few seconds usually. Unconsciousness may, or may not, be present, and if an embolus be the etiological factor, it must have some source of origin. The heart being the most fruitful, hence this organ should always be carefully examined. Coma, if it supervenes, is generally transient and premonitions are rare. The temperature variations are slight at the onset, and are in marked contrast to the conditions of hemorrhage, but are quite similar to those found in thrombosis.

We recognize at once, then, that the case referred to conforms to thrombosis rather than to either of the other conditions mentioned, so far as the character and onset are concerned.

Second.—Why do we conclude that the left cortical branches of the middle cerebral are the vessels involved? There are only three locations that are likely to be involved in such a lesion. They are the internal capsule, the white substance of the corona radiata, and the gray cells of the cortex. Now the white substance
of the corona radiata can be eliminated at once, for it is very seldom the seat of a lesion of this nature, lesions in this location usually partaking of the nature of the cortex or basilar ganglia dependent upon which it is nearest located. The internal capsule can be eliminated because it would be most improbable to have three distinct small vessels in this location each repeatedly involved in turn without disturbing the others. The fibers of which the internal capsule is composed are entirely too closely associated for such a condition to transpire. All three would have been involved at the same time, to some extent at least, had the seat of the lesion been in the internal capsule, and this does not conform to the history of the case.

Again, the form of aphasia we have in this case does not conform to a lesion of the internal capsule; hence there remains but the cortex in which the lesion may be located. When we come to examine the terminal divisions of the middle cerebral artery, located at the bottom of the fissure of Sylvius, we see that we have branches that anatomically conform to the areas involved in this paralysis, namely, the face, the arm, and the leg, and as these areas are supplied each by a separate branch it is but reasonable to suppose they each in turn became involved, giving rise to the sequence of symptoms found in the history. This point is most important, and would be interesting to discuss further.

Third.—What are the reasons for supposing this was a case of syphilitic origin? In answer to this question you will note that the age of the patient is not that at which one would expect atheroma commonly to occur. Again, the previous history refers to repeated miscarriages, without any apparent cause, and followed by repeated sore throats and serious disease of the female organs of generation, and the character of the pupils. No disease of the encephalon has so great a tendency to be multiple as that of a syphilitic nature, and this point is certainly demonstrated in the present case. She gave no history of suffering from any condi-
tion previously, to which it could be attributed or which might cause thrombosis, other than syphilis.

_Treatment._—One of the points of most importance to be considered in a case of this character as soon as the nature of the lesion has been established is that of treatment. The early treatment of thrombosis is much the same if it be of specific origin, or of some other character. This statement does not apply so well to the later treatment. In other words, a thrombosis following and due to syphilis is treated at time of onset much the same as one following some other cause. The important point at this stage is, not to treat a case of hemorrhage as if it were thrombosis, or a case of thrombosis as if it were hemorrhage, because the indications are almost diametrically opposite, and what is applicable in one instance is contraindicated in the other. In thrombosis the general indications are for some remedy of a stimulating character, something that will keep the already enfeebled circulation in motion, and not allow it to assume a condition of stasis, also to administer such remedies as will prevent the blood from clotting if possible. In hemorrhage, on the other hand, the indications are for sedative remedies, and to administer such as will favor the formation of a clot. As to the especial treatment of thrombosis, Gowers calls attention to perhaps the most important points as follows: "See to it that nothing interferes with the returned circulation. No constricting bands around the throat. Sinapisms to the back of the neck have a reflex effect on the blood-vessels, and quicken the circulation, preventing stasis. Action of the heart should be kept uniform and steady by the use of strophanthus and digitalis," and we may add strychnia at times is serviceable.

"The head should be slightly raised. The bowels should be opened but not so violently as in a case of hemorrhage because of the tendency to weaken the heart. Venesection is not to be considered in this condition or the use of anything of a severe depleting character." If stimulants are necessary, ammonia,
alcohol, or ether may be used the first few days, but should be avoided later. Yet in hemorrhage they had best not be used at any stage of the treatment. Upon regaining consciousness, if that should have been lost, and headache is found to be present, the head may be elevated and ice applied. Just at this point I wish to say, had the case reported been definitely recognized at the time of onset and treated as indicated above, no doubt only a portion at least of the resulting paralysis would have occurred, and this case is but representative of a great class.

A case illustrating the point in question was admitted under Gowers to the National Hospital, London, November 29, 1901, and gave the following history: Male, 35, clerk, married; syphilis eight months before. November 16, thirteen days before, noted he could not hold his fork properly in left hand, also that there was some tingling of the fingers of the same hand, and that the trouble gradually grew worse during the day. No pain but gradual weakness supervened. No convulsions, spasms, vertigo, sickness or vomiting, and no other weakness at that time. November 27, two days before admission, noted left face drooping and could not articulate so clearly as before. Tingling above referred to had continued during the past ten days, but only when fingers were touched. Last two days slight vertigo, upon walking or turning in bed. Also last two days noted the left leg and foot tingling and numb at times, but did not in any way interfere with walking. I shall not report in full the result of the physical examination. Suffice to say that it warranted the diagnosis of commencing thrombosis of the right middle cerebral branches. In this case the treatment was inunctions of mercury, potassium iodide in dose of 15 grains three times a day, also tincture of digitalis and tincture of nux vomica 10 minims, and tincture of cinchona 30 minims, and the result was that there was no progress in the paralysis, and a gradual improvement of that which already existed. An important point in these cases is when it is concluded to give iodide of potas-
sium not to give it in large doses, for it increases the tendency of the blood to clot, as is noted in cases of aneurism when the same remedy is exhibited.

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DISCUSSION.

Dr. J. M. Mayhew, Lincoln: It has been with great pleasure that I have listened to this valuable paper. It is one more step in the right direction. For many years practitioners of internal medicine have been striving toward an accurate diagnosis of obscure conditions. To the differential diagnosis of hemorrhage, thrombosis, and embolus I would take the liberty of adding anemia. I do this on account of a case which came in my practice about one year ago. A young married woman presented every symptom of an incipient thrombus of the basilar. She was taken to the hospital under this diagnosis and a guarded prognosis was given. During further examination a blood examination was made as a matter of course and a condition of profound anemia was found which was more real than apparent. Under the ordinary treatment for anemia she made a prompt recovery.

I would like to ask the doctor whether he finds the Babinski sign constant in these cases of high occlusion and whether the deep knee reflexes are not always exaggerated, sometimes to a great extent.

Doctor Coulter calls attention to the fact that any artery may be affected. In my experience I have met with one case of aneurism and thrombosis of the subcerebellar artery which is, I am led to believe from the literature, very rare.

Dr. W. L. Ross, Omaha: I have nothing in particular to offer except in compliment of this paper. It shows to the general practitioner how the way is simplified when something extremely difficult is taken up step by step and thread by thread. This would be a good lesson if all practitioners would begin and study the clinical symptoms from first to last, thereby simplifying the whole affair. I was particularly pleased with the manner in which the doctor carefully went over the symptoms. He picked up each nerve and pursued the different effects until the whole twelve were gone over. It shows us a very easy way of differentiating our diagnosis and making a proper one. For that reason I believe the paper is very commendable for the general practitioner and think it a very good lesson.

Dr. F. E. Coulter (closing the discussion): I simply wish to say in regard to etiology, that syphilis, as an etiological factor only, would be the main factor in the second and third decades of life. After 45 or 50 we have arterio-sclerosis
which is not due to syphilis usually. We often get thrombosis following labor and thrombosis is the natural condition of the arteries of the uterus following labor.

Those cases of hemiplegia that come on after labor are very frequently thrombotic, a transposed thrombosis.—(Gowers.)

Owing to the necessarily short time at one's command in a paper of this character, it seemed more important to take up the question of treatment and the history of a fairly typical case rather than to go into pathological conditions. Necessarily we have the deep reflexes increased as has been remarked, but that is not always the case with the superficial. The deep reflexes are increased on both sides, above normal usually, but on the paralyzed side the most, unless of course we have contracture or spasticity. The reason for the increase on the side not paralyzed is explained through the fibers of the direct pyramidal tract. You will remember the fibers of the direct pyramidal tract as well as those of the crossed pyramidal tract are united and course together from the cortex until the point of decussation is reached, when they separate. Now generally all are originally involved in the lesion, but after decussation the direct supply the side not involved while the crossed supply the side that is paralyzed, hence we get increased reflexes. Usually those on the paralyzed side are in a condition termed plus plus (+ +) while those on the other are termed active or plus (+).

Referring to the ophthalmoscopic examination would say that in a certain number of cases, and especially in those when we are deprived of the history of the case, that it is one of the points that helps us out. I believe that every sign and every symptom is of benefit and should not be overlooked especially if we are in doubt as to the question or diagnosis. In regard to the remarks of Dr. Ross, I will say that I believe every affection from which our patients suffer demands from us a thorough examination. We should have a systematic, regular way of examining all cases and we should make records of what we find in those cases.
OUR DUTY TO THE PUBLIC IN ACUTE INFECTIOUS DISEASES.

A. D. NESBIT, M. D., TEKAMAH.

The following diseases are considered to be communicable, and dangerous to the public health, viz.: Smallpox (variola, varioloid), cholera (Asiatic or epidemic), scarlet fever (scarlatina, scarlet rash), measles, diphtheria (diphtheritic croup), typhoid fever, typhus fever, yellow fever, cerebrospinal meningitis, relapsing fever, certain forms of ileocolitis, rabies, glands, and tuberculosis. Besides these, there are also a number of other infectious diseases, as parotitis, erysipelas, whooping-cough, malaria, etc., that are not dangerous to the public health, and therefore will not be considered in this paper.

Osler says: “An infection is the morbid process induced by the invasion and growth in the body of pathogenic micro-organisms. An intoxication is the morbid condition caused by the absorption of toxines, in large part derived from pathogenic organisms.”

Welsh says: “Whether or not an infectious disease is contagious in the ordinary sense, depends upon the nature of the infectious agent, and especially upon the manner of its elimination from, and reception by, the body. Most but not all contagious diseases are infectious. Scabies is a contagious disease, but not infectious.”

The number of infectious diseases, now generally admitted to be caused by some specific organism, is at present so rapidly increasing that no definite classification can be made. The knowledge we possess, gained principally through bacteriological research, of the specific organism which in an individual case produces the disease is constantly advancing, and only a somewhat arbitrary division into groups may be made of diseases known as infectious. Organisms are introduced into the body through the skin, as in syphilis, tuberculosis, etc.; through the air-passages, as in diph-
theria, scarlet fever, and other specific fevers; and through the digestive tract, as in typhoid fever, etc. It is not putting it too strongly to say that no year passes but that one or more of the infectious diseases occur in every precinct, town, city, or county, and prompt measures, many times, are demanded to prevent the spread of the disease. One cannot long remain in practice anywhere in this country without coming in contact with one or all of the infectious diseases, although one may indeed practice for a long time without having to deal with smallpox, while on the other hand, as during the past two or three years, it may be and has been met on every hand.

Now, when we consider the prevalence of the acute infectious diseases and the constant occurrence of these diseases, it behooves us, as a "life-saving crew," to be "instant in season and out of season." There comes into the mind of the progressive man a desire to keep abreast with the advancing knowledge touching affections that are constantly being thoroughly investigated and therefore promises new hopes and new conquests in the matter of prevention and also in the matter of better treatment. In nearly all cases of infectious diseases, the specific organism is known, and the route by which it enters the body is well understood. Why is it, then, that so little attention is given this subject by the state, when so many promising buds are blasted every year; so many individuals, families, towns, and, directly or indirectly, the state, suffer by reason of neglect, many times, of strictly enforced quarantine?

Too little attention is paid to the isolation of patients suffering with infectious diseases. To us the laity look for advice, and justly so, on questions pertaining to the prevention as well as the treatment. Smallpox is the only disease that the state board of health requires physicians to report to them. Why is it? No one will dispute the fact that the mortality in diphtheria, scarlet fever, and measles is very much greater than that of smallpox. Why not require physicians to report all cases of diphtheria, scarlet fever,
and measles? Diseases much more prevalent; diseases in which the mortality is so much greater, consequently more dangerous to the public health.

Every year, many schools throughout the state are closed, from a few days to months, on account of an epidemic of diphtheria or scarlet fever, not to mention smallpox, a wholly preventable disease, and no school need be closed on account of its existence if successful vaccination is required of all admitted pupils. Why not, then, have some general law or regulations regarding infectious diseases, formulated either by the state board of health, if they have the power, enacted by our legislature? If this were done, these questions would not be left wholly in the hands of some local physician, who is appointed, many times, without regard to his ability or fitness for the position, but because he has allied himself with the winning side at the municipal election; for it so often happens that incompetent and really ignorant men, indifferent and careless, are made health officers. Granting that the best men are appointed, a difference of opinion will exist as to the time of isolation or length of quarantine,—a question that a general state board regulation would solve, thus establishing a uniformity throughout the state. Local physicians could not then be held accountable for strict quarantine, neither would other local physicians be at the mercy of a health officer if he was inclined to be arbitrary, nor would the public be in danger if he were indifferent or careless. Such general rules or regulations would not meet all questions that would arise in the different localities, but questions of the hour could be decided, and decided satisfactorily, by local health officers. Let greater care, then, be exercised. Let us not be content to do as well as others, but try to be of greater value—not expend our lives in reading what others have said, and in doing so, neglect our own resources.
A CASE OF HEPATIC ABSCESS.

EMMA W. DEMAREE, M. D., ROC A.

The interest of the case which I have to report depends largely upon the fact that the abscess developed in a puerperal woman, the septic condition produced by it being so like puerperal fever as to cause great anxiety and many misgivings until a positive diagnosis became possible and it was proven that the infective agent had not gained entrance by way of the parturient canal.

Mrs. M., aged 22 years, primipara. Had been well except that for about four years previous to pregnancy she had suffered from attacks of what she described as "stomach trouble." For these she had received treatment for a time by a physician in a neighboring town, but finally abandoned it as it seemed unprofitable. She does not remember that pain at this time was referable to the right side. She thinks it was chiefly in the stomach and in the back, but it was paroxysmal, and it seems quite possible that the symptoms may have been due to a cholelithiasis.

During pregnancy there were none of these attacks. For the first four or five months she suffered much from nausea, but otherwise felt well.

I first saw her during the seventh month when she came to engage my services for her confinement. I found the pelvic measurements normal; the kidneys were acting well, as they continued to do throughout the period of gestation, and she was in good general condition.

On July 17, 1901, she gave birth to an eight-pound boy after a labor which, though severe, was normal. There was a partial rupture of the perineum which was sutured. The stitches were removed on the fifth day, the tear having healed nicely. For a few days after delivery there was difficulty in emptying the bladder and a catheter was used. There was no fever at any time up to the tenth day. I visited her July 26 and
found temperature and pulse normal and the patient feeling so well that she asked to be allowed to get up, which request was not granted.

On the morning of the 27th she complained of pain in the right side and back, in the region of the liver, and of a general malaise. I was sent for that evening. Severe, lancinating pain had come on suddenly in the afternoon, accompanied by vomiting. When I reached the place the acute pain had subsided, but there was marked tenderness in the region of the gall-bladder. The patient had been unable to lie on the left side since the morning, and was most comfortable when lying on the right side. Pulse 120, temperature 101° F. I could find no tumor and did not succeed in palpating the liver. A thunder-storm kept me at the house during the night. About 2 a. m. there was a severe rigor, followed by a temperature of 105°, with profuse sweating. That there was pus was evident, and it seemed to be in the right hypochondrium. The fact of her recent delivery led to fears that the uterus might have been the original source of the infection, but I was unable to find anything in its condition or anything in the pelvis to indicate that such was the case. Pain and tenderness were wholly confined to the region of the liver, and, after the first day, were more marked posteriorly than anteriorly. After that time pain was not a prominent symptom, being felt only upon moving or taking a deep breath. Liver flatness extended as high as the fourth interspace; there was interference with respiration on the right side and a troublesome cough developed. There was no bulging of the intercostal spaces. Neither my husband, who saw the case with me, nor I, could make out any downward enlargement of the liver. There was no swelling nor was there anything which seemed to indicate the exact location of an abscess or abscesses if such existed. The patient was sallow but there was no jaundice. Pulse remained constantly above 100 and was not often below 120. Temperature ranged between 100° and 104° F. Sweating was profuse when the patient slept or was moved; vomiting
was a distressing symptom, and on the 29th there was a persistent hiccough.

Treatment was directed chiefly toward securing elimination and sustaining the patient. Calomel with salts or oil, and strychnine were the chief medicinal agents used. Some quinine was given at first, and various attempts were made to lessen the irritability of the stomach. Sedatives were given occasionally to induce sleep, but after the first day the pain was not severe enough to require an opiate. High enemata of salt solution were given several times daily, and frequent sponge baths were ordered. Exploratory puncture was talked of, but the family was averse to anything that savored of “operation” and the indications as to the best place for aspiration were so obscure that we hesitated about trying it.

On reaching the place on the morning of July 30 I found decided improvement in the condition of the patient and learned that during the night a considerable quantity of bloody pus had been passed by the bowel. Those in attendance said that she had also expectorated material which had a similar appearance. None of either discharge had been saved and there was no more expectoration, the cough gradually subsiding, so that one can only surmise that the abscess may have ruptured both into the lung and into the intestine. Pus, containing blood-flecked masses, continued to pass by the bowel, and it proved to be full of what, under the microscope, looked like microtome sections of liver in a state of cloudy swelling. After a large amount of this pus had been discharged, a black sand began to pass, a large quantity passing with each stool for several days. This seems to furnish a clue to the original irritant.

Although improvement was rapid I did not give a very favorable prognosis, especially as to the time likely to elapse before the patient could hope to be well. What I was able to glean from the literature led me to believe that, at the best, recurrences might take place for many months, if not for years. By August 5 the pulse
and temperature were normal, the appetite had returned and the patient was gaining strength and feeling hopeful. There was no longer pus nor sand to be detected in the feces. This state of things continued till the 11th when there was a chill, followed by a recurrence of the original symptoms, only in a milder form. With the use of oil and enemata there came again a discharge of pus containing liver tissue, and this was followed, as before, by the gall sand. Twice thereafter, with intervals of a few days these attacks recurred, the discharge of sand being preceded each time by that of pus. The family having learned the significance of these attacks and knowing what to do, I did not see the case after August 16 until the 31st when I was called because the patient had had chills and fever for several successive days, with intervals in which she felt quite well. This proved to be a malarial attack and yielded readily to quinine. There was no further accumulation of pus, the last having been seen in the third week in August. At intervals of two or three weeks she passed and still passes the black sand. For a time this was preceded by a day or two of what the patient believed to be fever, and was accompanied by more or less pain. Now the prodromal period consists of a day or two in which there is possibly slight fever, but nothing that amounts to pain, only a sense of fullness and discomfort in the right hypochondrium which disappears with the discharge of the stones.

At a time of which the family is uncertain, but which they think was last November, there were passed at two different times in advance of the sand, stringy masses which they describe as looking like pieces of emptied intestine, but consisting partly of a “gristly” material. These were bottled with the intention of bringing them to the office, but were later destroyed. They were doubtless the remains of the pus sac and the inflammatory exudate thrown out in connection with the rupture of the abscess into the colon. That the rupture was into the colon rather than the small intest-
tine the unchanged condition of the blood and liver tissue evacuated seems to show.

By the middle of October the patient was able to do her own work and care for the baby, and she is now well and strong and free from the attacks of "stomach trouble" of which she formerly complained. What to do about weaning the baby was a question that caused considerable anxiety and must, I think, always do so under similar conditions. The course pursued seems to have worked well in this case, but I should feel doubtful if again confronted with similar conditions. During the height of the septic condition there was almost complete suppression of the flow of milk and the child was given artificial food, but there were only one or two days when it was not put to the breast at some time. Efforts were made to keep the milk and except for a short time preceding the first evacuation of the abscess, the baby was compelled to take what little there was before being given other food. By the time he was three months old no artificial food was needed, and he has grown and flourished as he did not do when fed chiefly with modified cow's milk. Some of the relatives of the patient disapproved of this course, but she herself was anxious to nurse the baby and both parents are now very thankful that he was not weaned.

Did the biliary concretions which seem to have been the exciting cause of this abscess form in the gall-bladder and rupture into the liver or did they originate in the liver? C. W. Allen, in the Reference Handbook of the Medical Sciences, says that while "the gall-bladder itself is by far the most usual portion of the excretory system of the liver in which calculi originate * * * they may form at any point along the bile passages, even to the very commencement of the hepatic ducts." It would seem that the size and form of such concretions might furnish some indication as to their probable source, and that sand might be more likely to originate in the smaller hepatic ducts than the larger stones, but I find no statement that such is the case.

Another question which arises in connection with the
case is, to what extent, if at all, were pregnancy and the puerperal state etiological factors? Since Osler states that “three-fourths of the cases of gall-stones occur in women,” and quotes Naunyn as saying “that 90 per cent. of women with gall-stones have borne children,” it seems highly probable that pregnancy may be an important causative factor, and that it was such in this case. By furnishing conditions in which the power of resistance of the tissues was lessened, the puerperal state may have had something to do with the pus formation, but that it was not responsible for the entrance of the pus organisms is shown, I think, by the history of the case.
ACUTE SUFFOCATIVE PULMONARY EDEMA.

LE ROY CRUMMER, M. D., OMAHA.

The attention attracted by Steven's recent article, not only in England, but also to a certain extent in this country, leads me to report the following case of acute suffocative pulmonary edema. A careful search of the American text-books on medicine shows that such cases can not be identified under the description of pulmonary edema in any of them. Steven says the same is true of the English authors. Auld claims that the condition was described by Laenec, but a careful reading of his descriptions shows that they by no means fit the condition as I have seen it. Von Leube and Eichorst, of the Germans, are silent concerning it. Strümpel refers to this condition by inference. The French have long described such cases. Dieulafoy gives the best account. Giraudieu, Renaud, Huchard, and Bouveret have described cases.

The characteristics are a sudden attack developing without ascertainable cause during usual health, of an alarming dyspnea, accompanied by a profuse expectoration of white or pink frothy mucus, albuminous and of low specific gravity. The attack lasts one to six hours and passes off with or without treatment, as suddenly as it came in most cases, though death may occur in the attack. Physical signs are all obscured by the diffuse generalized mucus rales of all sizes. The heart's action is usually labored, and the pulse strong and rapid. Steven divides the cases into primary, i. e., without demonstrable disease in other organs, and secondary, where there is disease of the heart or kidneys, which may give occasion to the pulmonary complication. Dieulafoy considers it always an accident of nephritis. Lissaman, in analyzing the condition, attributes it to vasomotor spasm of the pulmonary vein, and consequent pulmonary cyanosis. It may also be due to fail-
ure of the left ventricle, as seems to be the cause in the case I am about to describe. I have recently seen an analogous case of sudden dilatation of the right ventricle, with consequent cyanosis, venous pulse, etc., which rapidly recovered.

On August 3, 1901, I was called to see an old gentleman of 67, who had been in his usual health until 8 o'clock that evening. But then he suddenly became dyspneic and began to expectorate large amounts of froth. I saw him at 11. He was sitting up and grasping the arms of the chair. Accessory muscles of respiration all on tension. His extremities were cold, his skin damp, huge drops of perspiration on the forehead; expression anxious; breathing, despite the greatest effort, was shallow and very rapid; every fifth or sixth breath was a little deeper, and with a hack, but no cough, two to three drams of pink froth was expectorated. On physical examination there was some relative dullness at the bases of both lungs. Auscultation revealed large, moist rales over the entire chest, obscuring both breathing and heart sounds. The pulse was rapid (136 to 140), strong, regular. The condition was indeed serious, and a fatal termination was anticipated. Aromatic spirits of ammonia every fifteen minutes and strychnia hypodermically gradually caused an amelioration in the symptoms. The breathing became deeper and the expectoration less. The anxiety and prostration passed away, and finally, under the influence of a small dose of morphine, the patient at 3 A.M. resumed the recumbent position and fell into a calm sleep lasting until 8 A.M. On the following morning there was no evidence of the desperate condition, save a severe muscular fatigue. A more careful physical examination was instituted. The lungs were found normal in every respect save a few moist rales heard occasionally. The area of heart dullness was increased to the left and downward. The apex beat in the mamillary line and sixth interspace was rather wide and heaving. Over the aortic interspace could be heard an onward
systolic murmur and a long, low, high-pitched diastolic murmur. There was dullness under the manubrium sterni. The arteries of the neck and arms were visible, tortuous and sclerosed. The pulse was about 100—typically Corrigan. The pulse tension was 140 mm. Later the tension rose to 180 mm. The diagnosis of aortic regurgitation was clear, though the patient had not previously suspected heart trouble. The urine was cloudy, 1023, acid, with a trace of albumin. Casts were found together with a few blood-cells. In a very few days the patient was able to resume his work and was in a fairly good condition under heart stimulation, etc.

On October 10, just as suddenly, without overexertion, error in diet, or other assignable cause, a second attack of suffocation came on, and with the same symptoms and fully as severe as at the first. The same treatment, with the addition of adrenalin chloride, was instituted, and recovery was much quicker, the attack lasting but three hours instead of six, as in the former one. Following this attack there was a persistent failure of cardiac compensation, swelling of feet, enlarged liver, dilated heart, etc., for which treatment did very little. On November 10 there was a similar attack of edema, but very transitory, and on November 12 a cerebral hemorrhage developed, from which the patient died.

The question of interest in connection with these cases is: Have we a condition in this symptom group sufficiently characteristic to make it a nosological entity. If we can establish this, the differential diagnosis from similar pulmonary disturbances must be made clear. We find characteristic of the recorded cases: The sudden outset without cause; the anxiety; the deep grade of depression; the peculiar expectoration without cough; the rapid recovery from the attack, with no demonstrable physical signs remaining; and the tendency to recurrence. These constitute a picture which does not agree with any of the ordinary forms of pulmonary trouble, independent or secondary. Some-
what similar conditions are found in asthma, pulmonary embolism, acute pulmonary edema, following removal of pleural pressure, and uremic dyspnea.

In asthma the attack, anxiety, and recovery are similar, but the expectoration is entirely different.

In embolism we have the same suddenness in attack, the expectoration may be very similar, but we have persistence of the symptoms, and the infarct is usually demonstrable by percussion. We also have the etiological factor, thrombosis, varicose veins, etc., with embolism.

We do see sudden dyspnea, with rales and expectoration, following the removal of large pleural effusions at times. In mechanism and symptoms these cases could be considered the same, but the pathogenesis is different and serves to distinguish them.

In uremic dyspnea we have as distinguishing features the stertorous or Cheyne Stokes breathing and the accessory signs of uremia.

Not only the time of development but also the characteristics I have described serve to separate this condition from pulmonary stasis.

In prognosis, we can say that death may occur during any attack, as it did in the case of Steven in the third attack. Lissaman's case had seventy-two attacks and was alive and well at the time of the report. The influence, however, in rendering the underlying condition worse must be considered, and death may occur, as in my case, from an aggravation of the primary condition. On the whole, I think we may say that the prognosis of the attack is good but the case itself bad.

In treatment we may use the ordinary heart and respiratory stimulants, and in addition antispasmodics. I cannot but attribute the favorable outcome in the second and third attacks in my case to adrenalin chloride, which is reported to act as an antispasmodic on the pulmonary veins. Lissaman used chloroform with continued success in his case.

Dieulafoy bleeds and uses caffeine and ether hypoder-
mically. Steven uses strychnine, digitalis, and aromatic spirits of ammonia with brandy by rectum.

SUMMARY.

We must admit acute suffocative pulmonary edema as a definite condition.

The diagnosis is important, that we may be correct in our prognosis and active in our treatment.

REFERENCES.

1 Lancet, January 11, 1902.
2 Lissaman: Lancet, February 8, 1902.
RUBBISH IN MEDICAL LITERATURE.

J. LUE SUTHERLAND, M. D., GRAND ISLAND.

In coming before this august body with a paper upon such a subject I am not unmindful of the possibility of committing an offense which by some may never be forgiven; I shall, however, seek consolation in the hope that it will in time be forgotten and the writer still live. In its preparation the greatest difficulty was, not "what shall I say?" but "what shall I omit?"

It requires but a cursory review of our standard publications of to-day to convince even the most optimistic that there is a crying need for reform in this direction. The study of medicine, in connection with anything like an active practice, is becoming more and more arduous with each succeeding year; and plan as he may, the time of the conscientious practitioner is only too much occupied, if he attempts to keep in touch with the real advance, in only the departments in which he is especially interested, and having access to the very best there is in print, without his wasting a single moment in reading articles which in point of scientific value, practical utility, and in some instances, the plain truth, should never have been allowed to waste printer's ink, or spoil white paper in their publication, however great the reputation of the author, or however large the triangle announcing his titles and places of appointment, which almost invariably adorns the head of the first column of his production. Wishing to take no unfair advantage by including in my criticism things found in the "one dollar" journals, and "sample copy" magazines with which our offices are flooded at intervals both regular and irregular, I will say, before proceeding further, that it is rubbish found only in "high places," and only a very small part of it at that, with which my paper has to do. Furthermore, by no means do I wish to be understood that I class as rubbish all of the things found in the above-men-
tioned journals; on the contrary, I find much in them which is not only interesting but very instructive also, from the pens of very able country practitioners, notwithstanding the relative obscurity, from a literary standpoint, to which some of their city brethren are pleased to relegate them. In fact these cheap publications are about the only avenues that are open to the writings of such men; the corporation journals and society organs being given over almost exclusively to the ultra scientific (?), though oftentimes ultra visionary, creations of the verbose college professor and hospital appointee whose prolixities are permitted without question to monopolize the major portion of an entire issue with "Observations Upon the Tonsil of the Tree-toad," or some other equally important (?) subject, although it is well known by both the editor and board of censors that it will be read by but very few and utilized by none.

There is also a little room for improvement in the conduct of the meetings of our various medical societies. There is at every session much that would be of great value to the entire membership, were it omitted. I mean not only some of the papers which are read, but the rubbish uttered in the discussion of almost all of them. In these meetings, the American Medical Association being rather worse than state or district, when the "battle of the giants," the Kelleys, the Murphys, the Deavers, the Prices, the Duffs, the Carstens, and our own Mansfeldes, Jonases, Summers, Hildreths, Henrys, and Lords, begins in the discussion of a paper upon the subject of appendicitis, or the vaginal versus the abdominal route for hysterectomy, the rank and file may choose either between the fresh air outside the hall or a snooze in their seats until the close of the session; for it may be depended upon with absolute certainty that not another number on the program will be reached at that one. And what of these discussions? Much that is good and valuable I am glad to be able to say, but at the same time much, too much, which is only a mass of inaccuracies, reiterations, and
sometimes acrimonious contradictions. As an example I will briefly relate an actual occurrence. In the gynecological section one afternoon at the Columbus meeting of the American Medical Association, a distinguished surgeon, well and favorably known to most, if not all the members of this society, mounted the rostrum and with chalk and blackboard made a drawing of the anatomy of the part under discussion and by it proceeded to illustrate what he had to say. A thoroughly well informed gynecologist from the same city immediately followed him and pointing to the drawing said: "Dr. —— said that the relation of the parts is so and so, the parts involved are this and this, the pathology is so and so; it is no such thing." He then took the crayon, illustrated and most clearly proved the correctness of his assertions; hence the justice of his criticism of the remarks of the surgeon. I have no fault to find with the gynecologist who thus called the surgeon down, but I would like to have someone explain what right the latter had to take up valuable time of the section in talking about something he did not understand and at the same time posing as an instructor? The question in my mind is, did he not understand? but presuming upon his well-established reputation took no pains to be accurate, but trusted to the credulity of his audience to make up for all deficiencies. There is one thing, however, for which we should all be truly thankful, and that is that not all that is said in these discussions are reproduced in cold type; I do not believe the incident just mentioned is so preserved; if it is I have never seen it.

Let us notice briefly some of the representative literature of the last few years upon the subject of appendicitis. In the management of this disease the pendulum has swung in every direction, and just where it is to-day I am free to confess that I would not know were I compelled to rely wholly upon literature for my guide; for, aside from a few general principles governing methods for differential diagnosis, the great bulk of all that has been evolved within the last five years,
when it has not been confusing contradictions, has been needless repetition. One writer will say that every case is surgical and should be operated upon as soon as the diagnosis is made. Another will say that only a certain per cent. require surgical interference. Another says he will treat all of his cases in a purely medical way, and although he will have some mortality, his percentage will compare favorably with the best. Another says he is in favor of both the medical and surgical treatment, but that the latter is not indicated in any case until the acute symptoms have passed and adhesions have had time to form. Another will say, in a very emphatic manner, that to wait for "wallowing off" is but little short of criminal. One says that after the diagnosis is made, keep the patient easy with opiates until convalescence is an assured fact; another equally prominent will stand up in medical meetings and, sawing the air with both hands and feet, say, "Give no opiates at all at any stage, you will mask the symptoms if you do." The latest method, as far as I know, is the starvation treatment, and with some it is quite a "fad"; others, however, denounce it, and so on ad infinitum; and the result is that the average practitioner, despairing of ever bringing order out of all this chaos, throws all aside and follows "his own sweet will," if he has any, after he has "read up," and no matter what the result is to the patient, abundant literature can be produced to defend almost any line of treatment that may have been pursued. It is no great wonder that the laity seek relief in osteopathy, Christian (?) science, absent treatment, and now to the man in South Dakota with the "only X-ray machine that can see clear through a man."

Then we have the innovator; the original author; the man who, on account of his superior ability, energy, etc., has acquired superior knowledge, and thus feels it his duty to periodically take some old and rather shelf-worn subject and see to what absurd extremes he can go in his efforts to say something new and startling for the edification of his less fortunate fel-
lows. As a matter of course he is a man of established reputation and, to do him justice, has contributed many valuable things to medical literature; otherwise he might experience difficulty in placing his innovation upon the market. But with the reputation already made he has entry free into any society in which he may wish to read his paper, and any journal will welcome it for publication in its columns. He sometimes commences his article with profuse and almost lachrymose expressions of regret for the hitherto ignorance, or rather erroneous knowledge of the rest of the profession upon this particular subject. To properly introduce a specimen of this class of literature I will make reference to another for the sake of comparison. In the Journal of the A. M. A., May 10, 1901, Thomas Niel McLean, of Elizabeth, N. J., contributes a very interesting and comprehensive paper under title of "The Vesicular Murmur in Its Relation to Pulmonary Health and Disease." In this, to my mind, he shows conclusively that pulmonary activity and complete pulmonary function is necessary for pulmonary health; and most certainly are his ideas endorsed by the great majority of thinkers and writers of to-day. But now comes Norman Bridge, A. M., M. D., of Los Angeles, Cal., in a paper read at the fifty-second annual meeting of the American Medical Association, and published in the journal of the association January 4 of the present year, which not only flatly contradicts everything precedent pertaining to pulmonary activity, but is decidedly revolutionary to all former teachings as to climatology, and the outdoor treatment of this disease. Taking it for granted that the article has been read by most of the members of this society, we will call attention to only a few of his most radical statements.

Near the beginning of his article he says: "It is necessary that we should recast our theories of cure and change, our procedure with the lungs themselves. We must learn new ways," etc. * * * "It is an interesting as well as a pathetic fact that the profession has
in the past fallen so readily and innocently into the habit of believing and following the theories of the lay public.” “It is likewise pathetic that we of the profession are wont to continue to rock along in the old ways for decades without stopping to consider whether better ways are possible. Some things by the light of the present day must become axioms.” Here are some of his axioms: “1. Shallow breathing is important and beneficial for a tuberculous lung that has to breathe. Better than that is no breathing. The good rule to put a sick organ at rest finds no exception here.” Thus far he has not said a word as to the stage of the disease, but later on in his axiom 10 he continues: “There is now no reason to doubt the great value of immobilization of the lung. * * * Gas inflation of the pleural cavity according to the method of Murphy is undoubtedly the best way to accomplish this purpose, where it can be done. * * * It is chiefly adapted to the incipient stage of the disease before adhesions have taken place; and adhesions develop as a rule rather early in pulmonary tuberculosis. At the same time many of the patients that show most benefit from fixation of the diseased lung, and that most need it, are more advanced cases that are even more deserving of consideration, if less promising for recovery.” From which statements I understand the doctor considers immobilization by some method is applicable to any stage of the disease; at the same time he most certainly betrays his lack of faith as to any permanent benefit when he says that the more advanced cases need it most and are even more deserving “if less promising for recovery.” (Italics mine.) Then in axiom 11 he says: “The method consists in fixing the diseased side as far as possible by means of numerous strips of firm adhesive plaster or some other apparatus, as plaster of Paris splint or one made from some other material.”

Without consuming time with further quotations, since the entire article is within easy access to all, I wish to ask the profession, at least such a part of it as is here represented in this society, whether the
above teachings of Dr. Bridge are endorsed? If they are, have they been adopted and utilized? How long and with what success? From the entire absence of any criticism or adverse comment since the appearance of the article, I take it for granted that the method is endorsed. But if it is, and is not being used by all who treat this disease, why not? As for myself, I consider such a method decidedly unphysiologic and irrational, for any patient and for any stage of the disease. If I am wrong I would like to be put right, and that as soon as possible, for I have had, and yet expect to have, much to do in the treatment of this dread disease, and the best method is none too good.

For Dr. Bridge I have always had the greatest respect, having been a student under him at “Old Rush” shortly before he removed to California, consequently have been interested in every article from his pen which came to my notice, but if he has not transcended his authority in asking the profession to accept such doctrine as set forth above, I am willing to acknowledge that at least one member of the profession is just so much behind the times, but who is anxious to “be shown,” and who will be greatly obliged if Dr. B., or anyone else, will furnish a few statistics substantiating his claims. Let us have the names and addresses of a few dozen (living, of course) patients who have been treated by gas infiltration or who have worn the immobilizing apparatus one, two, or three years or until the attending physician decided that the desired result had been accomplished. Let us have also the subsequent history of such patients covering a period of four or five years; then we will know.

Since the doctor mentions and recommends the Murphy method of gas infiltration of the pleural cavity, I would like to ask how many members of this society who equipped themselves with the Murphy apparatus since that memorable (?) oration of almost two hours in length, at the Denver meeting of the American Medical Association, extracts from which appeared almost simultaneously in some of the lay papers of both Den-
ver and Chicago, and subsequently came out as a serial story in the Journal of the Association? How many, I ask, are to-day using the apparatus in the treatment of your cases of consumption? Those of you who have long since relegated it to the garret, there to keep company with the von Bergeon apparatus for gaseous enemata for the treatment of the same disease, need not say a word if you do not want to.

When a new theory, a new medicine, or a new method has been thoroughly tested in actual practice, and has proven its efficacy in a sufficient number of cases to entitle it to a place among facts, then place it and the author's name, if he wishes, before every medical man who reads. But when some one, wishing to attract especial attention to himself, seeks to exploit a something, new and untried, and in some instances impossible of even rational experimentation, and which, aside from its newness or absurdity, has nothing to recommend it, I care not who the author or promoter, how great his name, or how long he has been recognized as authority upon other subjects, I, as one of the reading portion of the profession, demand that the pages of our medical literature be kept clean from such rubbish.

DISCUSSION.

Dr. H. W. Orr, Lincoln: I have no doubt such literature as the doctor describes can be found, but I do think the present condition of medical literature calls for some differences of opinion on such a paper. The practice of medicine is carried on not only by the profession as a whole, but by individuals, so that any system of practice must finally be a matter of personal opinion. As long as the present condition exists it cannot be otherwise. A great deal that is wrong will at least be presented for consideration and will also to a certain extent be practiced.

In recounting his experience the writer calls to my mind a paper which was read before this society a year ago by Dr. Davis, a paper of considerable value, on appendicitis. He presented the subject from every possible standpoint. It was a broad paper in every sense of the word.

According to the doctor, when a physician reads a number of papers on one subject, the thing he will do will be to throw the whole lot in the waste basket and then follow his own will in deciding which process to take. That is not the thing he will do. He will read all, and ten to one the course
Dr. J. L. Sutherland (closing the discussion): I have but a few words to say. I agree with the doctor who has just spoken in regard to the sifting of papers, but the sifting should be done by the author. That is where the sifting should be done. They ought not to throw stuff such as I have mentioned in with medical literature. Then also every article should be examined carefully by the censors, and if not worthy of publication, should be returned regardless of the author. I am not criticising the good papers which are in circulation, but everything of doubtful value should be eliminated from publication. We have something else to do than to read everything that gets into print. Yet we feel that we must read to keep up our professional interest, but we cannot waste time in reading worthless material.

I was in hopes that in the discussion some one would say something in defense of at least parts of the papers I have criticised; especially the part in reference to the immobilizing of the lung in the treatment of tuberculosis, for this is certainly a very important question. If the method is right and productive of good results, it should be adopted and become universal; but if it is impracticable and of non-utility, even if not positively harmful, all literature advocating such a method should be suppressed.
INFLUENZA.

EDW. S. BLAIR, M. D., WAYNE.

Our state, as well as other states throughout the country, has been thrown into the utmost confusion and wildest controversy over a disease recently prevalent, and which in former times has been regarded with mortal fear by the laity and with considerable anxiety by the profession. I refer to the much talked of variola. In some localities but a few cases have occurred, in other places the disease has assumed the proportions of an epidemic. Indeed, there are but few localities in the whole American continent where the malady has not manifested itself in the past two or three years. It is with some feeling of alarm that we observe the rapid spread of this disease and the vast territory included in its visitations; yet in this paper I have to present to you a disease that, in its rapidity of travel and far-reaching influence, claims its victims, not only by communities or by such large areas as states, but by continents. In fact we must regard influenza, as it has but recently presented itself to us, as a pandemic disease. It includes in its ravages practically the whole globe, traveling from east to west with remarkable rapidity, confining itself to no class or condition of persons, equally prevalent in all climates, and visiting with pain and death not less often the home of wealth and station than the place of poverty and obscurity. Our personal experience with this disease dates from the winter of 1889, and you will recall that the announcement of its arrival in this country was received among the laity and even among many of the profession with but little show of alarm. The press comments referred to it as "An innocent and trifling malady," and many were the newspaper jokes circulated at the expense of this new foreign visitor. Twelve years' experience with this foe has led us to regard it with more seriousness, and when we reflect that 25
per cent. of the whole population of Europe was affected by this disease in the first years of this present pandemic, we may more correctly estimate its gravity in comparison with the dreaded smallpox referred to in the first sentences of my paper. We scarcely comprehend the statement just uttered—that 25 per cent. of the whole population of Europe was affected by this disease in a few months' time. It means that from eighty to ninety millions of people were rendered more or less prostrate and that probably nearly a million of deaths resulted.

It might be profitable, but not at this time, I think, altogether practicable, to discuss at length the history, the pathology, and the various theories as to the etiology of influenza. I will therefore, in the few minutes allotted to me, simply give my experience with the disease during the first three or four seasons after its advent into this country, during which time I treated many cases. I kept no record of cases as I met them and must rely wholly on memory.

The disease has been one of peculiar interest to me, and no doubt it has been to most of the profession, probably not less on account of its first introduction to us of this generation than from its manifold and peculiar symptoms, its very numerous complications and sequelae, and from the fact that the etiology of the disease has been, until very recent years, undetermined. To Pfeiffer, in 1892, we owe the discovery of the influenza bacillus. The writer's experience with la grippe leads him to the belief that it is, as expressed by Dr. Julius Althaus, "A true nervous fever, the symptoms of which only differ so far as the localization of the grippotoxin in the different areas of the nervous system are concerned, all the symptoms of the attack being referable to irritant poisoning of a different centre of the nervous system."

In relating my experience with this disease I will first record some general observations and then refer to particular cases with their symptoms, complications, sequelae, and the treatment pursued.
The first cases which came under my observation were met with in Sioux City during the winter of 1889-'90 at the time when the malady first made its appearance among us. It is my opinion that the cases which I there encountered, during the first season, were milder, as a rule, than those I treated in the two succeeding epidemics. Another general fact which I have observed is this: that, at least among adults, more males have contracted the malady than females, and the symptoms in the former have been more severe than were met with in the latter. Another general observation I may mention is that among children who suffered from the disease catarrhal symptoms were by far the most common, if not the only, symptoms, while among adults nervous symptoms were more often met with and various complications were more often observed.

During the epidemic of 1892 I recall many more instances, by far, where the disease appeared in a family and one after the other was attacked, and at times all at once, so that the entire household were affected at the same time. In former seasons, often families were visited where only one or two were affected while the others did not suffer.

The disease has been called by some a catarrhal fever and descriptions of it as occurring in former times lead us to regard catarrhal symptoms as an essential part of the disease. Yet many cases have presented very mild catarrhal symptoms and we might say in some instances no catarrhal symptoms whatever, while under observation. It has been a question in my mind whether these latter cases had not gone through a catarrhal stage and delayed calling in medical aid until more serious and painful symptoms arose. In quite a large percentage of cases I found little or no elevation of temperature and in a few even a subnormal temperature.

The disease has presented such an array of symptoms, so numerous and varied, with its complications and sequelae involving almost every organ and tissue of the body, that indeed there has been a tendency dur-
ing the prevalence of the disease to overlook other causes of pathological conditions and, in doubtful cases at least, diagnose one and all as la grippe. The brain, the spinal system, the stomach, the lungs, the liver, the intestines, the kidneys, the mucous and serous membranes, and the skin have all suffered from the evil effects of this grippo-toxin.

If I were to classify my cases according to the predominant symptoms, I might form a class in which, first, catarrhal symptoms were most prominent, another in which nervous phenomena were more pronounced, a third class where gastric or intestinal troubles were the main features. I might make a fourth class of those cases in which more or less serious complications arose and a fifth of those where sequelæ occurred.

As I have intimated, the cases in which catarrhal symptoms were more pronounced were, in my experience, among children. In these cases the catarrh differed from an ordinary cold, or what we term "acute catarrh," in the sudden and violent character of the attack and also in the, at times, very abrupt termination of the same. The child in apparently sound health would be suddenly attacked with violent coughing. In very young children who were unable to eject the secretions from the nose or expectorate them as they collected in the throat, the symptoms were at times alarming. A long and violent fit of coughing would finally terminate in complete exhaustion of the child and relief by either swallowing the secretions, vomiting them up or dragging them from the throat with the finger. The secretions were thick and viscid, and in these cases the pathological condition seemed to consist not only in a congested and inflamed condition of the upper air passages, but involved the larger bronchial tubes. In some cases symptoms pointed strongly to an involvement of even the smaller or capillary tubes. During the season of 1892, among these catarrhal cases, so violent was the coughing, of such a spasmodic, paroxysmal character, so long continued and obstinate in its treatment that parents have repeatedly believed and re-
ported their children as having whooping-cough; but this was disproved by the fact that there was not the accompanying whoop and other children associating with those affected did not contract a similar cough. While the great majority of catarrhal cases was among children and the most serious among very young children, it is a singular fact that the only cases in which catarrhal symptoms were the most prominent in adults were, as far as I can recall them, among the very aged. I recall three cases, all above 80 years of age, in which the catarrhal symptoms were pronounced while there was an absence of the nervous or gastric symptoms. In all three of these cases the symptoms were so serious that, considering the advanced age of each, my prognosis was anything but encouraging, yet all recovered, one dying several months afterwards, however, from general debility no doubt influenced by his former encounter with la grippe. The only other fatal case was that of an infant of six weeks, manifesting only the catarrhal symptoms. Bronchitis developed, the child was unable to free the tubes of the secretions, and finally suffocated.

Among my patients were many more very young children from 3 or 4 months to as many years of age. All suffered from the catarrhal form of the disease, and, I may say here, that my main reliance in treatment in these cases, which proved also eminently satisfactory, was the carbonate of ammonia in powder with extract of glycyrrhiza dissolved in a little milk or water at the time of taking. Where there was any considerable elevation of temperature from \( \frac{1}{2} \) to 1 drop of aconite every hour until skin was moist. In older children and adults in which cases the cough had continued for a considerable length of time and was violent and interfered with rest at night, I experienced good results from terebene combined with aromatic syrup of yerba santa and syrup of tolu or syrup of glycyrrhiza. Where the cough was tight and the secretions raised with much difficulty a combination of iodide and carbonate of ammonia was used, the stimu-
lating effect of the ammonia salt serving also a good purpose.

Among children I recall but one case where the nervous symptoms were manifested:

Roland M., a robust boy about 8 years of age. He complained of severe pains in various parts of the body commencing in the lower extremities about the ankle joints and simulating rheumatism. The knees, the arms, the chest, the neck, all in turn suffered, and especially did he complain of pain in the region of the heart. He was very nervous and could not sleep. Had great difficulty in breathing and especially while lying down, a symptom much complained of among many of my la grippe patients. Anorexia and costiveness; a slight cough only, which distressed the patient greatly by reason of the pain it produced in the side and chest from the effort at coughing. There was for two or three days some elevation of temperature. As the pains began to subside and other symptoms improve, a partial paralysis manifested itself very similar to that met with in diphtheritic patients. The right hand, arm and leg, and the speech were affected.

The treatment, which was employed also in other similar cases, may be summed up as follows: Relief of pain and restlessness with morphia, bromide of potash, hyoscyamus, etc., attention to the bowels and kidneys. Where elevation of temperature existed, antipyretics, as aconite or antifebrin, with digitalis to sustain the heart, were used. In these cases a combination I frequently employed was salol, antifebrin, and quinine, obtaining thus an antiseptic, antipyretic, and tonic effect. Strychnine, in small doses, and other tonic remedies were used in convalescence. The case above referred to made a good recovery, strychnine being employed when the paretic symptoms appeared.

Cases in which gastric symptoms were pronounced were affected with pain in the region of the stomach, severe nausea and vomiting; anorexia, and at times severe headache. In one case the vomiting was so violent that blood finally appeared in the matters ejected. The
least movement of the body, as raising the head from
the pillow, would bring on the nausea and effort at
vomiting.

Those cases in which intestinal symptoms were mani-
fiested were suddenly attacked with gripping pains in
the bowels and diarrhea. It was common for these
cases to exhibit great depression, complaining of ex-
treme weakness within a few hours of the beginning
of the attack. With antiseptic and astringent reme-
dies, as salol, bismuth, and opium, the pain and diar-
rhea usually were soon controlled and, with tonic treat-
ment following, the recovery was more rapid than in
cases where there was apparently less depression.

Among cases manifesting nervous phenomena some
were quite interesting and curious:

Emerson T., a strong healthy man of about 38 years,
complained of excruciating pain in the head, with nau-
sea and violent vomiting. Blood was finally thrown
up with the vomited matter. The patient felt better the
next morning, and though weak went about attending
to light work. In a few days he drove into the country
about eight or ten miles to attend to some business,
and while there and conversing with a companion was
suddenly affected in such a manner that he was unable
to continue the conversation. He could articulate but
could not put words properly together to form his sen-
tences, and after several efforts he gave it up and drove
home. He complained, at the same time, of a numb-
ness in parts of the body. When he arrived at home he
found the same difficulty in attempting to talk. The
severe headache also returned. I called to see him that
evening and administered quinine and remedies to con-
trol the pain. The next morning, though weak, he went
about and has not complained since. Three little chil-
dren in this family were affected with the disease, all
with the catarrhal form.

During the first season when the disease appeared
and was prevalent in Sioux City I met a case there, a
young woman about 20 years of age, who had but
recently arrived in this country. Was strong and
healthy in appearance. She was attacked with la grippe and had been sick but a short time when she lost all muscular power. She was unable to move any part of her body and lay upon her back in this condition for several hours. The power of motion returned and other symptoms improved. The case was dismissed and as nothing more was heard from her I judge she made a good recovery.

Among the symptoms met with in other cases were excessive sweating, often with a cold, clammy skin, sweating of one part of the body while other parts were not thus affected, numbness or prickling sensations in various parts, localized tenderness at different points, syncope, palpitation of the heart, insomnia and great restlessness.

I will now note some complications and sequelae and with this close my paper:

Mr. C., aged 40, at the same time that he was suffering from la grippe was attacked with acute articular rheumatism and pleurisy. The suffering was intense. In this case there was considerable coughing and the patient expectorated quantities of a thick purulent matter. Antirheumatic remedies were employed and hypodermic injection of morphia to control pain. The wife and daughter were attacked about the same time with la grippe, the latter suffering most from gastric trouble, with considerable elevation of temperature.

In another family composed of man, wife and three or four small children, the male parent was attacked with the intestinal symptoms, diarrhea and severe intestinal pain, the wife with pains in the head, face, and other parts, while the children suffered from the usual catarrhal symptoms and they with the mother complained of a peculiar mouth affection. The mouth and tongue became sore and painful and the flow of saliva was so stimulated that it continually dropped from the mouths of the younger patients. This peculiar complication was of unusual interest to me inasmuch as I met with it in my own family. The affection here began in the throat, which became red and felt raw and irri-
tated. Soon this feeling extended to the base of the tongue along its side and finally to the tip end. Points of redness the size of a small pea appeared on the tongue and much pain was felt at the side of the tongue where it came in contact with the teeth in speaking or eating. For the time being the sense of taste was almost lost and the mouth and tongue felt as though it had been burned with a hot liquid. The affection lasted for two or three weeks or longer, disappearing finally without any special treatment.

Another complication quite common among children was otalgia and discharge from the ear, while in several cases, also among children, I met with an eye affection. In a family in which the father was affected with the gastric and nervous symptoms, three children were suffering from the catarrhal form of the disease and in each the eyes became slightly inflamed, tender, and the lashes stuck together with an abundant mucopurulent secretion. This lasted but a few days and improved with a boracic-acid wash.

Skin eruptions formed a frequent complication or rather, in most cases, I think, a sequelæ, for in some cases the skin affection appeared soon after the attack of la grippe and continued to annoy the patient for months, growing better and worse at times and appearing even a year or more after the first attack. Dry and moist eczema, pruritis, and pustular affections were not uncommon sequelæ. Various parts of the body were affected and in some aggravated cases the whole surface was involved.

The following characteristics I think we have all observed in our experience with influenza: The suddenness with which the symptoms appear; the absence of prodromal symptoms, the extreme depression and exhaustion often following but a few hours' illness, and the great uncertainty as to what part of the body or its tissues we may expect to be affected. These features, I think, will strengthen the theory as to the nature of the disease and its cause as claimed by Dr. Althaus and quoted in the beginning of my paper: "A true nervous
fever, the symptoms of which only differ so far as the localization of the grippo-toxin in the different areas of the nervous system is concerned.” This toxic principle may, as in diphtheria, gain access to the body in most cases through the inhaled air, and primarily affect the mucous surfaces of throat or nasal passages or bronchial tubes, but it soon enters the blood current, and the violent and sudden manifestations of its attacks upon the nerve centers are only too evident in the multitude and variety of its alarming symptoms. Since 1889 scarcely a winter has passed in which la grippe has failed to make its appearance and the mortality in our cities has been largely increased by its ravages. During the past winter and the present spring we have been again called to meet the disease. With each succeeding year since 1889 we have been called to meet this foe. Must we continue to meet it with the years to come? Have we satisfied ourselves that its cause has been really defined? Are we satisfied with the weapons we have employed to meet it? These are questions that may be interesting and profitable and I leave them for your consideration.
CIRCULATORY CHANGES A FACTOR IN KIDNEY DISEASE.

W. R. LAVENDER, M. D., OMAHA.

The kidneys are glandular organs with special functions in the selection and excretion of waste metabolic products from the blood, both the glomeruli and tubules combining in this work. The nutritional, functional, and reproductive action of these structures depend upon a normal supply of nutrition, the absence of which favors disintegration of the albumin of their component histological elements, and by alteration of their physical and chemical structure causes albuminous and fatty degenerative changes.

In early life, owing to the simpler arrangement of the structures of these organs, viz., less capillaries passing into the cortex from the capsular vessels, less perirenal fat with its supporting connective tissue stroma (the increase in number of glomeruli and urinary tubules being due to a normal hypertrophy) the functional elements are consequently less subject to pressure. In later life there is an increase in number of the capillaries passing into the cortex from the capsular vessels, hypertrophy of both vascular and cellular elements (in volume but not in number), all or any of which may produce pressure causing limitation of normal repair, proliferation of the histological elements, and favoring engorgement and hyperemia.

This congestion, if temporary in duration, results in no important pathological changes, but if considerable in extent and of long duration may injure delicate neighboring tissues, ultimately, producing induration of the stroma (interstitial changes) more or less permanent in nature. This induration may in time produce irritant effects resulting in production of new connective tissue, which is subject to secondary inflammatory changes and contraction, thus increasing ob-
struction to the normal circulation in affected parts; or finally becoming the starting point of an extensive fibroid change in the organs.

Regeneration of functional tissues can only take place from similar elements. When complete destruction of these occurs, there is a substitution (attempt at repair) of such elements by new connective tissue formation. But owing to the mutual interdependence of the structural elements in individual organs, isolated disease of a single element is rare, so that in disease of the parenchyma the blood-vessels are also usually involved. New tissue formations are favored by three conditions: (1) Excessive nutrition, as in hyperemia; (2) increased activity, causing functional hypertrophy; (3) excessive growth by removal of the natural limitation to proliferation exerted by pressure of the surrounding tissues. Hyperemia sooner or later produces the so-called “vicious circle,” viz., leucocytic emigration, injuring vessel-wall and increasing its permeability; retardation of flow of blood through capillaries and veins; plasma passes over to the tissue, emigration of leucocytes. In hyperemia, when extensive, we have diapedesis of red blood-corpuscles with resultant ischemia, venous congestion, stasis, intoxications, chronic disorders of innervation, and metabolism, and anemia.

Pathological changes in the kidney due to circulatory disturbances vary in degree according to the exciting cause; from those cases in which the involved area, through possession of a normal nutrition and circulation, where repair is possible by proliferation and hypertrophy of the unchanged elements, to those in which the vascular destruction is extensive and regeneration impossible.

Inflammatory exudation and tissue necroses in kidney structures resulting from circulatory disturbances in these organs, originate primarily from various causes, viz., mechanical—interference with quantity and velocity of blood passing through the kidneys; chemical—from changes in the quality of the circulating
blood. Secondarily, in diseases of other organs favoring vascular congestion, in local and general diseases, especially of the digestive apparatus and portal venous system. In non-infective diseases, where functional elimination in other organs is defective, with reabsorption of products necessitating their excretion by the kidneys, viz., the toxic products in infective diseases which are generated within the body, or in the direct micro-organic invasions causing degeneration of secreting structures, or circumscribed lesions; drugs and other substances from without the body; from vasomotor disturbances, peripheral or central, any or all of which produce local effects and if transient in nature causing but slight damage, or if long in duration ending is serious and irreparable organic changes.

Active Hyperemia of Kidneys.—Most commonly due to increased pressure within the aorta alone or combined with dilatation of the renal vessels; or it may be due to passive congestive obstruction in the veins, or other influences increasing abnormally the amount of blood in the organs, or in general or localized disturbances of metabolism, viz., where the tissues require such an increase of nutriment that assimilation from the blood is overpowered, the result being albuminous and fatty degeneration of the tissue elements.

Passive Hyperemia of Kidneys.—The most prominent cause is general disturbance of the circulation, as in heart and lung disease; the tissue changes induced depending upon (1) amount of obstruction, sudden onset, or combination with inflammatory or other changes in the lumen of the renal vessels; (2) thrombi in the vena cava. If gradual in onset the condition is partially relieved by part of the blood passing from kidney through small capsular vessels of the cortex which empty into the communicating branches of phrenic, lumbar, and suprarenal veins; the organ is edematous during this stage. If sudden in onset, subcapsular, cortical, and medullary hemorrhages quickly result, Bowman’s capsule and other portions of the urinary tubules are filled with blood. Should the obstruction be extensive and persistent there occurs a cyanotic indu-
ration of tissues, or necrosis, fatty degeneration, and liquefaction of renal elements; the kidneys are swollen and purple in color.

**Engorgement of Kidney.**—Recent cases. The vessels are distended with blood, the capillaries and veins especially. Bowman’s capsule and proximal convolutions are filled with red blood-corpuscles and their disintegrated products; the lumen of tubules also contain fluid which yields albumin on boiling; hyaline casts and a few red corpuscles are found in some tubules, the epithelial cells lining the loop of Henle contain pigment from the hemoglobin. Long standing cases. Increase of the interlobular connective tissue, dilatation and loss of elasticity (tone) in vessels; increase of tissue in the walls of the capillaries and veins with occasionally leucocytic infiltration; the straight tubules in the medullary portion of organ show fatty infiltration of their epithelial lining; where the glomerular contents are shrunken and homogenous in appearance their corresponding tubules undergo atrophy and collapse.

**Ischemic Infarction of Kidney.**—There being no free anastomosis in the arterial arrangement in the kidneys, emboli result in an ischemia and necrosis of tissue elements in area involved; in a few hours after blocking of vessel the tissues become pale gray in color. This area is directly surrounded by a hyperemic marginal zone showing hemorrhagic infiltration but rarely extending over whole part supplied by the occluded vessel. In a few days this anemic infarct, surrounded by its reddened marginal zone, undergoes changes, forming a wedge-shaped patch, opaque, yellow, gray, or white in color, containing dead tissue, red blood-corpuscles and leucocytes or round cells; later liquefaction and reabsorption of dead tissues takes place, followed by a regenerative hyperplasia in the surrounding neighborhood, producing both connective tissue and epithelial cells. Glomeruli and tubules entirely deprived of blood do not become functionally normal again (even although circulation is promptly restored through adjacent capillaries, or by a reopening of the occluded vessels by shrinking of the em-
bolus), but result invariably in depressed scars in tissues of organ.

**Amyloid Disease of Kidney.**—Affects middle coat of arteriae rectae in the medulla, the glomerular loops in the cortex, and often occurs in the capillary walls immediately external to their endothelial layer, change forms in situ, but may exist in preliminary stage in the circulating blood.

**Angiosclerosis of Kidney.**—Is not due to a single cause; it is both an anatomical and functional disturbance, and its products are the result caused by numerous etiological factors, viz., intoxications, infections, and many metabolic disturbances.

Circulatory changes are possibly the most important and common etiological factors in producing disease of kidneys, and whether due to circulating toxins, which are now known to be capable of destructive action upon not only the red corpuscles of the blood, but also directly upon endothelium of vessel walls, or to chronic local or general diseases of other organs, or derangement of functional activity or organic elements in other organs producing degeneration of functional elements of kidney directly from eliminative irritation. The occurrence from any of these causes of an engorgement of the kidneys, if long in duration, results eventually in not only destruction of functional activity and of elements, but also in production of new non-functional tissues permanent in character with progressively fatal organic changes.

Uranalysis and microscopical examination of sediment in early stages of engorgement is apt to be mistaken for conditions found in chronic Bright's disease. The presence of hyaline casts, albumin, and leucocytes, a nearly normal output of urea, varying specific gravity, are significant of circulatory disturbance and its severe action upon functional elements, which, if not checked, will result in fibroid changes with its uranalysis of persistent low specific gravity, diminished urea, granular and other casts, debris, and other products.
THE SMALLPOX PROBLEM.
W. H. SLABAUGH, M. D., SOUTH OMAHA.

It is hardly fair to ignore smallpox entirely during an epidemic, otherwise I would not have the temerity to present this paper which contains little or nothing of scientific value and merely my own impressions of the situation to-day.

When the committee appointed in 1807 by the Royal College of Physicians concluded that vaccination afforded security against smallpox, no doubt they considered the smallpox problem about solved; but we, who have to deal with an epidemic today, find it a very perplexing question and about as far from solution as it was a hundred years ago.

In our city of South Omaha, we have had about 750 cases during the past season, with two deaths. The disease, although mild, is more severe than it was a year ago, and the government expert, who was with us a few weeks since, predicts a still more severe form of the disease next year. There have been quite a number of confluent cases. We are not having as many cases at present as we did in the closed winter months; yet, with all our attempts to check the disease, it continues to flourish and probably will continue into the next year. The mildness of the epidemic, no doubt, is responsible in a measure for the general spreading of the disease.

Our quarantine regulations, consisting principally of placarding the houses, are of little value, as we have a large irresponsible, transient element to deal with. A quarantine, to be effective in stamping out the disease in short order, no doubt would require an unlimited amount of money and perfect police control; conditions which do not exist in South Omaha or any adjoining city of which I am aware.

Perhaps it would not be profitable to discuss matters
upon which the medical profession agree; but there are
certain phases of this question relating to the manage­
ment and treatment of these cases that I think we may
discuss with profit; namely, the apathy and prejudice
of the people to vaccination, the prevention of pitting,
and the quality of the vaccine virus.

How frequently we meet with persons who do not
know what smallpox means. They have been led to
believe it is a very trivial matter, and quote some one
who has had a light attack as saying “he would rather
have smallpox again than be vaccinated,” and while
this might be true of a very mild case of smallpox, as
compared to a very severe case of vaccination, this
apathy defeats our best efforts and tends to perpetuate
the disease. If these people knew the possibilities of
a case of smallpox, many of them would submit to
vaccination, and the best argument I have found is to
show them a photograph of a well-developed case of
the confluent form.

There is a class of honest people, however, who are
prejudiced against vaccination, and often with much
reason, who deserve our earnest consideration. These
people are filled with the traditions of the past; the
transmission of disease in the days of humanized virus.
They know of the danger of the complication of tet­
anus; they are familiar with the accidents due to in­
fec­tion, such as phlegmon, abscess, keloid, and derma­
titis; they have vaccination phobia, and would about
as soon be shot at as to be vaccinated. If we could
assure such people that these accidents were things of
the past, and that we had so thoroughly mastered our
art that these mistakes would not occur again, I think
we could convert many of them; but unfortunately we
cannot do so at present. We can employ thorough
cleanliness and proper surgical procedures, and mini­
mize the danger from this source; but we need assur­
ance ourselves that the wound will not be subsequently
infected, and especially that we have a virus which is
harmless. I think this is the bottom of the whole ques­
tion. If I could assure my patient that this virus had been tested on susceptible animals for tetanus, and appropriately for other infecting germs and found sterile, I am confident that I would be a long way toward convincing him of his error.

Probably no two individuals would react identically if inoculated with the same virus, any more than they do with smallpox itself; but there seems to be a growing suspicion in many sections of the country that the severe results following the use of some virus do not produce immunity, but are the result of a more severe infection. Our experience, although small, tends to corroborate the above conclusion. In one severe case of vaccination of a year ago, a well-developed case of smallpox occurred the past winter; but with a very few exceptions, we had no cases of smallpox in those who had been successfully vaccinated. In this connection it would be interesting if physicians who discover smallpox in those who have had well-developed scars from vaccination would observe their appearance; whether they are of the pitted Jennerian type or the smooth cicatricial variety following a phlegmon.

I think one great duty of the medical profession today is to demand a systematic inspection of the manufacture and sale of vaccine virus, so as to insure more uniform and perfect results.

One year ago, much of the virus used in our city was unsatisfactory. The glycerinized variety often failed and the dry points, while more certain to "take," were often followed by severe inflammation. Since January last, some of us have been using a glycerinized virus on an ivory point, protected by a paraffin covering, and up to date it is all that we could desire. The success of our city physician, Dr. Sapp, with this virus has been remarkable. In primary cases he has seldom had a failure, and he has had no bad arms. My experience has been of a similar character.

Our efforts to prevent pitting have not been very successful. We have tried various methods, including
the red light, but we are still of the opinion that deep ulceration will occur in some cases, and deep ulceration will destroy tissue.

DISCUSSION.

Dr. A. S. v. Mansfelde, Ashland: I have a friend here who a year ago gave it to me in regard to smallpox, and therefore I want Dr. Hildreth to come up to the front and listen. I had a case of this so-called smallpox. It was not that disease but was very much like it. I take it that that disease has in some way been brought into this country from some other, and it is unfortunate that that disease was called smallpox. It is not modified smallpox nor varioloid, nor even what it was called last year, mild smallpox, because that is a distinct form of smallpox. When anyone gets up in this society and makes the statement that people are afraid of vaccination because of the terrible diseases that come from it, they have no basis for it. I will challenge the doctor who states that in the past history of vaccination there has been a great deal of transmission of disease. When you get that far, you have pretty near exhausted the sum total of vaccination. Vaccination does not protect unless there is a square inch of vaccination pustule. There should be a whole half an inch of pustule produced. Not one-half inch of suppuration. It is not good practice to scarify the arm one-half or one-fourth of an inch and then have an ulcer that extends down to the bone. It seems to me that we ought to learn something from fifty years ago when people vaccinated babies on the arm five or six times on each arm. What should be done is the smallest possible scarifications. three on one arm, and you will have no danger from vaccination. It will pustule. The only infection that a person is likely to receive from vaccination is the infection which is caused by the vaccination sore. You should make the smallest possible opening and put the virus into that.

Dr. W. N. Slabaugh (closing the discussion): I have only this to say, we had some very bad cases with eyes swollen shut and one hemorrhagic case that died.
A recapitulation of the general symptomatology of typhoid fever may by some be considered as laying much stress upon an elementary subject in medicine—one upon which volumes have been written. Still, a disease with which all of us come in contact every year cannot be too thoroughly discussed, and especially typhoid fever, in which, even with all of the advancement and progress of scientific medicine, we do not yet meet the results in the successful management of those cases which we so greatly desire. Among some of the causes for failure in the treatment of those cases is lack of a definite method or rule of placing every doubtful case in the recumbent position and there oblige him to remain until the development of the disease indicates the form and gravity of the malady.

I will not attempt to touch on the pathology of the disease, it is the symptomatology of which I desire to treat. The invasion of the system by typhoid fever is so gradual that we are many times unable to obtain the exact information so desirable from the patient, as to the mode of the beginning of his illness. In nearly every instance, however, in which we are called upon to treat a patient suffering from typhoid fever, we will find that nearly always he has been indisposed from three or four days to a week or more. A few instances of deviation from this general rule will be cited.

Some patients whose disposition in life is to note definitely almost all of the ills to which they are prone will, in all likelihood, from a minute observation of all of the details of their symptoms, be able to give us an exact and definite history of their case, as to the time of invasion by the bacillus typhosus.

Headache is one of the most common symptoms of typhoid fever; it is always present during the first few days. To this a few exceptions are noted; it is nearly
or quite as common, though less severe, in the mild as in the grave cases of the disease. Many times it will persist throughout the attack, but more often subsides at the end of the first week, or at this time the patient may fail to complain in consequence of the dullness which is liable to supervene. It is usually dull and heavy, but in some instances it is throbbing, especially during the first few days. The headache is sometimes so intense in the beginning as to mask the real nature of the disease and have it mistaken for meningitis.

In the beginning of an attack of typhoid fever the patient is very wakeful and restless at night, after which drowsiness supervenes. Drowsiness seldom takes place until about the eighth day of the disease. It usually persists until death or convalescence. Should the wakefulness of the first week, reappear in the third week and co-exist with muttering delirium, it then constitutes a most unfavorable symptom.

The temperature, according to some authorities, if it exceeds 106°, will nearly always end in death. The pulse is usually accelerated in a case of typhoid fever, the degree depending largely on the severity of the other symptoms; it usually ranges from 90 to 120 beats per minute; it is more firm and full in the beginning of the disease than it is later on; irregularity of the pulse is the exception in typhoid fever. The respiratory movements are accelerated, as they are in all febrile conditions. Sometimes you will observe that increased respiration in typhoid fever is due to an excessive tympanites. Muscular tremor is a common symptom of typhoid fever, also tremulousness of the tongue when protruded is often detected before the end of the first week.

Seldom does the disease begin with a decided chill; more often will we find a case having had a series of slight chilly sensations. Vomiting is the exception in typhoid fever. Of recent years a tendency to constipation exists in my observations more than formerly. The diagnosis of typhoid fever can be absolutely established, of course, when the bacillus typhosus can be
cultivated directly from the blood, urine, or feces, as is now sometimes successfully accomplished by skilled bacteriologists. The Widal reaction is of great value, too, in establishing a diagnosis when it is present, but it is sometimes not obtainable until very late; nothing, however, can be argued from its absence.

Epistaxis may occur during the first week; it consists usually of only a few drops of blood. Diarrhea consisting of ochre-yellow stools is another symptom often found at the end of the first week of the disease; it is often found much earlier, and, again, it never appears. Another characteristic symptom from the seventh to the twelfth days is an eruption of rose-colored spots principally on the surface of the abdomen, but not infrequently seen on the chest, sometimes on the face. Bronchitis, too, is nearly always present in the beginning of an attack of typhoid fever.

Deafness supervenes after several days' invasion of the system by the typhoid poison. Towards the end of the second week the tongue becomes dry and covered with a dark, heavy deposit. As the disease progresses the tongue becomes glazed and fissured, the lips and teeth are encrusted with sordes; hemorrhages from the bowels may be seen at times when such complication exists.

The temperature in a case of average severity of typhoid fever rarely exceeds for the first few days 102°. Tenderness in the abdominal region is many times observed, but that, and the gurgling in the right iliac region so often pointed out as diagnostic, is very frequently altogether absent. Enlargement of the spleen is evidenced as another diagnostic symptom of typhoid fever. The pupils are often widely dilated, the conjunctivæ clear, and the face pallid, with the exception of a circumscribed flush on either cheek. Remittent and typhoid fever often prevail together and present many points of resemblance, and are sometimes with much difficulty distinguished from each other. The Widal reaction, or the examination of the blood by a skilled bacteriologist, will be one of the positive meth-
ods of clearing up the true nature of the fever, especially during the first few days of the illness. To differentiate typhoid fever from the eruptive febricula, simply recall the fact that in the latter class of fevers the maximum temperature is reached in twenty-four hours and sometimes much earlier. Acute tuberculosis of the lungs is oftentimes with great difficulty distinguished from typhoid fever. It is here again that the up-to-date scientist can materially aid in making clear the diagnosis. Acute tubercular meningitis has also many symptoms in common with typhoid fever, especially the headache, delirium, and stupor; the temperature range is very irregular in tubercular meningitis. The following list comprises a few clinical cases where symptoms were somewhat misleading:

Case I.—A physician, aged 34, attending to his practice as usual, felt somewhat indisposed, but was working very hard, hence attributed his general condition to that cause and was about to go away to recuperate, when bloody stools made their appearance. Diagnosis, typhoid fever. Convalescence uneventful.

Case II.—A life insurance solicitor, aged 36, who imbibed alcohols freely, complained of headache and a chilly sensation. It was thought, perhaps, that his habits of imbibing might account for his symptoms, but one night, the second day after complaining of headache, chills, etc., he returned from a thirty-mile drive, had a bloody stool followed by four others in the next twelve hours. Temperature 103°. He was put to bed and the usual treatment accorded a case of typhoid fever given him. His convalescence very satisfactory; discharged at end of five weeks.

Case III.—Male, aged 46, who assisted in caring for another member of the family who had been ill for several weeks, as the result of an injury. He complained of being unable to walk without much fatigue. There had been no perceptible increase of temperature, no headache until ten days from date of first indisposition, when headache first attracted attention. It was never severe. This case presented no rose-colored
spots; no epistaxis; no tenderness of iliac region; no gurgling or diarrhea, and this progressed for two weeks, when a copious bloody stool took place. Patient was then obliged to remain in bed, though under protest, where he was apparently convalescing very satisfactorily for six days, when perforation occurred. Death in eleven hours.

Case IV.—Male, aged 28, had been at work as a carpenter every day until the day on which he consulted a physician; he appeared somewhat delirious and was considered by many of his friends to have been insane. He died next day of perforation through Peyer’s patches. Autopsy, typhoid fever.

Case V.—Male, aged 24, laborer; worked until the day before, when he was first seen by a physician; he was now, twenty-four hours later, comatose; was supposed to have poisoned himself. Perforation. Died same night.

Case VI.—Female, married, aged 33. Supposed to have died six days after labor from puerperal fever. Autopsy revealed perforation through Peyer’s patches.

Case VII.—Male; butcher; aged 36. Injured on head by a large plate window glass falling on him as he passed along the street. He lived two weeks. Autopsy revealed perforation in Peyer’s patches.

Case VIII.—Male, aged 32. Indisposed for several weeks. Treated for indigestion. Following the ingestion of a banana became suddenly ill and in a few hours presented symptoms of perforation and died within fourteen hours. Autopsy, perforation through Peyer’s patches.

(I am indebted to Dr. W. Jepson, of Sioux City, for the history of cases VII and VIII.)

How will we conduct the management of some of our typhoid fever cases in which, up to the present, an autopsy has been required to establish a diagnosis? Briefly, in every instance in which a person between 15 and 35 years of age feels languid and indisposed in the late summer or fall season, he should be at once remanded to bed and there remain at least a few days,
or even a little longer if the disease is slow in developing. If the typhoid invasion has taken place, we have anticipated it by rest, moderate liquid albuminoid diet, and cool and refreshing baths, with plenty of cold sterilized water to drink. We have thus conserved our patient's strength with which to fight the ravages of the disease and have him in a much superior physical condition to withstand a severe siege of typhoid fever than had we failed of the above precautions.

Gilman Thompson says: "It is a good rule to suspect typhoid fever as present, with any temperature not explained by demonstrable cause, which lasts for three or four days without complete morning intermission, especially if the facies be dull and dusky, and the tip of the tongue be sharp and red, with prominent papillae."

Another physician is quoted as saying: "When you have a patient between the ages of 10 and 50, especially if it be in the fall of the year, who has complained of general depression for a week, and then becomes bedridden with a temperature higher each day, the sooner you decide the case is one of typhoid fever, the sooner you are right."

In the absence of the skill which is not at all times available to produce the culture test for typhoid bacilli or the Widal reaction, we will oftentimes be obliged to postpone our diagnosis for many days, depending upon each symptom to form a chapter in the history of the case.
SCHLEICH ANESTHESIA.

R. M. STONE, M. D., OMAHA.

At a recent meeting of the Omaha Medical Society there was read a paper upon a case of labor in which the patient had pronounced valvular disease of the heart. The question was raised by the essayist as to whether her decision that an anesthetic should not be used was proper. The report elicited a very strong discussion, all taking the position that an anesthetic should have been used. Dr. J. E. Summers, Jr., discussed strongly the general subject of anesthesia and made a statement which is quite pertinent to my paper. He said: "I see before me quite a representative body of Omaha physicians. I recognize that one man out of every ten before me has lost one or more patients from chloroform while on the table. I know of these, and there may be some others of whom I have not heard, as doctors do not always report such accidents." One of his hearers, in an "aside," said, "No, we don't have to report them, the other fellow sees that that is done."

It is a lamentable and awful fact that death from chloroform is very frequent and that almost none is recorded. I have not been free from this sad experience, but I reported my loss at once to the board of health as a death from anesthesia, Schleich solution used, and I also reported it to the New York Medical Record and the Journal of the American Medical Association, because it was the only death known to me as due positively to the Schleich solution.

The more work I do as an anesthetist, the larger my experience grows, the more I am convinced that the subject of anesthesia is not at all appreciated in the proper light. In my judgment, the methods of practically all of the surgeons of the United States are sadly at fault with reference to anesthesia. Long-established customs will prevail in spite of the teachings of men
who attempt to make anesthesia-giving their busi-
ness and who are more competent to pass judg-
ment upon this subject than are the surgeons. I
speak with all modesty because, while I greatly
magnify my office and regard my work as one
of vital importance, I have not the slightest desire
to magnify myself. I allow no one to hold the
surgeons in higher esteem than do I. Their nerve,
their skill, their most wonderful knowledge of anatomy,
their fertility of resource, their results, delight and
amaze me and impress me in the highest degree, but the
conditions under which they work, their connection
with colleges and hospitals, where young men are
numerous and their only assistants, seem to force them
to employ the young, and usually the youngest, gradu-
ate as their anesthetist. The production of anesthesia
is an art, most laboriously and slowly acquired, and
yet the anesthetist of practically every hospital is one
of the youngest internes, who has had very little theo-
retical instruction, and almost no clinical, from a com-
petent anesthetist. I say without hesitation that the
operating surgeon is not competent to act as a clinical
instructor of the anesthetist; he is too busy; he must
attend to his operation and he can only supervise the
anesthesia in the most general way. He knows, to be
sure, when there is too little anesthesia, or when the
blood becomes purple from lack of oxygen, but he has
neither time nor opportunity to know the condition
of the heart, the pupils, or the face. Anesthesia-giving
is only properly taught at the side of the operating
table by an old, experienced anesthetist, who watches
the work of his student and teaches him while the anes-
thetic is being given. How many of us have ever seen
this done? There is a chief anesthetist in one of the
large hospitals in Chicago, but he himself is only a
two- or three-year interne and I have never seen him,
during dozens of operations witnessed, teach the in-
terne who administered the anesthetic. The English
surgeons employ anesthetic specialists and, in England,
you can see scientific anesthesia. We are passing through a period in which surgery is placed upon the pinnacle. Its results are so brilliant, are attained so quickly in point of time, that the surgeon is most magnified. It cannot be that the surgeons represent far and away the highest development of the brains of the medical profession, and yet, if a visitor from Mars should follow the leading medical man through the wards of a great hospital, see his simple retinue of one intern and one nurse, and then see the crowd of nurses, students, internes and doctors following the surgeon, watching his every movement, listening in awe to his words, our visitor might be excused if he formed the opinion that the surgeon was the "whole thing" and the medical man a mere subordinate. The tendency of this deference, this adulation, is to undue self-appreciation and pronounced selfishness. I know of no man on earth so supremely selfish, so utterly regardless of the rights and privileges of all others, as one eminent surgeon whose name is known world-wide; his nod is law and must be interpreted by his internes and nurses; he ignores everybody, walks roughshod over all, and yet he is a truly great surgeon and teacher, a man of most marvelous ability, of vast experience, every particle of it remembered and utilized when desired. He is the most striking type of the wrongly developed surgeon. The truth is that the tendency of modern methods is in this direction and many surgeons suffer from this undue prominence. But operations and operators, like water, and surgery as well, will find their level and the day will come when the physician, with his less brilliant, but equally important methods, will be recognized as occupying a plane, above which there is no other, but alongside of which is that of the surgeon. This seeming digression is only apparent. I desire to call attention in this way to the improper education and environment of the surgeon as one of the responsible factors in the failure of the profession and public to recognize the proper dignity of the anesthetist. The surgeon, him-
self a specialist of the highest type, has too often failed to see the necessity of having another specialist as his anesthetist. I may be permitted to repeat Joseph Price and myself in again quoting the best definition of an anesthetist: "He is one who gives an anesthetic, carries the patient to the edge of death and holds him there while the surgeon does his work." If this be a true definition, no work could be of greater importance than his, none could require greater skill. One of our ablest physicians honored the anesthetist in a discussion by saying that, were he to require a grave operation on the morrow, he should pay much more attention to the selection of the anesthetist than to that of the surgeon.

I have had a very large experience in giving chloroform, ether, and the Schleich solution, so that I can speak with some force as to the question of the choice of anesthetics. While I was limited to either chloroform or ether, there was good reason to choose one or the other, but, with larger experience, I have reached the conclusion that, when an operation is demanded, an anesthetic is demanded; that Schleich's solution is the best and safest general anesthetic, and I am entirely unable to find a patient whose examination would lead me to select chloroform or ether in preference to Schleich solution. I do, however, very rarely find a powerful man on the table, undergoing a rectal operation, who is not brought to complete surgical anesthesia by Schleich solution and to whom I would give chloroform for a second similar operation.

While I prefer to prepare patients for anesthesia, I recognize the most important preparation is the securing of the confidence of the patient that the anesthesia will certainly go well; it is always best for the anesthetist to meet the patient once or twice prior to operation. No amount of examination will enable the most skillful anesthetist to say in advance with certainty that a given patient will take an anesthetic poorly, unless the patient is known to be a chronic alcoholic, or a chloral fiend; these two always take any anesthetic.
badly and are very dangerous patients. When once the anesthetist has gained the confidence of the patient, the next step should be to form the most accurate opinion possible of the condition of the heart. I am not at all frightened by finding valvular disease unless it be of the most serious type. I am much more afraid of a flabby heart-muscle and acute dilation than of any other condition. We cannot measure this flabbiness of muscle but imperfectly, and here lies our danger. I have not as yet used adrenalin as a heart tonic prior to anesthesia, but I think I shall use it in future for those patients who show this flabbiness. Strychnine has been my reliance heretofore and has done me good service. I am entirely opposed to the use of morphine prior to anesthesia. I have used it and abandoned it; it masks and obscures all conditions present. One should never lose sight of the fact that every anesthesia is dangerous. When a competent physician gives a man about twenty whiffs of chloroform in a proper manner and the man goes into a convulsion and is dead in a moment or two, despite all efforts, it is quite enough to startle us and force us to think that there is real danger in anesthesia. One should never be guilty of saying that the operation is a slight one and there is no danger whatever. An anesthetist who is not thoroughly conscientious and who does not feel anxiety over every patient is not worthy to be an anesthetist. Practically, all deaths from anesthesia are horribly sudden and startling and, almost invariably, unexpected. The flippant, cock-sure anesthetist is worse than a jovial undertaker: the former trespasses upon human life, the latter upon human feelings.

Generally speaking, the most dangerous patients for the anesthetists are the adenoid patients, since the lymphatic habit is the most dangerous condition known for anesthesia. There is a record of seventeen deaths on the table out of fifty-one adenoid operations.

I enter upon all administrations of anesthetics with seriousness and anxiety, be the operations long or
short. After securing quiet and the removal of any artificial plate, I begin every anesthesia slowly, no matter what the anesthetic. There is nothing more dangerous or cruel than to crowd an anesthetic; crowding retards rather than hastens anesthesia and is the most dangerous possible procedure. An abundance of air should be allowed to reach the patient in early anesthesia and, during the whole process, the anesthetic, even if it be ether, should be added drop by drop, never poured on. With chloroform, the addition of a quantity of the drug, when the blood is nearly saturated with it, is often fatal, causing supersaturation and total paralysis. One should study the color of the patient's face prior to the excitement of entering the operating room so as to be able to compare the colors seen during operation with the color prior. One must learn to watch constantly, during the whole anesthesia, the color of the face, and the lobe of the ear, the size of the pupil, and the temporal pulse. Mere rapidity of pulse alone during anesthesia never disturbs me; it is the weakened force of the heart's action which disturbs. The eye can see the lobe of the ear at all times, even when the finger cannot be placed upon an artery, and form a fair opinion of the circulation. The pupil is a most valuable guide during anesthesia. Normally, it should slowly contract and become and remain about the size of a very large pin-head; in profound surgical anesthesia, in a good subject, the pupil does not vary but little. It is often said that a large pupil is a grave sign always, but I do not find it so; it merely indicates the wisdom of caution. One often sees an anesthetist touch the cornea many times during an operation; this is both wrong and dangerous, and one learns nothing from it of importance. I touch the cornea with a clean finger once only when I think corneal anesthesia has been established, because I keep a record of this point; after this, it is absolutely useless and valueless; corneal anesthesia is far short of surgical anesthesia. The anesthetist should see only enough of any operation to
enable him to adapt his anesthesia to the condition present at the moment; he should never be an observer of the surgical work.

One of the most important points is to secure absolute surgical anesthesia before the surgeon is informed that the patient is ready for the knife. One of the most dangerous conditions known in surgery is that of partial anesthesia. It is an art to be able to read from the relaxed jaw, the contracted pupil, the steady respiration, that the knife can be used with safety. The pulse always quickens, no matter how profound the anesthesia, with the first stroke of the knife. To my mind, one of the great beauties of Schleich anesthesia is that motion is entirely suspended and an operation can go on without interference, while the brain shows a more remote approach to complete paralysis than is seen under chloroform. My only loss on the table, due to anesthesia, was a splendid Iowa girl who seemed, to my best judgment, to be in profound surgical anesthesia, but who was not. When the surgeon used the knife, she flinched very much; when he separated the muscles for an appendicectomy, she died and an hour's hard work could not restore her; the pulse fell; respiration quickened alarmingly; an ashy color came over the face and, in twenty seconds, she was dead. No word of mine, nothing save personal experience, can teach this most important art, that of knowing when the anesthesia is surgical and that it is safe for the surgeon to use the knife. More deaths have taken place upon the table when chloroform has been given for the extraction of one or a few teeth than under any other condition, because surgical anesthesia was not secured. In these dentist cases, I demand an absolutely flat position. I require the dentist to use a table, unless his chair is perfectly flat. Surgical anesthesia must be secured before one tooth is extracted, for two reasons: First, because it is the only condition at all consistent with safety; second, because the anesthetist must cease the anesthetic when extraction begins and he must
have secured sufficient anesthesia to carry the patient through the whole operation. I gave Schleich solution recently for nine minutes and secured profound anesthesia. The dentist removed twenty-five teeth, only three of which came easily, in six minutes. The patient wrinkled his brow with the last one only and said, after complete recovery, that he felt no one of the twenty-five.

It will be of interest to recall some of the minor dangers, or disagreeable features of anesthesia. Early gasping, or catching, respiration merely indicates that the anesthesia is being pushed too rapidly and the mask held too near the face; relief is had at once upon removal of the mask sufficiently to allow more air. Nervousness and excitement are rare during Schleich anesthesia. As a rule, patients go quietly under, as into normal sleep. When there is a little excitement, quiet talk of approval of the way the anesthetic is being taken will soon quiet. Cough is very rare and soon passes away. Pronounced rigidity is a grave condition, fortunately rarely seen, and warns of tetany of the heart. It is a very dangerous procedure to forcibly restrain a patient who is quite rigid and disposed to struggle; many patients have died on the table, some in Omaha, from this very condition. Slight rigidity is occasionally seen and passes away with a greater degree of anesthesia. Vomiting during anesthesia is quite rare with me of late and only calls for more anesthesia. I have used chloretone a few times to forestall nausea on the table, but not enough to form an opinion of its usefulness. I am inclined to believe that 5 grains given thirty minutes before anesthesia would be useful. There is a condition during anesthesia which seems alarming to an inexperienced anesthetist and makes him fear that serious danger is impending when none is near; he notices, during the operation, that the pulse becomes weaker and the face pale, not ashy however, and becomes alarmed; this is merely the precursor of vomiting and, after that has taken place, the pulse
strengthens and color returns; the art consists in knowing that these symptoms are merely a false alarm. Chronic alcoholics and chloral victims act alike under anesthesia; they show somewhat more excitement than is normal in early anesthesia, and then, apparently, become quiet. One feels sure that, after all, he is not going to have trouble, when, suddenly, the patient becomes very talkative and excited and, often, very rigid. It is quite impossible, often, in these cases, to secure quiet surgical anesthesia.

Surgery of the rectum and genital organs causes more difficulty in anesthesia-giving than any other class of work. This is especially true if the operation be upon a strong, robust, vigorous man. The most skilful anesthetist will often meet with patients in this class upon whom he cannot secure perfect anesthesia. When chloroform is used, it is the universal rule among anesthetists to remove the mask when divulsion of the anus is attempted, because the very forcible inspiration which divulsion causes will draw in so large a quantity of the heavy vapor as to very easily endanger life.

General peritonitis also makes anesthesia very difficult. It has been said that surgical anesthesia should be produced for the incision for a laparotomy for an intestinal operation, but that anesthesia need not be at all profound during the handling of the intestines. Let one believe this if he can, but he will act upon it but once; it is not true.

When an operation is to be done near the mouth, it may be impossible to use any mask during the operation. In such cases, I begin with the Stone mask, properly cleaned and aseptic. It is impossible, however, to keep the mask aseptic when the septic secretions of the mouth constantly bathe it. I therefore secure surgical anesthesia and lay the mask aside. I then place a piece of clean gauze, folded into about a two-inch square, into a clean long forceps. I drop the solution on this and hold it under the nose. I use the same method when the surgeon operates for cleft palate. I
secure surgical anesthesia; the surgeon performs tracheotomy and I hold the gauze, during the remainder of the operation, just in front of the opening of the tube; anesthesia is easily maintained in this way.

There is one broad principle as regards anesthesia which must never be lost sight of. Any general anesthetic has killed, can kill, will kill. They all kill in the same way and they kill those patients with whom you feel safe, never those with whom you feel unsafe. Those who die, on the table I mean, die mighty suddenly and the heart ceases. It is of little use to gravely discuss whether ether kills by the lungs, and chloroform by the heart; you will think the heart is the central organ involved when you have trouble. I have seen, but very rarely, a good heart and an almost paralyzed respiratory centre. Here again strychnine and adrenalin are of the highest value.

What shall be done to meet the gravest symptoms seen in dangerous anesthesia, the weakening or cessation of pulse, the suddenly dilated pupil, the rapid, shallow respiration, the ashy pallor of the face? Most important of all is it that the anesthetist, surgeon, and assistants maintain perfect self-control. The surgeon should direct the efforts at restoration, but should do nothing himself; he should continue aseptic, ready for any surgical work needed. A window and a door should be opened to secure a draft of fresh air, the head should be greatly lowered, 5 minims of a 1 to 5,000 solution of adrenalin, or, 1-20 of strychnia, should be given hypodermatically, ether should be poured over the abdomen, gentle traction of the tongue should be made,—the Laborde method,—followed by artificial respiration; all these should be used for restoration. I have seen patients restored by the use of each one of these by itself, by all of them combined, and have seen them all fail. I am convinced that dilation of the sphincter ani and the use of ice in the rectum are of very minor importance. I am firmly convinced that acute dilatation of the heart and its paralysis, thus
dilated, are met with in these very serious situations, and that the surgeon, in the case of patients who do not respond soon to vigorous measures as above suggested, should quickly open the chest wall, grasp the heart, empty it and rhythmically contract it to induce it to start again. I have not seen this done, but shall ask that it be done the next time I meet with an apparently fatal subject.

A study of my case book shows some curiosities of anesthesia which are very interesting. I have had two patients who told me upon recovery that, during anesthesia, they felt certain that their soul had left the body. In connection with Dr. Dearborn, of the Psychological Laboratory of Columbian University, New York, I have studied the psychological aspects of anesthesia with very much interest. I had formed the opinion that the sensation of rotation, or falling, was a very common one during anesthesia; careful investigation shows that it is quite rare. I find that there is no one experience which is common to most of those who take anesthesia. I am delighted to say that the most common answer which I received was, “I remember nothing after the moment you put the mask over my face, or, after two or three moments after you begin, I quietly fell to sleep.” One woman looked up at me several times during the operation; she made no movement and seemed to have perfect suspension of sensation. Upon recovery, she told me that she heard every word said during the operation. I was positive that she was mistaken and said so; she then told me nearly every word which had been said; she said that she was entirely conscious but was unable to move and suffered no pain from the operation; she also said that it was decidedly unpleasant. She came to me a few months later for a second operation and said, “I wish to be anesthetized this time.” She was, but I had to use a great deal more than on the first occasion. Three or four patients have seen rapidly revolving discs of colors. I have had two or three patients, who had taken chloroform prior and
suffered much from retching and vomiting, who dreaded the nausea so greatly that they began to retch the moment I entered the room. The retching was uncontrollable and persistent. Explosive respiration is rarely seen. I had one patient who persisted in it until the abdomen was opened, after which respiration was normal. Jactitation is an unusual symptom, usually seen in alcoholics.

The most unpleasant state of mind for the anesthetist to meet is that of an awful dread of anesthesia, especially if the dread arises from personal experience. My statistics are very sadly marred by one such case. Dr. Allison removed a large sacculated stone from a very contracted bladder; a fistulous tract was left which required frequent anesthesia. The lad was always very nervous; his dread was frightful; he held his breath horribly; cyanosis was very marked; rigidity was frightful; at the last, I was able to hypnotize him into the belief that he would have no trouble, and the last anesthesia was fairly good.

I recall one very unique experience. The right lower jaw became dislocated four or five times during the anesthesia; when it fell, respiration ceased, and I spent half of my time in reducing that dislocation.

I used Schleich solution in a patient who had suffered for months with a chronic abscess of the brain, for which trephining was done posterior to the right ear. The pupils were equal, but became unequal after fifteen minutes of anesthesia; the right pupil became widely dilated, the left, markedly contracted; respiration ceased and the heart's action was barely perceptible. Death was imminent; it was certain, if the operation was abandoned. Traction of the tongue, followed by artificial respiration, restored him; the other ordinary measures were also used. The operation was continued. He was thus restored from apparent death ten times before the operation was finished. The pupils became equal upon each occasion as death seemed imminent and became unequal again as he came to life.
Pus was finally reached and evacuated. The patient eventually recovered with more restorations from apparent death to his credit than are commonly met with.

There is one form of cyanosis to which no attention need be paid; it is the cyanosis of the dependent arm when the patient is in Sims' position: it is entirely due to the position. The Sims position is a very difficult one in which to give anesthesia and as dangerous as difficult. Respiration is very much impeded. Hewitt, of London, has reported his experience in 7,000 general anesthesias. Many of his observations are timely and valuable. Among them are the following: In chloroform anesthesia, the danger stage begins early with the excitement and rigidity; to avoid this, he gives ether to start with, until the stage of excitement and rigidity has been past, and then changes to chloroform. He thinks this is one of the most important anesthetic improvements of late years. If the operation is short, he does not try to use the chloroform. If the ether causes cough, dyspnea, or mucus, he changes early. He cautions as to the necessity of care to prevent an overdose of chloroform after the change, because the ether has stimulated respiration and is rather likely to permit the inhalation of too much of the chloroform vapor. He thinks that a conjunctival reflex ought to be present before the change is made to chloroform and that the subsequent anesthesia from chloroform is as safe as with ether with which belief the present writer cannot agree. Hewitt has even dared for two years to give ether, when followed by chloroform, in a sitting posture, when that posture is of advantage, and in no case has he had to place the patient flat by reason of undesirable symptoms. Hewitt has had large experience with nitrous oxide followed by ether. He does not recommend it for major operations except in carefully selected cases. He thinks that this is the safest possible method for general anesthesia and avoids most of the unpleasant ef-
ffects of both ether and chloroform, but he finds that
the muscular system is not so well relaxed nor are the
reflexes so well abolished. Vigorous males, drinkers
and smokers, are bad subjects for this form of anes­
thesia. He also notes that whenever the solar plexus
is interfered with, reflex inhibition of the heart is very
common.

In very many respects, Schleich anesthesia is not
different from that of chloroform or ether and for that
reason a study of the Schleich solution must begin with
a study of general anesthesia as I have attempted to do.

The first question raised at this point of our study
will be, What is the Schleich solution? To answer
this, I shall be compelled to repeat some of my address
before the American Medical Association. Tait once
said that fifty years of anesthesia had only taught us
that chloroform was an anesthetic, no more. Schleich
patiently investigated and learned, what we had never
known before, that each anesthetic killed by paralysis
of vital function, usually due to overdose; that the
farther the boiling point of the anesthetic was below
human temperature, the less can be inhaled; that when
the boiling point is about 98½°, the lungs can regulate
elimination so that inhalation and exhalation are about
equal; that when the boiling point is very high, as
chloroform, 149°, much more is inhaled than exhaled,
anesthesia is rapid, the excess is accumulated in the
blood and a small addition is fatal. When fatality is
escaped, there is, in any event, an excess to be elimi­
nated by the lungs and kidneys at a large cost. Ether
furnishes another danger. Expansion of the alveoli of
the lungs takes place, much mucus is secreted, respira­
tion is embarrassed and cyanosis results. Schleich
therefore mixed chloroform, ether, and benzine, the
latter with a boiling point of 60° to 65°, used merely
as a diluent. For his No. 3 solution, he used the pro­
portions of

Chloroform ........... ........... 30 c.c.
Ether: sulphuric .............. 80 c.c.
Ether: petrolic ............... 15 c.c.
which made the boiling point 107.4°, high enough to make anesthesia possible, low enough to make it easier to avoid supersaturation of the blood.

In what respects then does Schleich anesthesia show any superiority over that induced by chloroform or ether? Schleich solution is, in my judgment, a real solution, possessing the characteristics of neither of its components, having its own individuality. It is a very much more pleasant anesthetic to inhale than either of the others. I hear no complaint of the sweetness of the chloroform, or of the suffocating character of the ether, though the solution is three-fourths ether. I hear no complaint of the awful nausea produced by chloroform and ether, even from those who suffer from nausea. I have given it five or six times to each of several persons, and the only one who has shown a horror of anesthesia, acquired it from chloroform. Most of my patients who have needed to take it the second time speak kindly of the first administration as one in which they went quietly to sleep. They universally request Schleich to be given for the second time. While nausea is not entirely absent, it is so seldom produced as not to be mentioned in criticism. Sensation and motion are abolished quickly and yet the paresis of brain centers is by no means so marked as with the other agents. I have often seen patients with pupils moderately contracted which responded to light during the whole of an operation and yet the anesthesia was continuously surgical. I have not had one single patient with the excessive mucous secretion so commonly seen with ether. Respiration is almost normal in all cases. I can therefore say without hesitation that it is a far safer anesthetic than either chloroform or ether. The period of recovery from Schleich anesthesia is far shorter than from either chloroform or ether, for the reason that the blood is far less profoundly saturated with the anesthetic. The Stone mask is extremely economical of anesthetic while securing perfect anesthesia. As regards after-effects, I have not had a
solitary patient with post-anesthetic paralysis, pneumonia, bronchitis, or albuminuria.

I have used the solution in very many obstetrical operations with perfect results. Unlike ether, it can be used with safety at night, because the vapor is all beneath the mask.

I am satisfied that Schleich's conclusions as to the manner in which chloroform and ether are dangerous are correct and that the profession has not yet realized that he has enunciated an epochal truth.

Old anesthetists have long since recognized that the less the amount of anesthetic used to maintain surgical anesthesia, the better it was for the patients. The most skilful anesthetists do not carry their patients as near as possible to death during an operation. Chloroform-givers often err in securing an anesthesia too profound. Ether-givers seem to lose sight of the principle just mentioned and pour on ounce after ounce so that the patient literally breathes ether, smells ether, tastes ether, and is disgusted beyond measure with ether, for days.

I beg, therefore, to call your attention, in conclusion, to a very few statistics.

I have now given the Schleich solution 666 times. It has been used in practically all of the operations of surgery. The long cases of my 666 observations, those requiring from 80 to 140 minutes, have been 31 in number. These 31 consumed just 3,100 minutes, an average of 100 minutes to the operation. I used 122 ounces of Schleich solution for the 3,100 minutes, a trifle less than 4 ounces to each 100 minutes. Seven and one-half ounces were used in one operation of 138 minutes, while another one of 140 minutes' duration required but 6 ounces. My last 100 patients required, on the average, 5 minutes for corneal anesthesia, 2 minutes more for surgical anesthesia, making a total of 7 minutes for surgical anesthesia. These 100 patients consumed 3,142 minutes, or 52½ hours of time, and 161 ounces of Schleich solution, which is an average of 3 ounces for
each hour of anesthesia. Five of the 100 required but
2 drams each for the operation, which was, on the
average, of six minutes' duration. Eleven of the 100
required over an hour's operation, from 61 to 140 min­
utes; the 11 consumed 841 minutes and 37 ounces of
solution, which is an average of 2 9-14 ounces for each
hour of anesthesia. Nineteen of the 100 used exactly
1 ounce of solution each, and this ounce secured anes­
thesia from 11 to 34 minutes, an average of 20 minutes
to the ounce. Of the last 100 patients, cyanosis of
slight degree was seen in 11, 18 were nauseated during
anesthesia, 15 vomited after it, and 12 were rigid in
varying degree in the preanesthetic stage; every one of
these had an awful horror of anesthesia from prior
bad experience.

SOME ANESTHETIC POINTS.

The muscular tone of the heart is the most important
preanesthetic condition.
The lymphatic habit is the most dangerous preanes­
thetic condition.
Securing the confidence of the patient is one of the
most important duties of the anesthetist before anes­
thesia.
Give the anesthetic in a perfectly quiet room.
Never use morphine prior to anesthesia.
Be sure that you have no removable artificial plate in
the mouth.
The Esmarch mask is the best one for chloroform.
The Stone mask is one of the best for ether and the
Schleich solution.
Begin all anesthesias slowly; speed is both cruel and
dangerous.
Never allow force used to restrain tossing or ri­
gidity.
Secure, if possible, profound surgical anesthesia be­
fore the knife is used.
Never observe the operation when giving the anes­
thetic.
Watch most closely the color of the face and of the lobe of the ear, also the pupil and the temporal pulse.

Train your ear so that it hears every breath without ever seeming to listen to respiration.

Add your anesthetic, whether it be chloroform, ether, or Schleich solution, from the best dropper, the Overholt, by constant, uniform additions; the rapidity of the drops should vary with the stage of the operation.

Beware of a heart of feeble tone; use adrenalin or strychnia prior to anesthesia.

Beware of a patient in chloroform anesthesia whose eyes half close; in Schleich anesthesia, only a fraction of the patients with half-closed eyes show trouble.

Always think that the particular patient now receiving the anesthetic may die upon the table; this will reduce one's conceit and tend to great caution.

The normal pupil in good surgical anesthesia is well contracted and steady.

A pupil rapidly dilating widely from a well contracted one means death imminent.

A pin-point pupil is indicative of a too profound anesthesia.

Do not be alarmed by reason of noisy respiration during rectal operations.

Secure profound surgical anesthesia before divulsion of the sphincter ani and, if using chloroform, remove the mask the moment the surgeon's fingers touch the anus for divulsion; a deep inspiration of chloroform can easily kill; this precaution is not necessary with Schleich solution.

Never forget that partial anesthesia, "just enough to keep them under," is most dangerous.

Never forget that the safest anesthesia is surgical anesthesia, steadily maintained.

Never forget that the least quantity of anesthetic which will secure this is the best.

If you ever have trouble, "keep your head well screwed on," act promptly, never hastily.

If collapse takes place, ashy pallor and cessation of
pulse, give adrenalin or strychnia at once, lower the head, make rhythmic traction of the tongue every four seconds and artificial respiration if this fails.

Remember that Waller was right in saying that "Death is nearly always due to unskillful administration and that is the administration of an overdose."

Remember that profound sepsis, enfeebled heart's action, chronic alcholism, asthma, serious valvular lesions, and severe albuminuria are the most dangerous states for anesthesia.

DISCUSSION.

DR. A. S. VON MANSFELDE, Ashland: I rise for the purpose of congratulating the reader of that paper. It is a most excellent one. I express my opinion and desire that some one will follow suit.

DR. A. B. ANDERSON, Pawnee City: I want to second the remarks of Dr. Mansfelde. There is hardly a physician but who at some time does this work and the suggestions that have been made in that paper are certainly valuable to everyone of us. I want to say in regard to anesthetizing, it would be a very good thing for us to know a great many things we do not know in regard to the anesthetics which are used over this country. We know in regard to ether and chloroform that records are kept in hospitals, but how is it with the country physicians? I would like to know how many times chloroform has been given. In all my years of practice I have never given ether but once.
THE BUSINESS PHASE OF OUR DAILY WORK.

I. N. PICKETT, M. D., ODELL.

In an experience of twenty years in society work, I have not once heard the subject of the doctor's finance mentioned, or the business phase of our daily work discussed. This is not to be wondered at when we remember that the object and design is set forth in the preamble of our societies to be the cultivation and advancement of medical knowledge, for exciting and encouraging emulation and concert of action in the medical profession, etc.; and that we are taught that our work should be largely one of charity and philanthropy; that we are to go in storm as well as sunshine, and that darkness or light are not to be considered when the call of suffering humanity comes. And this is all right from a philanthropic point of view, but philanthropy does not pay our bills or charity fill our stomachs.

When we consider the value of our services rendered mankind, it is indeed unfortunate that so many of our senior practitioners should not be in a better financial condition. Why should not the physician who wears his life out in relieving suffering humanity be able financially to support his family and educate his children, as does the farmer, merchant, or mechanic? Why is he left all but destitute when, from bodily infirmities incident to old age, he is compelled to relinquish practice? I know a doctor whose head is white with the frosts of seventy-nine winters, whose step was once, when on errands of duty, quick and elastic, now, even with the aid of a staff, slow and uncertain; whose figure was once erect and vigorous, now bent and feeble; whose intellect was once brilliant, now in the twilight of life clouded. People once called him doctor, they now say “old doc.” Were it not for the little rent he receives, and the assistance of a son and daughter, this man would be an indigent. Yet his
courage in time of danger, and his fortitude in the face of adversity, merit an opulence befitting the service he has rendered humanity. It is not dissipation that has brought him to this, for he has lived a temperate life, and in matters of economy and frugality he is beyond criticism. Where then lies the cause that this servant of humanity should be denied the comforts and ease that so justly belong to him at the close of a long and useful career? I leave it to an ungrateful clientage to answer. This is not an uncommon picture; there are hundreds of practitioners who at the end of an active life find themselves in the same unfortunate condition that I have described. Therefore, for the good of the profession, I think it is our duty as a body to occasionally look at the pecuniary side of practice, in order to correct some wrongs that undoubtedly exist.

Chief among the wrongs that exist is the matter of compensation. Thoughtful consideration leads to the belief that, in proportion to the actual value rendered, the general practitioner of medicine receives less compensation than any man in the world. It is no uncommon thing for a baseball player to get $5,000 for a few months’ work; and Wanamaker gives $100,000 for a single picture; the lawyer’s fee running up in the thousands is an every-day occurrence. Right here let me suggest that if a man commit a capital crime, the lawyer generally gets all of that fellow’s earthly possessions, in order to shield him from the law, and the culprit gladly pays the fee; but let the same fellow, without having committed crime, be the victim of a suppurative appendicitis, the doctor removes the offending appendage, recovery ensues, and the grand finale happens when his benefactor asks him for a slight compensation, say $100 or $200. The pain is no longer located in the right-lower abdominal quadrant but has become a metastatic pang of financial stringency, and in a paroxysm of anguish he exclaims, “Great Caesar, what extortion!”

Some years ago I recommended a client to take his
wife to a hospital for the purpose of having an ovari­
otomy performed. The probable cost was placed at $250 to $350. This, as I thought a conservative estimate, seemed to open his optics and in astonishment he asked if that was not too much. My reply was that that de­

dependent upon the money value he placed upon his wife. This "wizard of finance" contributed $800 to the print­
er's-ink-practitioner before taking my advice, as the surgeon's fee seemed to him exorbitant.

I believe we as general practitioners are largely to blame for this condition of—shall I say ignorance, on

the part of the laity, of the value of our services? Is the physician's work to be treated as a staple article of commerce, and handed over at actual cost and car­

riage? Where is the justice in the surgeon receiving the ordinary fee for removing an inflamed appendix when the physician cures the inflammation (and he does sometimes do it, gentlemen) and charges so much per mile for his services, amounting possibly to one­
tenth that of the surgeon. Or again, why not charge as much for administering an antidote as for ligating an artery, or for giving a subcutaneous injection of diphtheria antitoxin as for a tracheotomy? Why should the physician receive a 'less fee for curing an iritis than does the oculist? The general practitioner of medicine seems to be a dual personage; as a surgeon, he treats fractures and receives from $10 to $75; as a physician, he may jugulate a case of pneumonia, that is more dangerous than the fracture, and receives possibly $5. I hope you will not consider me a pessimist, as I allude to the above (and you are perfectly familiar with each example) in order to remind you of the dif­

ference in the customary compensation for service which has for its object and does accomplish the same end—the saving of life. In the parlance of the specu­

lator, I do not wish to "bear" the fee of the surgeon but to "bull" that of the general practitioner. In other words, charge in proportion to the actual services rendered; stiffen up all along the line and do not look
to a second or third party for a remuneration. The acceptance of a dividend from a specialist is on a par with the commission sometimes offered by the druggist and too often accepted by the physician. Both are a species of bribe, and he who accepts either degrades himself. If we expect our clientage to be honest with us, we must first be honest, even to the protection of those who are dependent upon us, and not surreptitiously compel them to pay two fees instead of one.

It has been maintained by some writers, who are themselves specialists, that when a general practitioner refers a case to a specialist, that the physician should share in the fee, as an assistant, in the same manner that one lawyer assists another. When we send our patients to a specialist, it is because we have exhausted our resources; or possibly our uncertainty of diagnosis; or our inability or lack of courage to perform some operation that requires adroitness which the specialist is supposed to possess. And any knowledge of the case that we may possess, that may be of service to the specialist, should not be used as a speculative commodity and delivered to the highest bidder. An ideal specialist, and one to whom we as conscientious general practitioners send our cases, is supposed to have his corps of trained assistants, and with whom he is accustomed to do his work; and for us to take the place of his trained assistant, is to jeopardize the efficiency of the end sought. There is another objection, viz., the dividend-specialist is too liable to specialize on the dividend. I therefore take the position, that as soon as we turn our cases over to the specialist our responsibilities cease, and we are not entitled to any part of the fee. If there has been an overcharge, give the patient the benefit of the rebate, as we are supposed to have been paid for our services.

If the acceptance of a commission from a specialist is wrong, it is equally wrong to accept a commission from a druggist to whom we send our prescriptions. While this custom is not general, it is far more prevalent than the division of fees with the specialist.
The pharmacist, like the specialist in other lines of practice, is a product engendered and fostered by the general practitioner of medicine, and as such should be considered our co-laborer and not we as his mercenary. The law of our state recognizes the importance of competency in the druggist, and unless he can prove by an examination a certain amount of knowledge of the nature of drugs, their chemic and pharmaceutic combinations, he is barred from entering this branch of trade. That the druggist should add a certain or reasonable per cent. to the retail price of drugs used in compounding, when charging for prescription work, to compensate for the extra knowledge and skill required by law, is freely admitted; but if the physician demands a commission, this otherwise justly added per cent. too frequently becomes extortionate, and our clients are forced to seek relief from patent medicines or other hybrid methods of cure. We are thus aiding some of the wrongs that we have been endeavoring to overcome. Therefore, as a matter of self-preservation, it becomes our duty to select a druggist whose honor, integrity, competency, and straight business methods are beyond question. When a druggist proposes to share with us the usual commission of from 20 to 33\(\frac{1}{3}\) per cent., we know one of two things: either that the druggist's profit is becoming a burden to his conscience, or that our clients and not the druggist will pay the revenue.

After our examination of the patient has been made and our knowledge of the clinical manifestation of disease and the therapeutic indications of remedial agents focused into a prescription, the patient pays or should pay us for that much of our stock in trade, which has a value that is universally recognized. It is as legitimate a transaction as is the sale of the drug and ends with the payment of the fee. The patient has a valid reason to believe, and the physician admits, that the debt is canceled. But when the month rolls around, the "tip doctor" calls on the druggist, who, according to the terms of the conspiracy, tips him to 20 or 33\(\frac{1}{3}\)
per cent. of the amount that this patient paid for—what? Not the prescription. Not for the doctor's knowledge or skill in curing disease, as he paid for that once; simply the drugs and pharmaceutical skill of the druggist plus the stipulated boodle; simply that and nothing more. I ask in all candor if the porter, the bell-boy, or the dining-room waiter can be more guilty of the pernicious custom of receiving tips? Or if the principle is not the same, will you kindly differentiate?

It has been maintained, that often the druggist's profit is greater than the physician's in a given case. In such an event, either the druggist is charging too much, or the doctor too little. If the druggist has made extortionate charges, he has proven himself unworthy of our confidence, and as a matter of self-preservation, and a duty we owe to our clients, it may become necessary either to compound our own prescriptions or send them to a druggist who will be satisfied with the legitimate profit that properly belongs to him. If the doctor charges too little, it is his own fault. If the case is a chronic one, there should be an understanding at first that, as the physician's knowledge, judgment, and time is his stock in trade, the consultation, advice, and treatment will be at a stipulated amount for a specified period of time. This is a legitimate business transaction, and will stand in the courts of justice.

The "tip doctor" (or whatever qualifying adjective you wish to use to designate this class of practitioners), writes prescriptions galore, with *ad valorem* as his beacon guide. If he accepts the customary fee for such services, he is guilty of receiving two fees when he is entitled to but one. If he declines the proffered compensation with a word or gesture that the service is of no value, or it is free as a special favor, he is guilty of duplicity. If the prescription is valueless, he has imposed upon the confidence of that sufferer by giving him worthless remedies; and he is taking an unfair advantage of his own client, in order
to secure what should belong to the druggist. What greater imposition could be practiced by the confidence-man? Is not this an act of deliberate deception with the design of securing money by taking unfair advantage of another? What better example do you want of fraud? I trust that this society will go on record as condemning this custom.

The average annual amount of business done by the general practitioner is probably near $2,000. Of this amount the average physician will probably collect $1,200 or $1,500, and after deducting the expenses of the year, he will be very fortunate if he has $250, or $500, surplus for his year's work. How many physicians among your acquaintance, who have practiced, say, 20 years, are today worth $10,000 as a result of their practice? It is true there are a few, but they are the ones who have made business methods as much a study in their practice as the cure of disease.

I am inclined to attribute it to three factors, viz., leniency, laxity, and laziness in business methods. Of these I believe leniency to be the dominant; and largely the result of a false idea that the practice of medicine is or should be a work of charity and philanthropy. The sooner the practice of medicine is divorced from charity the better it will be for humanity in general, and the physician in particular. I would not for a moment have the worthy poor neglected. A certain amount of charity work is to be expected; but between this and the business proposition draw a sharp line. "Let not thy left hand know what thy right hand doeth," is applicable to our charity work, which should occupy no part of a page in our ledger. Fortunately we as rural practitioners see very little of the pauper class, and are required to do little gratuitous work. In the large towns and cities it is different, but even here the state and county, realizing that "the poor are always with us," have provided a fund, to which you and I contribute, for their care, and employ medical service which for political or other reasons is too freely offered. The
physician, having paid his share of the tax from which this fund is derived, does an injustice to himself and the profession if he does this work at a loss. The usual custom of bidding for the county practice is degrading to the profession, unfortunate for the successful applicant, dangerous for the recipients of public charity, and should be abandoned. Why should the physician not be entitled to a remuneration commensurate with the county attorney, the county surveyor, or coroner? Evidently it is the physician's own fault.

When an account is opened in our ledger, the credit column should not remain blank very long. The accounts of those unable to pay should be endorsed by the county supervisor of the district in which the patient resides, and the bill charged to the county. It is with those who are able to pay that leniency is too apt to interpose and thwart proper business methods. Our clientage will be prompt or negligent in the payment of their bills in proportion to the manner in which we educate them. It is important to impress upon them that the practice of medicine is a business proposition; that in return for our services we must be compensated; and the bills are due when the services are rendered. And in this connection it is important that we adopt a system of bookkeeping that will always show the amount due. Frequently patients inform us that when we get time to "figure up" their accounts, they will pay. The systematic business physician is always ready to settle, as the patient's account always shows the amount due and does not require any figuring. This business method serves to impress the patient with the fact that the account is due, and the tendency is to beget promptitude on the part of the patient. There is one class, which I am pleased to state is in the minority, who never mention the subject of payment, but would be content to permit us to work for them year in and year out, thinking it a privilege we should appreciate rather than to expect a moneyed recompense. Bring these fellows up with a halt; do not be imposed upon; assert your dignity; collect your bills and let
this class go where the collector ceases from troubling
and the ungrateful are never at rest. Then we have
the "promising class,"—that is, they promise to pay,
yet do not at the time intend to fulfill their promise. I
believe it a good plan to keep in the column for remarks
a record of promises made to settle, and to keep relent­
lessly after this class. The column will get pretty
black sometimes, but may serve two purposes: first, in
case of litigation, it is a record of repeated acknowl­
edgments of the account; and second, it is an interest­
ing page to show to the party at intervals, and serves
as an ocular demonstration what a monumental pre­
varicator he is.

The lax habit of permitting accounts to run six
months or a year without having an understanding be­
tween the physician and patient is an injustice to the
former and unfortunate for the latter, as the longer
payment is deferred the greater the reluctance to com­
pensate for benefits long since received. The most op­
portun time to settle an account is at the high-tide of
gratitude, when the patient most appreciates our serv­
ices, and is not only willing to pay, but most anxious
to demonstrate in a material way his appreciation of
the greatest of all blessings—restoration to health.
But let the physician with loose business methods say
to this grateful patient, who has proposed to reward
him for his services, "Oh, never mind, wait until some
other time; I do not need the money now," and this
dutiful patient becomes at first indifferent, then ob­
stinate; and finally, if a settlement is ever made, it is
at the expense of friendship and confidence in the doc­
tor, both of which should be fostered by adhering to
business methods.

There is another important principle that must be
kept constantly in view; and that is to so regulate our
expenditures that the income will always show a bal­
ance in our favor. The matter of economy is just as
essential as is the collection of accounts, and he who
subordinates output to the income, will sooner or later
be bitterly disappointed in his surplus.
AN EXPERIENCE WITH SOME ATYPICAL CASES OF APPENDIX DISEASE.

W. O. BRIDGES, M. D., OMAHA.

The typical case of appendicitis has become so classical that its clinical history, diagnosis, probable and possible results are as thoroughly understood by the average practitioner as is the case with scarlet fever and its sequelae. Slight departures from the typical, as in the absence of fever, or in a normal pulse-rate, or a flat abdomen, or absence of acute pain or freedom from constipation, do not permit one even to hesitate concerning the diagnosis. With such cases this paper is not intended to deal, but it is desired to call attention through a few illustrative cases to the importance of a thorough examination of the region of the appendix in cases presenting obscure symptoms of intra-abdominal origin, all the way from apparently slight indigestion to a threatening peritonitis of obscure source. It should be recognized, as stated by Fitz, that mild attacks of appendicitis may run their course without the occurrence of symptoms sufficient to attract attention. These attacks may result in similar pathological changes, as are found in more severe cases and are as liable to give rise to remote effects. It has occurred to me that the foundation of appendix disease was often laid in the so common intestinal disturbances of infancy and early childhood, in many cases of which the former was unattended by marked symptoms or was completely masked by the clinical course of the latter. It should also be always remembered that the appendix is a variable organ both in its size and its location. It may be only one inch or it may be five inches long. It may be directed downward, inward, backward or upward, and its extremity consequently may be elsewhere than in the right iliac region. In fact the entire organ with its attached cecum may be displaced. Osler reports one case in
THIRTY-FOURTH ANNUAL SESSION. 235

which it was found in the contents of a hernial sac in the inguinal canal, the appendix being doubled upon itself, and its extremity being in an abscess cavity at the promontory of the sacrum.

Increasing experience surprises me with the number of cases of appendix disease which give no history of acute attacks, and patients are frequently nonplussed by the statement that the appendix is probably responsible for reported symptoms, when they were not aware of ever having had appendicitis. To determine what constitutes evidence of appendical origin of remote symptoms not classified as those of appendix disease, I would lay the greatest stress upon a definite point of pressure tenderness over some part of the appendix area (this area should extend from McBurney's point one to two inches downward and upward and toward the iliac spine), and the exclusion of other likely causes of the symptoms.

Pressure tenderness, to be important, should be restricted to the appendix area; oftentimes when it is found, pressure at a corresponding point in the left side will elicit tenderness, and perhaps, too, at other points about the abdomen. In such of course it is of less diagnostic importance. It is well, when this sign is found, to ascertain concerning its persistence after the bowels are thoroughly evacuated. The patient's attention should be diverted in the examination, as too often suggestion will require the examiner to be on his guard. I can best convey the ideas in mind by reporting a few illustrative cases:

Case I.—Mr. M., aged 22, single, farmer, was referred to me by Dr. W. A. Shreck, of Bertrand. His history prior to present illness was unimportant. About a year before, he began to have a good deal of headache, often nausea without vomiting, belching, pain in the lower epigastric region of mild character after meals, constipation, fullness of the abdomen from gas, pyrosis, anorexia. At times there was general abdominal pressure tenderness when distended. He had lost twenty pounds in weight, was unable to
work satisfactorily. He had not been laid up. There was no history of fever or acute pain and he had been through the list of digestive aids and diet treatment without relief. The temperature was normal; pulse 72, no evidence of renal, cardiac, or pulmonary trouble. In the recumbent position the abdomen was flat. The only abnormality determined was tenderness and pain on pressure over and to the outer side of McBurney's point. He was informed of a probable appendix origin of the indigestion and referred to a surgeon who, concurring in the diagnosis, removed the appendix which was found to be thickened in its mucosa and contained catarrhal products. The patient called upon me about eight months later, stating that he had regained his health and weight and had had no evidence of indigestion since the operation. This case was one of chronic appendicitis and atypical in the absence of pain referable to the appendix area and the persistent symptoms of indigestion.

Case II.—Mrs. B., aged 54, had been somewhat afflicted with subacute articular and muscular rheumatism for a number of years and also more or less persistent symptoms of indigestion, for all which she had sought relief at different health resorts with only moderate and temporary relief. She had never had pain in the right iliac region, but did give a history of two very severe attacks of intestinal colic in the last of which I attended her in the absence of her family physician, and which was completely relieved by single morphia injection. At this time there was nothing suggestive of appendix disease. A year subsequently during a visit to a relative in the house she desired me to examine her abdomen, stating that she had discovered a tender place on pressure which she could not account for. This was found to be exactly at McBurney's point and quite limited in area. There was no tenderness elsewhere. She was without fever, pulse normal, no abnormality elsewhere discoverable in the abdomen, but her indigestion had been very persistent and she had need of great care in her dietary. She
never experienced pain in the appendix area. I ad­vised her to consult her own physician, and if he agreed with me that a probable diseased appendix ac­counted for her abdominal discomfort, to accede to his request for a removal of the organ. At an opera­tion some time later the appendix was found com­pletely adherent to the cecum, necessitating fine dis­section for its removal. She recovered promptly and has been completely relieved of her indigestion. Had I been sufficiently careful to examine the abdomen at the time she had intestinal colic, very probably I would have ascertained then the true cause. This ex­perience served me a good turn in the following:

Case III.—Mrs. C., aged 34, sent for me in haste to be relieved of an intense gastralgia. She was suf­fering as one with hepatic colic. The pain was di­rectly in the pit of the stomach. Her distress was so great that a morphia injection was promptly given. Her husband then gave me this history: For three years past, with unimportant previous history, she had had recurring attacks of a similar nature, pain always in the epigastrium, sudden onset, very severe, unat­tended by vomiting, and not always following a meal. The attack would be promptly relieved by a morphia hypodermic, but without it would wear away in one to three hours by means of hot applications or natu­rally. She would be entirely free from any symptoms in the intervals and regarded herself otherwise as a perfectly healthy woman. She had never been jaun­diced, nor had she noted any tenderness about the region of the liver or elsewhere in the abdomen. Neuralgia of the stomach had been the diagnosis made by physicians who had treated her, most of whom had been homeopaths. She was without fever, pulse 80. My physical examination, which was thorough, revealed only a marked pressure tenderness at Mc­Burney's point limited to a small area. A few weeks subsequently she came to my office by request when she was entirely free from any pain, and another ex­amination revealed the same area pressure tenderness which was also accompanied by discomfort in the
epigastrum. She was then advised to consult a surgeon for corroboration of my diagnosis of appendix disease, but deferred doing so, expecting to see Dr. Billings in Chicago later. Six weeks later I saw her in a recurrence which presented the same manifestations as the preceding attacks. She has not yet had an operation to prove the diagnosis, but I am satisfied of its correctness.

A somewhat similar case but without the distinguishing feature to enable a correct diagnosis during life is

Case V.—Mr. S., aged 32, married, of vigorous and splendid physique, had always enjoyed good health until the summer of 1895, when he was suddenly seized with acute epigastric pain, attended by vomiting, which was relieved by a single morphia injection. An examination at the time failed to detect any cause other than acute gastric indigestion. There was no fever, pulse normal, absence of any abdominal tenderness. The attack was followed by slight indigestion which was attributed to good living. From this time to April, 1901, he had about six attacks of a like character, at varying intervals, one of which intervals was about two years in duration. He was treated by me in four, and two were relieved by a prominent physician while visiting in New York. The pain was invariably confined to the epigastrium, relieved somewhat by pressure, attended always by vomiting and could often be traced to indigestible food. On several occasions repeated morphia hypodermics were necessary at half-hour intervals before he could be left. There was never fever or an excited pulse, and in each instance, as soon as the opiate wore away, he would resume business as usual. Repeated and careful examination during and between attacks failed always to reveal any tenderness or induration in the appendix or gall-bladder areas. There was not at any time jaundice. On one occasion I urged him to consult a surgeon, fearing he had some obscure trouble with the gall-bladder tract, or the appendix, which I was unable to find. In April, 1901, after one year's interval, he
was again seized with a like attack, which, unlike former seizures, tended to recur after a few hours' relief. Following one period of relief in about eighteen hours from the commencement of his illness he was again seized with excruciating pain, attended by vomiting with some blood. His pulse quickly rose to 130, feeble and wiry, there developed slight fever and general abdominal tenderness, mostly found in the umbilical region. Surgical counsel was at once summoned, but it was deemed inadvisable to operate. He died of general peritonitis two days later. The diagnosis suggested after the onset of fatal symptoms were duodenal ulcer, with perforation, and hemorrhagic pancreatitis. At autopsy there was found a general peritonitis with seropurulent exudate, intense inflammation and swelling of the appendix without apparent perforation and without adhesion. The ileum for six to eight inches from the cecum was intensely red and inflamed in its peritoneal coat. No other abnormality was discovered excepting a slight distended gall-bladder.

In studying over this case I have failed to see wherein there could have been justification for even a probable diagnosis of appendicitis even in the fatal attack. True the recurrences were suggestive, but so, too, were they of hepatic colic without jaundice, and even more so, for the pain was invariably referred to the epigastrium. The vomiting of blood in the fatal attack preceding the development of peritonitis taken in connection with the clinical history, was suggestive of duodenal ulcer, and I fully expected to find it at autopsy.

SOME CASES OF APPENDICITIS—OPERATIVE AND OTHERWISE.

A. B. ANDERSON, M. D., OMAHA.

I do not think it necessary to apologize for bringing the subject of appendicitis before you at this time. After all that has been written upon the subject, after
all that has been said upon it, after all that has been done, after all the comments on the surgical and medical aspects of the disease, and after all the autopsies that have been made, there still remains something to be said, something to be done. I believe we may still learn something about appendicitis. It might seem that after the hundreds of operations done by the Deavers, Murphys, Ochsners and Prices, with their pathological researches and deductions therefrom, nothing could be gleaned from a few cases by an obscure observer in the "wild and woolly west"; however, I believe we may yet learn something concerning appendicitis and its treatment. The teaching of those whose experience brings them in contact with thousands of cases, together with our own experience and observation, should constantly add to our knowledge and judgment in the management of these cases. Facts are stubborn things, but I sometimes think they are no more stubborn than our preconceived notions. We should always be ready to accept new facts and always ready to discard accepted theories when proven false. I believe that the teaching of Ochsner, "that absolute abstinence from food by the mouth, with lavage of the stomach and absolute quietude, is the treatment for appendicitis other than from a surgical standpoint. This treatment will carry nearly every patient through to safety or to a point where an operation is a simple and safe procedure." On the other hand comes our friend Carstens, of Detroit, who knocks the props out of this and says that this teaching is all wrong as it delays and prevents the good results from early operation. Nevertheless I am convinced of the practical good that comes from this early lavage and starvation treatment.

It is somewhat singular that the experience of physicians in the same vicinity and in the same department of work should differ so widely, and yet we find this to be true. It has been my fortune in the last ten months to see eight cases of appendicitis. Five of these were operated on, one died without an operation.
one died twelve hours after a delayed operation, and the remainder recovered. Those operated on, so far as could be determined by the conditions found at the time of the operation, could not have recovered by medical treatment. My experience teaches me that the safest thing for my patient with an inflamed appendix is to get it out by an immediate operation if the case is seen early, and if seen later, to restrict his diet to rectal feeding and operate later. A brief history of a few cases will better show my position and the reason for the hope that is in me.

Case I.—Miss B., school teacher, aged 17 years. First attack was mild. The symptoms were typical, but under judicious treatment, which consisted in withholding food and requiring absolute rest, the patient improved. In three or four days, contrary to advice, patient was sitting up. A relapse occurred, running a mild course of two weeks. Soreness in right side, pain on exercise, which also was much aggravated at the menstrual period, continued for several months. About four months after the first attack she submitted to operation. Adhesions to caput coli were quite dense and the large club-shaped appendix was turned back behind the cecum and adhered thereto almost its entire length. The separation of the appendix from its attachment was most carefully done, but in spite of this care it was ruptured in the process. The point to be noted here is that the patient was in a fair condition and only suffered pain at stated times, and that not very severe, and yet carried around an appendix that would certainly have ruptured in the abdomen at some future time if left alone. The recovery was prompt and the restoration to health complete.

Another case which very appropriately comes under the head of “appendicitis propagated” as described by M. Reuclus, an inflammation of the appendix developing from an enterocolitis; the nature of the tissue in this organ favoring stagnation and resulting in a greater intensity of the lesion in this part of the intestine, is
Case II.—Mary M., aged 22, about August 1, was attacked with enterocolitis; great pain, some vomiting, and moderate diarrhea. The temperature was very slightly elevated, but the soreness, pain, and diarrhea continued off and on for two months. During the latter part of second month the pain was more intense and the tenderness more decided at and around McBurney's point. Bowels now became constipated and when forced to move gave a great deal of pain. Repeated examinations for temperature found none but pulse accelerated. Examination in November revealed the above history with almost continuous pain and some fullness in right flank. Operation showed adhesions of cecum but appendix free. Large intestine congested, blood-vessels full and prominent. Appendix very dense and hard, caliber almost entirely obliterated. Typical sclerosis. Patient made a good recovery from the operation, but still suffers a good deal of pain in right side which is greatly aggravated during the menstrual period.

The following case carries its own lesson:

Case III.—A young married man had a severe attack of appendicitis in July, 1902, was treated by Ochsner's starvation method and nursed by a skillful attendant. In two weeks suppuration occurred, the abscess opening into the bowel. His physician, Dr. Plehn, of Burchard, Neb., wisely advised a surgical operation after recovery, which the patient declined with thanks, mildly intimating that bleeding a man's pocket-book was a common motive that prompted such suggestions and that he had not been very sick any way. In the course of a few months a slight attack of appendicular colic was endured without a physician being called. In a few more weeks another attack was ushered in and a doctor other than the one who had suggested the knife was called in. In a few days he apparently recovered. In the course of a month or so the offending appendix behaved worse than ever, the pain being so severe, he expressed it, as to be intolerable. The first mercenary was called back and
the patient declared himself willing to take advice. Inside of thirty hours from the onset of this pain the abdomen was opened, the adhesions were broken up, and an appendix found so gangrenous that it would scarcely bear its own weight. It was removed by tying off, no invagination of the stump being attempted. The pulse at the time of the operation was 140 and temperature 103°. Drainage was used for a few days only. Convalescence was rapid and recovery complete. While we were operating on this case and just as I was removing the appendix the parents-in-law came upon the scene. I saw by the look on the old man's face that war was brewing. He could hardly wait until the patient was put to bed. No sooner was the way opened than the war began on his part. When I said, "Just wait, perhaps the boy will get well." "What, with his entrails taken out like that and part of them taken off!" In the afternoon of the same day the young man's own parents came, and then the dickens was to pay again. However, by this time the doctors were away and the poor nurse had to bear the brunt. Of course there were two doctors in that locality who were, to say the least, on the anxious seat. For although we were entirely conscious of only doing our duty and while we had the consent of both the patient and his wife, the belligerent attitude of four parents awed us considerably. However, Providence was kind and in three days we were in the saddle and in a very short time all were reconciled except the mother, who still persisted that at least she wanted to go appendix and all. And I think she will go that way. This is one case of which it might be said was saved in spite of his friends.

As an appendix to the above allow me to report the case of a little girl, aged 8 or 9 years. She had had several attacks of colic, some of which were not of sufficient intensity to call a doctor. One attack, for which a physician was called, was not typical as to symptoms, the attendant being inclined to regard the case one of gastric indigestion. However, she was
taken very sick at school, had severe pain, but walked home, a distance of a mile or more. They secured medicine that night. The following evening, being no better, the physician was called and recognizing the danger wired me to meet him. I reached the case the following morning, less than forty-eight hours after the initial symptoms, and found the case practically moribund, she dying in two hours. An operation the day before would doubtless have saved this child.

Now here is one on the other side. Boy, aged 8 or 9 years, was treated for "stoppage of the bowels" for several days before the case was recognized as one of appendicitis. Purgatives were then stopped, rectal feeding was carried out, and soon a tumor developed in the right side. At the end of a week or ten days, the boy's pulse being good and temperature below 100°, it was determined to open into the abscess. Accordingly, the usual precautions being taken, an incision was made directly into the abscess cavity, the peritoneum not being opened at all. No attempt was made to locate or remove the appendix. Tubular and gauze drainage was placed in the wound. The little fellow went to bed in good condition, but in a few hours his temperature suddenly jumped to 103° and 104° and his pulse uncountable, and he died at midnight. Thus we see sometimes the most promising cases suddenly disappoint us. My comfort is that he would most certainly have died had he been left alone, unless a kind Providence had directed that pus to the intestines. My regrets are that the operation was delayed. One day earlier would doubtless have saved him. Sepsis had already begun its insidious work, although a favorable pulse and a low temperature made the case seem propitious. A sudden explosion occurred which would have happened had no operation been done.

Now it seems to me that these few cases, though not carrying the weight of Price's 100 cases in three months, yet teach a lesson, and while we may never be perfect, and in the very nature of things cannot
be, yet certainly we can glean a truth here and there that will aid us in relieving suffering and in saving human lives. The truth, as it seems to me, in regard to appendicitis is first that it is a surgical disease from start to finish; second, that no medicine given by the mouth has any directly positive effect upon the disease, and that purgatives are positively harmful; third, that opium or codeine, by quieting peristalsis and relieving the nervous irritability, is a good remedy to use, ever bearing in mind that the patient may be lulled into a false security by its use, but that the doctor should not be; fourth, that absolute rest in the recumbent position, with absolute abstinence from food by the mouth, will nearly always render the giving of opium or codeine, unnecessary; fifth, that in all severe cases operative measures should be taken within thirty hours of the onset.

DISCUSSION.

Dr. J. W. Bullard, Pawnee City: It will not do to allow a paper on appendicitis to go undiscussed. Just one word relative to recurrences. There is no doubting the fact that there are a few cases of the catarrhal variety in which the lumen is obliterated by the inflammatory process, and a cure without operative interference is the result; but it is my opinion that if we keep track of this class of cases over a period of several years, that, sooner or later, a recurrence will be the result in a majority of the cases. I have in mind the case of a boy whom I treated about eight years ago. He had a severe attack and I expected to be obliged to do an emergency operation, but he apparently recovered and I had counted this as a cured case; but about three months ago he had another moderately severe attack. I had one other patient that I kept track of for about ten years and there was no recurrence.

Dr. A. J. Clark, Albion: I believe appendicitis to be a surgical disease, and I believe some cases can be cured by the surgeon. I also believe that some cases can be cured without surgical operation. How can we always tell we have appendicitis? We read of cases similar to those outlined by the author of this paper with identical symptoms. The knife is not used and the patients recover. If these cases were not appendicitis, what were they?

Dr. R. C. Moore, Omaha: It is pretty well settled, I believe, that those who practice general medicine and specialize that man, woman, or child who has once had appendicitis is not safe until that appendix has been removed. He may go for some little time after an attack and there may never
be a recurrence, but he is not safe. He is liable to be caught some place where it is impossible to receive relief at the time when it is absolutely necessary. So I look upon it that all we can do as general practitioners is to tide the patient over the immediate attack and then turn him over to the tender mercies of the surgeon. To operate during the inflammatory stage causes far more danger than to operate during the intermediate time. This is the course I used to pursue: I make my patient as easy as possible, watch him closely, and when he gets over the attack, to request and advise him to submit to an operation. Of course the physician must not have his judgment clouded because the patient is not suffering severe pain. I believe it is advisable at the outset of these cases to pursue the course of withholding food, but on the other hand to empty the bowels and then give the patient a rest. The application of extreme cold will give them relief and will retard the formation of pus. I formerly used heat, but a paper read by Dr. Lee before the A. M. A. in Philadelphia suggested ice. It was my opportunity. I had two cases on hand. I used the cold treatment, and it was astonishing what relief those patients received. I advised operation for these two, but they did not see fit to follow my suggestions. One has had a slight attack since, the other has not. In the way of medicinal treatment, what I have suggested is about all I know of. The ice is above all the best that can be done.

Dr. B. B. Davis, Omaha: Just one or two things. In the first place the treatment of washing out the stomach and using ice and nourishing per rectum is the best method when you are not going to operate, or if you have a case where it is impossible for an operation to be done at the present time. It is good treatment also where the patient is moribund. When a gentleman gets up and says something about tiding over the patient, it is a dangerous teaching. If I am called to a case on the first or second day of the attack and the condition indicates plain, clear-cut appendicitis, this is the picture I put before the patient: If this case is through the worst of it, the operation at the present time will not be particularly more dangerous than would an operation done in the interval. This patient will never be safe until the appendix is out. If this case is one that cannot be tided over, an operation at once will be 100 per cent. safer than if done next day.

Dr. A. R. Mitchell, Lincoln: It seems to me that this question resolves itself largely into one of diagnosis. It seems pretty well settled as to the question of operation. Davis' rules are about as good as can be made. The papers cover many of the necessities for great care in diagnosis. The technique of course is understood. The tender points are variable. My observation has been that in several cases of appendicitis, and even in some of the minor cases, the first symptoms are not located at McBurney's point but in the region of the navel. The question of the obstruction of the bowel, in the second paper read, is one which is difficult to diagnose. I do not think there is very great difficulty in
distinguishing between intestinal obstruction and appendicitis. The stethoscope will aid in all cases where the pain stops suddenly in some particular point. I am an advocate of immediate operation for appendicitis. If the case is tided over, they will not be secure.

I would like to mention one point of technique about which nothing has been said. I have seen a number of operators and many who did not employ this particular method of the opening of the peritoneal cavity. Make a large incision, rather than work in the dark. The particular point which I wish to mention is the use of the dam made of iodoform gauze. After the incision is made, if you do not see the appendix, it is almost always adherent. I use gauze dam, always packing it well into the field of the operation.

Dr. Coffman, Omaha: I would like to ask of these surgeons who favor operating on all cases, if they all refer back to their anatomical knowledge and experience in the dead room or wherever they may have had the opportunity of dissecting, how many appendices in every particular normal they have found. The next thing is that it has been decided that if you do not operate on these patients, they will have a renewal attack of which they are very likely to die. If that it so, all these patients with abnormal appendices have not died of appendicitis. They may have died of something else. What is the cause of appendicitis? We hear nothing but operation. In all our arguments I do not know that I have heard one man express an opinion as to the cause or the predisposition to this disease. Here is where lymphoid tissue exists, a favorable soil for germs. I think that auto-infection is one of the great causes of the disease. There are many cases of disease in the region of the appendix that originally were not appendicitis and yet there was pus formation. Wherever you find pus, if you do not evacuate it, nature will. When we talk about whether there is a medicinal or surgical case, I am a little disposed to believe that nine-tenths of the ailments of the human family develop into a surgical condition.

In regard to the theory of emptying the bowels and treating with cold. You can undoubtedly arrest progress by cold. You can stop a diseased condition, always a septic one, with ice, and I think you can cure appendicitis with prolonged cold. Where suppuration does not exist, aid by antiseptic enemas oft repeated and by the mouth antiseptics and sulphide of calcium, instead of opium, with a continuous elimination through the bowels by calomel and salines.

Dr. H. P. Hamilton, Omaha: I have been interested in the papers and the discussions especially on the diagnosis of appendicitis. The diagnosis of appendicitis is usually easy, but I believe it is impossible at times to make the correct diagnosis. Make an exploratory opening into the abdomen. I believe we are justified and required to open the abdomen and find the region and then we are able to work with more satisfaction. That is not a dangerous operation.

As to the treatment, I have nothing more to say than
what has been said. I believe that medicinal treatment is indicated in a great many cases and that it does do good. But it never cures a case permanently. When we remember the history of appendicitis and see the number of cases that occur where there is no physician called in at all, we know that about 90 or 95 per cent., whether they have treatment or no treatment, usually recover from the primary attack. From 5 to 10 per cent. die. There is a reason for this—depends upon the character of the lesion that is causing the appendicitis. In those cases of appendicitis we have an inflammatory condition confined to the muscular structure. In those cases where the peritoneum is invaded by the germs, all those cases, whether treated by medicine or if left alone, will either die soon or there will be an abscess formed later on.

When we study the pathological changes that take place in the production of appendicitis and the condition that exists, what do we know? We know that all those cases of perforation of the appendix, or those cases of gangrene, die if not operated upon, and they generally die if they are operated upon. In all those cases where the pus-forming germs have not penetrated the peritoneal surface of the appendix an operation is comparatively harmless. From 95 to 100 per cent. of those cases will recover if operation is properly performed. Unfortunately we are not able to state which is the case which has the pus-forming germs which have penetrated to the peritoneal surface and which is not. Where the pus has not formed, the case is operable and subjected to almost no danger, because the pus-forming germ has not penetrated the peritoneal surface and so an antiseptic operation can be performed. While that is true, the dangerous cases, and those of which the surgeon is really afraid, are those in which there has been a small perforation formed and a few drops of pus penetrated to the peritoneal surface. These are the cases for which we should wait until there is a protective area drawn clear around the part. If we were able to exclude these cases in making our diagnosis, every other case should be operated upon as soon as possible.

Dr. W. O. Bridges (closing the discussion): In regard to this question of exploratory operations, I do not believe they are always free from danger. There are cases on record in which fatal issues have resulted from simple laparotomy.

I do believe that the burden of proof for the necessity of an exploratory operation in any given case is upon the surgeon, and not upon the physician. The physician is not supposed to be a surgeon, and in any condition in the abdomen giving rise to obscure symptoms, then I say it is the duty of the physician to call in the surgeon for consultation. I am pleased with the paper of Dr. Anderson, and it is very gratifying to hear that surgery is going on where work is accomplished for patients who are not permitted to go to the centers for treatment. There are one or two points in the paper, however, of which I wish
to speak. One is with reference to the question of the surgical treatment of cases of appendicitis and the question of operation in any but the milder cases. The writer believes that operation is advisable in the more severe cases. How can he tell that any given case of appendicitis is to be a mild one? None of us can ever tell that a given case is mild until that attack has been recovered from. Another point is the absurdity of speaking of the Ochsner treatment as starvation treatment. It is very far from starvation treatment. When a patient has taken from one to two quarts of milk, and eggs and beef tea, in twenty-four hours, and absorbs practically the entire amount it is very far from starvation treatment. I have been much pleased with the treatment as outlined by Ochsner since his paper came out, and I must say that one feature connected with its adoption in the treatment of appendicitis impresses me, in that it gives one a chance of having a satisfactory rule to go by. My experience has been that the severe and general symptoms of the disease all subside after the stomach and intestines have been emptied of food and gas, and food withheld from the stomach.

Dr. A. B. Anderson (closing the discussion): In regard to the diagnosis. It is not always an easy matter to diagnose a case of appendicitis. Undoubtedly we have all treated cases of other infection in which we were at a loss to know the exact condition. I have a case in mind. It was in the family of a physician. Neither of us at first could satisfy ourselves in regard to it. There was very much diarrhea, pain not confined to any part of the abdomen, while the most of the tenderness was in the pelvis. It was accompanied by an irregular menstrual period which was quite a mystery to us. We could not decide whether the case was one of appendicitis, typhoid fever, or some obscure pelvic trouble. After the case developed we decided it was appendicitis.

In regard to the question of Dr. Bridges as to how we can tell a mild case. We see many mild cases that become very severe. We do not have any control over those cases. If we have control over a case in the first twenty-four hours and can keep the patient quiet and empty the bowels, the case is very apt to go through as a mild one.

In regard to the Ochsner treatment being termed the starvation treatment, I think the doctor who originated the plan has himself called it the starvation treatment in his lectures. It is not really a starvation method, but the first day or two the stomach and the bowels are empty. Very little sedatives are required to control the pain. It is not a starvation method but an abstinence from food by way of the stomach.
INTESTINAL OBSTRUCTION.

W. J. PINKERTON, M. D., MEAD.

Intestinal obstruction or ileus is a condition by no means uncommon and which in my experience has been the cause of a great deal of concern; the principal reason for this being the comparative ineffectiveness of medicinal and mechanical remedies, which may be applied without objection by the patient or relatives; or in other words, our comparative helplessness without resorting to surgical measures for relief, the great reluctance with which our patients yield to grave surgical procedures quite frequently being the cause of failure to effect a cure. Of the three principal divisions of obstruction, namely, adynamic, dynamic, and obstructive, the obstructive is by far the most frequent.

The obstructive may be divided into strangulation, of which we have hernia, bands, adhesions, diverticula, intussusception and volvulus, enteroliths, gall-stones, neoplasms, cicatrical contractions; obstruction by pressure from neighboring organs, and fecal impaction—the pressure from adjacent organs being rather a cause of fecal impaction than a cause of obstruction of itself.

Case I.—Mrs. M., aged 27, no children; presented herself for treatment October 9, 1899. She complained of pain in right groin, aggravated by walking. Not much appetite; bowels somewhat constipated, but not more so than usual for her. Pulse and temperature about normal. On examination of abdomen by palpation a mass of a doughy consistency could easily be detected. By vaginal palpation the same mass could be detected in the cecal region; abdomen not much distended. I also found an adherent retroflexed uterus. I prescribed a saline cathartic with the injunction to be sure to notify me if her bowels did not move promptly. The correctness of my diagnosis being somewhat doubted by the patient, I did not hear from her again until the second day, October 11, when
she again came to my office, but as I happened to be in the country when she called, I did not see her until the following day. This time I prescribed large doses of castor oil, without any effect. The next day, October 13, she came to my office. I took her to my home (her home being five miles in the country) and had my wife give her high enemata at frequent intervals during the day, at the same time continuing the castor oil. This treatment was ineffectual, with the exception of causing occasional cramps in the bowels. On the 14th her husband reported that she had had a good movement of the bowels and felt some better. All this time her pulse remained at about 80 and her temperature somewhat subnormal. On the 15th, she having grown quite a good deal weaker, I called to see her and found her still passing large quantities of fecal matter. She told me that she passed the skins of some plums that she had eaten three weeks previously. On the 18th I again called to see her, her pain having considerably increased and her temperature risen to about 101°. On the evening of the 19th I found a good deal of sweating and increased pain and tenderness. Consent having been obtained to have her taken to a hospital we arranged for and took her to Omaha the following morning. Operation at 3 p. m., by Dr. B. B. Davis at Immanuel Hospital. Pus was found as expected and patient slowly recovered.

Case II.—Mrs. E., aged 24, primipara; confined after a somewhat tedious but otherwise normal labor. After completion of labor patient informed me that her bowels had moved well the previous day and that they had not been hard to keep open during her pregnancy. On the third day I ordered a laxative, but it did not move the bowels. When I saw her again on the fifth day I found her with a temperature of 103.2°, pulse 115; abdomen somewhat distended. At the left of the uterus could be made out a large mass, which proved to be fecal matter impacted in the sigmoid flexure. Lochia somewhat offensive, some tenderness of uterus. Treatment, intrauterine douche of weak antiseptic so-
lution; enemata, which brought away a large quantity of fecal matter. For the next three days laxatives were given in addition to enemata, patient recovering without interruption.

Case III.—Mrs. V., mother of Case II. Began with some vomiting; pain in inguinal region, pain in back and breast. Tenderness over cecum; a distinct mass could be made out in this region. Pulse 84, temperature 99½°. Anodynes and a cathartic were prescribed, with the result that the pain had somewhat subsided by the next day, but the bowels had not moved. However, the pain and tenderness in the bowels had moved up to the hepatic flexure and the tumor less easily felt. I remained with the patient the greater part of the day and administered high enemata frequently, as well as castor oil by the mouth, a tablespoonful every hour. During the night her bowels began to move and patient made a complete recovery.

Case IV.—Mr. J., aged 56; came to my office August 17, 1901, with abdomen greatly distended. Diffused pain over abdomen, pulse 70, temperature normal. Some vomiting; bowels had not moved for a couple of days; no tumor could be made out, distention of abdomen being great. This man had been considered a hard drinker and had endured a great deal of hardship and exposure during his life. Treatment at first anodynes and a cathartic, followed by an enema, from which patient said his bowels moved and he felt somewhat better. The next day I was sent for and found the patient’s condition no better, his bowels not having moved any more, his pulse being 100, temperature 98°. I remained with him about four hours, giving enemata repeatedly without result. In addition he had dram doses of magnesium sulphate hourly. August 19, not any improvement; pulse about 80, temperature subnormal; enemata continued. Internally I tried castor oil instead of the magnesium sulphate. He also had two minims of croton oil during the day. In the afternoon fecal vomiting set in; this made him feel somewhat easier, as it relieved the distention slightly. I
now tried opium, giving him two grains as an initial
dose and one grain every three hours. August 20 not
much change in the morning, but at 6 in the evening
there was a change for the worse and at 3 o'clock the
following morning he died. Operative interference was
repeatedly urged as the only means of obtaining relief,
but it was rejected. I endeavored to obtain permission
to open the abdomen after death, but could not get
the consent of the relatives.

It may be worth while to emphasize a few points
which are to be observed from these four cases.

In Cases I and II the cause seems to be that of pres­
sure upon the colon by the uterus. In the first instance
a retroflexed and adherent uterus, and in the second
that of physiological enlargement due to pregnancy.
It would appear as though this cause was not given
enough prominence in the literature on the subject. In
the literature at my command I did not find it men­
tioned.

Case IV is one that would seem as though surgical
interference was indicated almost from the start. In
this instance the peculiarities of the patient were
largely responsible for his refusal to submit to opera­
tion. He being accustomed to enduring discomforts,
and pain without paying any attention to them, it was
impossible to make him realize the seriousness of his
condition. I believe this to have been some form of
strangulation, perhaps a volvulus.

As to treatment in general, when we have a case of
fecal impaction, I believe mild cathartics are indicated,
the best being castor oil in large doses. Enemata of
warm sterilized water, normal salt solution, mild anti­
septic solutions, or of oil may be used. Some recom­
mend electric enemata. Gentle massage to abdomen
may be of benefit. Where there is much distention, a
support making uniform compression will make the
patient more comfortable. Washing out the stomach
may relieve distention somewhat.

Puncture of the distended intestine has been prac­
ticed, but it is a procedure not unaccompanied with
danger. If the healthy intestine be punctured by a small trocar needle, the wound will immediately close and extravasation will not take place; but when the intestine is fully distended and in a paralytic condition, extravasation is more than likely to take place. Inflating the intestine with hydrogen gas or sterilized air may be used instead of enemata. Exploration of the rectum with the hand should only be attempted by those with small slender hands, and if the obstruction is low down will be of benefit either as a means of diagnosis or for the removal of the obstruction.

Abdominal section should be practiced early after a fair trial of mechanical and medicinal remedies. As we are never sure of the exact pathological condition, exploratory operation should be performed early, followed by whatever procedure is found to be indicated. Every case is a law unto itself as to what methods should be practiced.

Medical treatment other than cathartics.—The patient's strength should be maintained by supportive treatment. Opium is indicated to relieve pain and excessive peristalsis. Atropin in doses of 1-20 or even 1-15 of a grain has lately been recommended by some. I have not had enough experience with it to form any conclusions as to its efficiency. However, it would seem to have a favorable action by paralyzing the termination of the splanchnics; the splanchnics being the inhibitory nerves to the intestines, peristalsis would be increased.
ACROMEGALY, WITH CASE AND AUTOPSY.

W. F. MILROY, M. D., OMAHA.

It is not the purpose of the present paper to enter upon a discussion of acromegaly, as to its history, etiology, symptomatology, pathology, or treatment. However, since comparatively few autopsies have been made and recorded, it has seemed worth while to extend the list by the addition of the present case.

Hanna C., age 36, Danish, single; height 5 feet 8 inches, weight 158 pounds; entered my service in Douglas County Hospital September 30, 1901. Her family were healthy people. She had enjoyed perfect health until 22 years of age. Until that time she was of slender form, but at the age of 22 she began to gain in weight and so continued to do until at the age of 25 she weighed 281 pounds. When this increase in weight began, she ceased menstruating and for several years complained of general ill-health characterized by weakness and severe digestive disturbances. In her 28th year she observed that her rings were too small and that from that time a steady growth of her hands and feet was evident.

One year ago she began to lose flesh rapidly and was told by a physician whom she consulted that her urine contained a large amount of sugar. She was treated for diabetes mellitus, but continued to diminish in weight. About two weeks before entering the hospital she began to suffer with convulsions, which involved the right side of the face and neck and the right arm. These convulsions occurred at irregular intervals, increasing in duration until a period of nearly two hours had been occupied without interruption in this condition. The muscles were very weak during the intervals between the convulsions, but there was no paralysis. The patient insisted that she was entirely conscious during the seizures. A hazy account was obtained of some sort of abnormal mental attacks for a considerable period before coming under my observation. The
general condition of her mind had been one of steady decline.

About six months before entering the hospital she lost the vision of her left eye completely, and more recently that of the right eye had been failing. Examination disclosed the presence of cataract in both eyes, though not fully opaque in the right eye. The patient was able to walk about. An abundance of sugar was present in the urine.

The classical picture of acromegaly was presented by this patient. A marked anteroposterior kyphosis existed in the cervicodorsal region. The inferior maxilla was projected downward and forward. The supraorbital ridges, the malar bones, and the clavicles were massive. The tongue was so greatly enlarged as to be with difficulty confined within the mouth, and intelligible articulation was almost impossible. The pelvis was of the masculine type, the hands broad and "spade-like," though the skin was of normal texture. The feet were increased in size, the great toe being especially large. These features of the case, together with others not enumerated, were sufficient to lead to a diagnosis of acromegaly.

In the evening of October 5 the patient experienced great difficulty in swallowing. Following this she was, for several hours, extremely restless, but finally became comatose, in which condition she remained to the time of her death, eighteen hours later. No general convulsions occurred.

Autopsy eighteen hours after death revealed as follows:

Lungs: Recent pneumonic consolidation at left apex, with pleuritic adhesions in the same location. Slight emphysema. Otherwise normal.

Heart: Small degree of hypertrophy. A small amount of serous fluid in pericardium. No endocardial lesion.

Thymus gland: Not demonstrable.

Liver: Enlarged to two inches below the margin of the ribs. It was extended to the spleen, to which it
was adherent. It presented the appearance of passive congestion.

Gall-bladder: Large, containing no calculi.

Stomach: Seven inches along the lesser curvature from the esophageal opening was found a fibrous constriction dividing the viscus into two pouches, which communicated by an opening two inches in diameter. The first pouch measured 7 by 5 inches, the second 5 by 3 inches.

Small intestine: It was dilated in the first four inches of its course, forming a pouch which was limited by a fibrous constricting band in the wall of the transverse portion of the duodenum. The diameter of the lumen of the jejunum and ileum varied at different points from two and one-half inches to almost complete obliteration.

Spleen: Seven inches long, three inches wide and one and one-half inches thick. A small supernumerary spleen was found located above the spleen.

Pancreas: In gross appearance it was normal.

Kidneys: Alike in size. They measured six and one-half by three and one-half by two and one-half inches. They were firm, capsule not adherent, and were very red on section.

Uterus: This was about the size of a walnut.

Brain: The pituitary fossa measured one and one-eighth inches anteroposteriorly and one inch transversely. The pituitary body was as big as a large walnut, the enlargement having occurred in a fairly symmetrical manner. It extended across the anterior perforated space so as to rest in contact with the anterior portion of the superior temperosphenoidal convolution. Extending from this point of contact in the left hemisphere (not in the right) was seen a tract of the brain, darker in color and softer in consistency than the normal brain tissue. This tract, one-half to three-fourths inches wide, involved the brain substance along the fissure of Sylvius, to a point near the middle of its course, whence it extended across to the lower portion of the fissure of Rolando and followed that
fissure through about one-third of its extent. It was most marked in an area about one and one-half inches in diameter, having its center about the middle of the lower third of the fissure of Rolando.

For the histopathological study of this subject I am indebted to Dr. W. K. Yeakel, professor of pathology in the College of Medicine of the University of Nebraska. His report is as follows:

“Pituitary body: Membranous covering made up of fibrous connective tissue present over about two-thirds of the free surface. No membrane distinguishable over the remaining area. This membrane about the sides showed thickening, but gradually dwindling down to the uncovered area, viz., the outer and lower surfaces. Peripheral portion of healthy cells occupying the outer one-fourth of the diameter of the body. The cells have no cell wall, are generally spheric, loosely arranged and variable in size, averaging about four diameters of the red blood-cell. The protoplasm is uniformly granular, the granules very fine and take a strong, even, eosin stain. The nuclei are mostly spheric and vary as to numbers from one to six. The single nuclei are usually centrally placed. The nuclei of the polynuclear cells may be in contact with each other or widely separated. The nuclei are never joined by filamentous nuclear material. They stain well with hematoxylin. Many nuclei contain from one to three nucleoli. The stroma is structureless, containing no observable connective tissue fibers. It is rather mucoid in character. Capillary blood-vessels are abundant and extremely thin-walled. They are markedly congested. Blood is often found in the intercellular spaces. Pigmented bodies are present throughout the tissues. The central portion of the organ is occupied by extravasated blood easily discernible by microscopic examination. This is made up largely of blood more or less degenerated and of cells similar in character to the other portion of the growth but mostly broken down.

“The tissues of the brain along the course of the middle meningeal artery and its branches, as described
above, show extreme congestion of the blood-vessels, numerous small extravasations into the brain tissue and infiltration of cells similar to those found in the pituitary body. From all appearances I consider this growth a large round-celled sarcoma."

Acromegaly was first described by Paul Marie, chief of Charcot's Clinic, in 1886. Several theories have been suggested to account for it. Marie attributed the disorder to the presence of some pathological condition of the pituitary body. Klebs attributed it to a persistence of the thymus gland. Virchow supposed that acromegaly is the terminal stage of some condition not yet recognized. Others call it a neurosis depending upon the presence of a certain substance secreted by the pituitary body; or else a poison which ought to be eliminated by the pituitary body, this giving rise to a dystrophy.

In a majority of the post-mortem examinations which have been made on the subjects of this disease, a pathological condition, of one kind or another, has been found, yet not in all. One has not gone far in a study of the anatomy, physiology, and pathology of the pituitary body before he discovers that our knowledge of that organ is exceedingly limited. There is evidence that one of its functions may be the control of growth and nutrition. The fact that a large number of the cases of acromegaly with disease of this organ present some derangement of the urinary function, as polyuria, or, as in the present case, glycosuria, suggests an intimate relation to the kidneys and their function.

Adopting the suggestion afforded by the experience of recent years in the use, medicinally, of various animal extracts, a number of observers have worked out along similar lines the pituitary gland. The results of these labors are summarized by F. Golla in the Lancet for February 15, 1902, and I shall mention a few facts there set forth. The most notable body derived from this gland has been termed the "pressor" substance, from the fact that it both slows the heart, increasing the power of its action and also the arterial
tension. This slowing of the heart action differs from that by digitalis, in that it prolongs the systole instead of the diastole. Several observers have claimed that the pituitary body may be removed without any evil results. The medicinal use of pituitary extract is so far so limited as to its scope and value as to have commanded little attention. Schiff found that the administration of pituitary extract caused a marked increase in the phosphorus excretion by the urine and feces with no corresponding increase in the nitrogen metabolism. This may be regarded as suggestive of the causal relation between disease of the pituitary body and acromegaly. Marinesco was unable to effect any improvement in the condition of the extremities of three well-marked cases of acromegaly, but the headache and neuralgic pains in the limbs were much relieved. Broadbent found great improvement in the psychical condition of patients suffering with acromegaly, after treatment with pituitary extract. Rolleston obtained a lasting improvement in the case of a woman who had suffered for three years from acromegaly, which was permanent after the pituitary treatment was suspended. These reports appear to warrant the further use of pituitary extract in acromegaly.
SERUM-THERAPY, WITH ESPECIAL REFERENCE TO DIPHTHERIA.

W. H. CHRISTIE, M. D., OMAHA.

The excuse for this short paper is to reply to a very ably written one by Dr. Wyman, of Cheyenne, Wyo. His paper appeared in the Western Medical Review of March 15, 1902. He expresses himself as skeptical as to the "theory of the so-called Klebs-Loeffler bacillus as the cause of diphtheria," and as a natural consequence of such skepticism as to the etiology, he has no faith in antitoxin as a therapeutical measure. While he confesses that he has had but little experience with the antitoxin, he frankly admits that he has had no success with it, and, to support his position, he quotes from the paper read by Dr. John Blake, which is a criticism upon the profession relying upon the microscope for a diagnosis and upon another toxin for treatment.

The fact that we have men in the profession to-day who discredit vaccination for smallpox is no argument against the protection of mankind from this scourge, by vaccination, under properly antiseptically prepared virus and a properly antiseptically prepared site to inoculate, by antiseptic means and hands, and the maintenance of the inoculated area free from infection. The history of smallpox and the modification of its epidemics by vaccination, and the protection of mankind by the latter from the former, is no better established, in my mind, by observation and experience and the history than is the modification of diphtheria by antitoxin.

I cannot concede that the nature or etiology of diphtheria, in its relation to the Klebs-Loeffler bacillus, is any longer a theory. I know of no better proven fact in medicine. That Klebs-Loeffler bacilli may be found in throats where diphtheria is not manifested
is no argument that the bacillus is not the cause of diphtheria, since the mucous membrane, like the skin, protects, when unabraded, against infection. Infection can only occur when congestion or traumatism causes abrasion. I fully concur in the idea that we should never lose sight of the clinical picture of disease, and, personally, I rely upon it and only use the microscope to confirm my diagnosis. The use of many of the scientific appliances with which disease is studied is quite apt to lead us to neglect to study the clinical picture as carefully as we formerly did, or as our fathers in medicine did; but this is no argument against the value of these appliances. The thermometer is observed quickly and easily, and, too many times, is depended upon at the expense of studying the nature, character, and quality of the pulse, and the clinical picture of the facial expression and the operations of the mind; yet this is no argument against the use of the thermometer as a clinical aid. When we come to reflect upon many of the changes we have produced in the system many times, we find that we have unconsciously practiced serum-therapy, and we have only imitated Nature in her physiological functions and efforts. The stomach has within its tissue a substance which, in its physiological excitement, pours out pepsin into the stomach and, at the same time, an unknown element, formerly locked with it, an albumose, has been poured into the blood current. The pepsin breaks up fibroid tissue for diffusion in the blood and lymphatic streams; but what has been the effect of this unknown element? The pancreas secretes pancreatin, but its unknown companion, an albumose, enters the blood stream and prevents glycosuria. Its absence leads to diabetes. The albumose, from the thyroid, in undue amount causes exophthalmic goiter; in deficient amount, myxedema. The albumose from the suprarenal capsule seems to have much to do with regulating the vasomotors and inhibiting the heart, and, where these
are affected, we have conditions of the circulation which are markedly corrected by the administration of this albumose. We know, too, that the injection of a small, non-fatal amount of serpent venom into an animal susceptible to its action will prepare that animal for a larger amount of the venom until it can be rendered entirely immune to that venom. We also know that serum from such an immune animal will render another susceptible animal immune to the bite or sting of the serpent.

To my mind, it has been established beyond question that the Klebs-Loeffler bacillus is the etiological factor in diphtheria. It certainly produces a visible exudate upon an abraded mucous surface or upon the endepidermis. In the life-work of this vegetable parasite, not only has this exudate been thrown out, but also a product of it has been thrown into the serum of the body. It is not dissimilar to the albumose of the venom of the serpent, or the albumose of the different glands of the body. In many cases, the effect of this so-called ptomain is as profoundly poisonous to the nervous system and the blood as is the venom of the serpent, though the venom is the more rapid. As it has been proven that the injection of dilute serpent venom rendered susceptible animals immune to the venom, so has it been proven clinically, beyond the shadow of a doubt, that the use of a diphtheritic antitoxin renders human beings immune to diphtheria. In these lie the benefit of its action and the proof of its efficacy. To illustrate: Finding it impossible to stamp out diphtheria in a foundling hospital, it was determined to inoculate all the infants with Paltauf's diphtheritic antitoxin as a prophylactic against the disease. Each child was inoculated with 100 units of the antitoxin, with the result that out of 1,450 children so treated only two developed diphtheria, and in one of these two children the onset of the disease dated seven weeks after the inoculation. In the two years previous to the adoption of this treatment no less than thirty-one
cases of diphtheria had occurred, while in the second year of its adoption not a single case of diphtheria was recorded. The ages of the children varied from a few hours to several months. (Sajous Annual and Analytical Cyclopedia of Practical Medicine, vol.2, p.602.) For some time Heubner made it a practice to “immunize all the children in his wards in the Charitie every three weeks. For a while he had to give up his immunizing injections, because the hospital directorate thought it savored too much of experimental investigation on children and might arouse popular indignation. They were resumed after an interval of only two months, however, as it had become clear that they had been wonderfully efficient in preventing diphtheria in the wards of the hospital.” (Ibid., p. 603.) To secure immunity, the antitoxin must be used before infection takes place. The use of from 100 to 500 units will protect from eight to thirty days. My own clinical experience, and that of all others who have used antitoxin under the proper conditions as regards the time of its use, the age of infection, the quantity to be used, and the frequency with which it should be used, shows that it surpasses any other method of treatment. It is of the highest value in the treatment of pure diphtheria, clinically recognized and proven by the demonstration of the Klebs-Loeffler bacillus. It has no effect upon the affection, sometimes associated with it, known as mixed infection. When it is used early, and repeated in eight to twelve hours, if necessary, it will affect the history of the Klebs-Loeffler bacillus, remove the exudate, lessen the fever and modify all the clinical signs of the disease. I am in the habit of using from 1,000 to 3,000 units according to the age of the patient. Personally, I never use less than 2,000 units upon any aged person, and sometimes use as high as 4,000 units. I used the antitoxin constantly for over ten years prior to the spring of 1902 without meeting with a single case of diphtheritic paralysis of any importance. I then met with it in the
case of a young lady of 20, subject to sore throat, who had diphtheria for five days and received ordinary home treatment for it. I was then called and used the antitoxin twice, one dose of 3,000 units, and another one of 2,500. There was an amelioration of all symptoms, except that there was great weakness generally and of the heart in particular. Large doses of strychnia, at first, 1-20 of a grain every four hours, later, every three hours, did not prevent severe neuritis, manifested by neuritic pains and paralysis of all the extremities. Judging from my own experience and that of others, I am quite sure that the early use of the antitoxin would not have been followed by this alarming neuritis and paralysis. The timely administration of antitoxin not only aborts the disease, but also acts as a prophylactic against the formidable sequelae of the nervous system. I have not had a death in my own experience, nor have I met with one in consultation, in those severe cases of croup in which there were present marked cyanosis, stupidity, extreme restlessness, and cold sweats. In such cases I have used the antitoxin and have intubated. Before the days of antitoxin, all patients with these conditions would have died.

I will give a few histories briefly. Little Miss G. had been sick three full days; she was restless, cyanotic, had a sharp, croupy cough, could not lie down; there was marked retraction of the infraclavicular spaces and of the substernal and lateral thoracic regions; the dyspnea was grave and the heart's action very feeble. I used 2 grains of calomel every two hours until the bowels moved freely, and also used other means to loosen the exudation. I also gave strychnia and digitalis. Five hours later I was called again and used antitoxin, which could not be obtained up to this time. I then called upon Dr. J. E. Summers, Jr., to intubate. He did so, but requested me to remove the tube when the child died and return it to him. I asked him if he had intubated any after the use of the
antitoxin. He replied that he had not; that he thought it was then too late to get the results; that antitoxin should be used early, and, in this case, it was very late. Through the use of the antitoxin and the means to sustain her heart, she recovered with but slight paralysis. She is alive to-day.

Dr. Williams, of South Tenth street, called me to see a babe suffering with true croup. She had been under the care of another physician who had informed the parents that the child must die. Dr. Williams was therefore called to take the case. I told Dr. Williams to have antitoxin ready and I would come and bring Dr. F. S. Owen, who would intubate. He did so without resistance, because the child was so feeble from lack of air and resulting depression. The child had no other treatment than the antitoxin, with strychnia and digitalis. The tube was removed on the fourth day and the child was then strong enough to put up quite a fight.

In another case I was called to meet Dr. J. C. Davis in consultation. Upon learning the nature of the trouble, I asked if antitoxin had been used. I was informed that it had not been. I wrote a prescription for it, saying that there was no use of my going unless antitoxin was to be used. I found a babe of 2 years with a bad case of diphtheritic croup. All of the clinical signs were present. Intubation was advised, to be done at once. This was done by Dr. J. E. Summers, Jr. Recovery took place.

I will forego any further detail of cases of like character which I have carried through this disease without professional witnesses. The cases given have not been isolated ones. Recovery has been my uniform result during the past ten years. I might add that Dr. Clements, of Clarkson, Neb., has reported to me that he has had three cases of laryngeal diphtheria, in all of which he performed tracheotomia because of the fact that he did not have an intubating set. Two cases recovered, the third having been sick seven days before
the antitoxin was used. We all know that this was not the rule before the days of antitoxin: the rule was death.

In the same family with little Miss G., reported above, there were four other cases of diphtheria. They all showed patches on the vault of the pharynx, on the uvula, and the tonsils. Antitoxin was given to each one and in thirty-six hours all signs of the disease had passed away, except a reddish, tender condition of the throat, and weakness and pallor.

I might also report another case, illustrative of the value of antitoxin as a prophylactic. The 7-year-old daughter of Mr. R. had all the clinical symptoms of diphtheria: patches on the tonsils, uvula, and on the posterior wall of the pharynx. Three thousand units of antitoxin were used. One thousand five hundred units were given to each of her two brothers as a prophylactic. The boys simply had a little sore throat without any membrane. It became necessary to use another dose of 2,000 units by reason of the persistence of the membrane in the case of the girl. She remained anemic for some time. There was no question as to the nature of the disease, although no bacteriological examination was made.

In the treatment of diphtheria, uncomplicated with any other infection, I have followed the general line of treatment now indicated. First, I have used the antitoxin. Then I have met any symptoms that have arisen upon the expectant plan. I have cleared out the prima via, have used gargles, have sprayed out the throat and the nose, and have sustained the circulation and respiration by strychnia. During convalescence, I have used such remedies as seemed to be called for, often, iron and arsenic in small doses. During the whole history of the case I have kept close watch of the kidneys. I have fed my patients as well as their digestive organs would permit. I think that all irritating applications to the throat are unwise and detrimental, likewise all irritating medication which
goes into the stomach. The antitoxin will modify and make simple the treatment and will not interfere with the functions of the digestive tract or of any other organ.

When there is mixed infection, characterized by sloughing of the throat and great edema of the fauces, pharynx, and trachea, or broncho-pneumonia, or extensive infiltration of the lymphatic glands of the throat and neck, we have an active streptococcus infection which may kill independently of the diphtheria, and at times it seems to be more deadly in its destructive action, perhaps because of the depressed condition of the system from the diphtheria. Such cases will require more active treatment; they also call for quinia, tincture of the chloride of iron, and spiritus frumenti. I am also of the opinion that chlorine water would prove as efficacious as in streptococcus infection in the puerperal state, a measure so enthusiastically endorsed by Wilcox of New York and used by many in the treatment of the ravages of the typhoid bacillus. I have had no experience with it, nor have I even had a case of complicated infection in diphtheria for a number of years.

I have attributed my good fortune to the early use of the antitoxin and its protection of the system from the depressing influence of the disease, thus enabling nature better to control the complicating conditions. I formerly used to apply ice locally and considered it of great value. I shall use it again when I wish to control the rapid progress of such infection in the throat and the lymphatics of the neck.

I am sure that many of my early cases, before the days of antitoxin, were of the mixed infection, for they were just such cases as we now recognize to be of that character.

I am so thoroughly convinced of the efficacy of antitoxin that I use it in every case in which I have made the diagnosis of diphtheria. I use it early, for I do not know what is in store for my patient if he has diph-
theria and the disease once gets the mastery. If there is an agent which will prevent dire calamities, it is my business to use it and not to waste my time in doubt. In fact, in cases in which I have made the diagnosis of diphtheria and objection has been made to the use of antitoxin, I ask that a consultant be called; if he confirms my diagnosis, I withdraw from the case if the parents do not then permit the use of the antitoxin. I have never had this determined stand refused but once and then I was the consulting physician. Both the attending physician and I withdrew from the case and the patient subsequently died from the diphtheria.

It has not been my purpose to enter into a full discussion of the different classifications of diphtheria, or to furnish extended tables of statistics of the antitoxin treatment as compared with other treatments. I wished simply to give my individual experience in the use of antitoxin in diphtheria with the hope of bringing out a full discussion upon a treatment which has, in my opinion, not only saved many lives, but also saved many physicians many anxious hours and deprived diphtheria of many of its horrors.

I do not believe that physicians are improperly calling all their cases of sore throat diphtheria. It would not even be a good business proposition to do this; there would be no money in it, for the use of antitoxin deprives physicians of many calls, and the physician who is constantly dishonest in his diagnoses would soon become a dismal, professional failure. Nor can it be possible that scientific men, engaged in pediatrics, have been so universally fooled as to endorse serum-therapy in diphtheria when it is a mere fad. If the use of antitoxin will prevent diphtheria, as it has without doubt, and save lives from its ravages, why shall we not stay with it at least until something better is found?
It is my purpose to speak of the lying-in room as it presents itself to the physician in common practice. The lying-in room as found in our well-equipped hospitals, with all modern appliances and antiseptic conveniences and trained nurses, I will not take much time to discuss in this paper. The skill of a physician who has charge of an obstetrical ward in a hospital is less tried on account of the many advantages and conveniences at hand. He should have better results and claim less credit than the physician whose work is in private houses and in many places where there are not even the necessary conveniences so essential for the patient’s comfort.

We might, for convenience, classify the lying-in room into three classes: First, the lying-in room as conducted in a hospital; second, the lying-in room in the home of the wealthy or moderately so; and third, the lying-in room of the poor. The first class needs no particular reference. The woman who is confined in a well-conducted hospital should congratulate herself that she is so fortunate as to be able to have such good treatment. The advantages in the lying-in room for proficient work in the second class, in the residence of the wealthy, are equally as good as in the hospital. Good nurses and every convenience necessary for the best work are at the physician’s command and the results should be as good as in the hospitals. But in the third class, at the home of the more common or poor people, the skill of the physician is often severely tried. Trained and competent nurses cannot always be had, even when the parties are willing and financially able to have them. Among the very poor, where we sometimes go, the patient has scarcely enough of the necessaries of life to sustain her in health, much less in a time of sickness. A poor house, poorly heated,
a bed hardly worthy the name, a large family of children already to care for; and even in the houses of some who are able to live better we find anything but an ideal room to deliver our patient. If we had no experience in obstetrical work we would be led to believe by the teaching of our medical journals that a woman could not be safely delivered in any but an antiseptically clean room, fumigated and disinfected, walls washed and floors scrubbed, bedding fresh from the laundry, and everything surgically clean. Yet women are delivered in the most filthy houses imaginable and make good recoveries. Every physician who is in general practice is more or less an obstetrician and must answer all calls of confinement. It makes no difference whether it is among the high or low, rich or poor, and frequently he is called to places of the greatest degradation imaginable.

The idea as advocated by some practitioners, that we should refuse to attend a case of confinement unless we have the case in charge some days or weeks beforehand, is simply absurd. Frequently we are not called or consulted until the woman is far along in labor. Perhaps on account of the expense of a doctor's bill or some other reasonable excuse they did not intend calling a physician. But as labor advanced and the conditions being then worse than the friend anticipated, the physician is sent for. To refuse to go would be inhuman, if not criminal. It is our duty as men, as well as physicians, to answer all such calls regardless of surroundings or conditions. True, most cases of confinement may get through without any help, but sometimes proper assistance, timely rendered, shortens labor, and I am sure the woman, having been in labor for many hours, suffering only as a woman in labor can suffer, is very grateful when she gets relief and her child is born. The physician who refuses to attend a woman in confinement is not worthy of his calling.

The physician in general practice cannot always select his lying-in room; being called hastily and frequently finding his patient well along in labor, he has
not time to make elaborate preparations. He must adapt himself to the occasion and do the best he can under all circumstances. This is where the physician's skill is put to a test. The physician who can hastily change undesirable surroundings into favorable conditions for a speedy and safe termination of labor is surely skillful as an obstetrician.

The instructions given to medical students on the eve of graduation are not always practical as pertaining to the lying-in room. The arrangement of the room and bed, the necessary assistants, antiseptics in abundance,—in fact the whole arrangement as outlined for the young doctor is too elaborate. In some places these arrangements may be carried out, but frequently it would be impossible and unreasonable to think of having things so well arranged. The young physician, as he starts into practice, is at a loss to know what to do in many places where these arrangements cannot be carried out. I would not speak lightly of cleanliness and judicious use of antiseptics, but I want to impress upon the minds of our young doctors, and some of the older ones too, that good work has been done and can be done in places where cleanliness is not known or antiseptics have not been dreamed of.

I have, and so have many of you, attended cases of confinement in poorly kept sod-houses or dugouts, with only one room in which the family lived, ate, and slept. A bedstead made of pieces of dry-goods boxes, the patient lying on an old feather bed upon which two or more generations have been born, the covering of the patient another feather bed of equal antiquity,—the stench coming from these old feather beds, when handled, is sufficient to prove their antiquity,—yet these patients make good recoveries. This only proves what nature may accomplish even under most septic circumstances. We are apt to forget that nature's antiseptic laws are quite sufficient for all ordinary cases of confinement. When nature fails in this respect, too often it is caused by tampering with it, by the too frequent use of vaginal douches, with syringes that are
septic, preventing and infecting natural secretions with which nature has been provided for self-protection. I think, in arranging the bed and preparing the patient, we should be thorough and yet not too fussy. By being too particular in some minor things, it is apt to be confusing to the attendant and tiresome to the patient. Ordinarily, when the physician gets to the house, the bed has already been put in readiness, perhaps by the patient herself or by a friend of the patient, who expects to be with her during her labor. A good mattress upon which is put extra heavy blankets, under which is an oilcloth. Over the bedding is spread a clean sheet. The patient is covered with a sheet and a blanket, and perhaps a quilt if it is cold weather. The patient has on a clean wrapper or gown, wash basins have been provided, hot and cold water are at hand. The physician makes a few suggestions as he thinks necessary. Some prefer rubber gloves; if they are kept clean they are very convenient, but it requires a good deal of pains to keep them clean.

The physician prepares himself by thoroughly washing his hands and arms up to the elbows with plenty of hot water and soap, using the finger brush freely, and finishes with an antiseptic solution, such as bichloride or lysol, or whatever he prefers, and puts on his gown. If a trained nurse is present to assist, she prepares herself in a similar manner to the physician. If you have an amateur for an assistant, instruct her how to prepare herself. Towels and abundance of soft clean cloths will conveniently be made use of. The physician should have in his obstetric bag such things as he needs. Obstetric forceps, long dressing forceps, a fine perineum needle and aspirator and long aspirating needle, a pocket case containing scissors, artery forceps, scalpel and catheter, a clean gown, a fountain syringe, nail brush, sterile gauze, absorbent cotton, rubber gloves, bichloride tablets, saline infusion tablets, lysol, and green soap. This grip should contain such things as are commonly required in a case of confinement and a few essentials for possible emergencies.
that sometimes occur. A too great display of instruments and remedies may excite the patient and cause unnecessary alarm.

By the time you have everything arranged, labor will probably be well established. The physician makes an examination to ascertain how labor is progressing and what part of the fetus is presenting. Inquiries as to condition of patient's bowels and the condition of kidneys and asks such questions as he thinks necessary. If the bowels have not moved freely, an enema may be given and bladder emptied if necessary.

*Position of Patient.*—In the first stage of labor I would not compel the patient to keep any one position. There is no reason why she should not sit up or walk about the room if she so wishes. Even after labor is quite well advanced I would allow the patient considerable liberty on the bed. Sometimes by turning the patient upon one side or the other according to the position of the fetus, labor is favored by gravitation. Some authorities object to frequent examinations for fear that the patient might become infected. As we endeavor to keep our hands surgically clean, there is but little danger of transmitting infection. There are certainly better arguments for frequent examinations. You keep yourself posted as to position of fetus, by manipulating the os you favor its dilatation and stimulate uterine contraction and you impress the patient with the fact that you are trying to help her. Frequently the patient will ask you to help her in this way. Many times have I been successful in converting a hard, thin, dry and contracted os into a moist, soft and dilatable one by frequently manipulating the part with my fingers. In some cases when the head is well engaged and the occiput is trying to pass under the pubes, I find by turning upon the side, most frequently the left side, it favors flexion and consequently a more rapid advancement of the head. At the last trying and painful stage of the expulsion of the head, I prefer to have my patient upon her back. This position at this stage of labor seems to be the most convenient. I can
control the patient and support the perineum and aid the expulsion of the head better in this than in any other position. I have seen advocated in some of our medical journals,—and you know much of our knowledge comes through our journals,—the better position for a patient in confinement is to lay her across the bed on her back, buttocks at the edge of the bed, the physician sitting on a chair in front of patient, knees close to bed; patient's legs astride physician's lap. In this position the physician claims he has full control of his patient and is conveniently located to render all necessary help. I think it would be well for the physician who adopts this position to have on a baseball player's belly pad. If he had some patients to deal with, he would be knocked out in the first round. This may look well on paper, but it is not practical.

How can we save the perineum? My method is to assist nature in relaxing the parts with my hand well lubricated. As the head comes down, I make a pressure with the hand over the perineum in such a way as to favor flexion. If the head is slow in passing and pains are strong I give chloroform, and if the parts are well relaxed and the head is not forthcoming, I apply the forceps and deliver the head. I see no reason why, after the parts are well relaxed, instruments should not be applied and the patient relieved of much suffering. Some say deliver the head, not during, but between, the labor pains. I never was successful in that way of delivering the head. After the head is delivered, the head resting on one hand to support it, we bring down first one shoulder, the posterior, then the other, and the body readily follows. With a clean towel I remove all liquids or mucus from the child's mouth, eyes, and face. In a few moments respiration is well established. With a clean piece of strong twine or tape I tie the cord a half inch or three-fourth of an inch from the navel and tie the cord again some three or four inches distant from the first and cut quite close to the first. The child is then wrapped in a warm blanket and passed to an assistant, who cares for it.
The child, after being well rubbed, particularly about the joints, with some clean olive oil, or clean fresh lard, is washed with warm water and soap. The navel or cord stump is dressed with a clean piece of muslin or antiseptic cotton and bandaged in the usual way. After the child is delivered I give my attention to the mother, ascertain if the womb is contracting, make her as comfortable as I can and allow her to rest a few minutes. In delivering the placenta, I do not think it is any advantage or prudent to make pressure over the womb by the Crede method. If you grasp the womb lightly over the abdomen for a short time you will excite uterine contraction. But a continuous pressure is not only uncalled for but injurious. There are a few cases on record where the womb has been ruptured by continuous pressure. After a few minutes with light traction on the cord and a little pressure over the womb, the placenta may be effectually delivered. After the placenta has been delivered the bedding is changed, the patient washed, a pad of absorbent cotton or one made of a number of folds of muslin is applied over the parts and a T bandage applied to hold the pad in its place. The patient is then allowed to rest.

The After-Treatment.—I leave a laxative to be taken night and morning until bowels move freely, and I also leave something to overcome the after-pains. I require the patient to turn over in bed frequently. I prefer that she should lie on her side more than upon her back. By lying upon her side the uterus gravitates forward and rests in a natural position and prevents adhesions forming posteriorly, which no doubt is a cause of so much trouble after childbirth. In ordinary labors the physician does not need much assistance. Ordinarily, some of the patient’s friends are present during her confinement. Their services can be utilized to a good advantage. About all assistance that is necessary is to keep plenty of clean, warm water in the basins, provide towels and cloths as they are required, to steady a leg when necessary, and to give the
chloroform after the patient has been put under its influence by the physician. The physician should be composed and yet thoughtful in all his proceedings, to prevent any undue excitement and cultivate pleasantness.

DISCUSSION.

Dr. A. S. v. Mansfelde, Ashland: This is the second time in twenty years that I have been asked to this city to be present at the reading of a paper on this subject. The first time the physician talked of giving injections to the vagina and uterus for thirty days before labor. To-day it has been my privilege to listen to a gentleman who says there is no need of those things. In the first instance I calculated the expense of such highly scientific method of practice and I concluded that the average farmer of Nebraska could enjoy the luxury of progeny but once in a lifetime. In the second case, that of to-day, I have a high regard for the doctor and am a good friend of his and so I dare to speak as I do. The doctor has occupied a long time telling us about the technique from beginning to end. He should have avoided it, because our time is too valuable for that which we have all seen again and again.

There is a certain something in the question of asepticism and its practical application. Perhaps there is no person on this floor who has more practice in asepticism than I have had, yet I plead guilty to the fact that in the aseptic room I have not been the best obstetrician I might have been. In thirty-five years I have had only one case of septic condition, and I own that it was on account of carelessness on my part.

In closing, I want to say one thing to the young physician, and perhaps to the older ones. I think it is remarkable that you do obstetric work of a dangerous and very trying nature on the miserable beds which the doctor in his paper has so aptly described, when you do far less dangerous and less difficult work on the operating table.

Dr. I. C. Philbrick, Lincoln: In the very complete armamentarium which the doctor has given us he has omitted one important thing, and that is the Kelley pad. All physicians should be compelled to carry a sterile Kelley pad. Then it does not matter how dirty the bed and its surroundings, you will still have a clean surface next the patient with the pad, changing and moving the patient after the delivery is rendered unnecessary, which adds greatly to her comfort.

Dr. Butler: We do not all live where everything is equally as good as in some other places. We should be prepared with the best armamentarium we can get, for the practice of obstetrics is one series of surprises. We should be ready for emergencies. Do what is best for the case and what will bring our patient through with the best possible results. No line of special treatment or routine procedure can be followed in all cases. The question which we are called on
to decide at the trying moment is, what is the best thing to do for this particular individual case. My experience has been, during twenty-four years' general practice, that many cases require a special line of treatment, and care, in and of themselves. I compliment the doctor on giving us a paper that covers the ground quite well.

DR. A. J. CLARK (closing the discussion): I regret I took up so much time. I want to say just a few words now. Sometimes it is impossible to make the place clean no matter what you do. To do the operation on the table is all right, but if there is no table, will you put the patient on the floor? Sometimes there is not even a clean cloth in the house. You might think this typical of Boone county, but I warrant I can go to places in Omaha where I will find conditions just as unpromising. I put clean pine boards under the patient. The reason I do not carry a Kelley pad is because of the infection which the pad itself is likely to carry. Suppose we deliver a woman in the morning and in the afternoon we are called to another case. If we used that pad in the morning, how do we know it is sterile and can be used in the afternoon? Doederline has made cultures after confinement from the secretions of the vagina and the uterus; one number taken where douches had been used and one where they had not been used. Almost invariably no pus germs were found in the cultures where the douche had not been used, and most frequently such germs were found where the douche had been used.
Any whitish discharge appearing at the vaginal orifice or vulva is known to the laity as "leucorrhea" or "the whites." Normally the mucous membrane of the vulva and vagina are moist, but no apparent secretion is visible, nor is there sufficient to soil the linen, and when such is found it is abnormal.

Leucorrhea is never a disease, but always a symptom, and yet it is often so prominent that many patients attribute all of their troubles to this discharge; and so annoying is it, by its profuseness or otherwise, that patients complain of nothing else and come to the physician for relief from this discharge alone. Many women get the impression that this discharge is the wasting away of very important material and vitally concerns their health. Instead of recognizing this as a symptom of some other more or less serious pathological condition and attributing their failing health to that trouble, they ascribe all of their aches and pains to this discharge and apply for help.

**Etiology.**—The causes of leucorrhea are numerous and may be those which cause a vulvitis, a vaginitis, an endocervicitis, a metritis, an endometritis, or erosions of the cervix. Even the watery discharge due to malignant disease is called "the whites." So that there is a long list of diseases, local and constitutional, of which this may be a symptom. In young women there may be a catarrhal condition of vagina or uterus dependent upon anemia, taking cold at time of menstruation, or other causes leading to general depression of the system: overwork, mental worry, being on the feet too much, especially at menstrual periods, too long hours, too little sleep, lack of sufficient food, and constipation.

**Symptoms.**—As has just been said, this is a symptom
of itself and not a disease; therefore, patients who come to the physician for treatment of female trouble very often have this symptom, but many times come with the simple statement that they have “the whites,” or leucorrhea, and that otherwise they are perfectly well, but want this cured, either because it weakens and annoys them, or they are afraid so much loss will undermine their health and lead to consumption or other equally dire results. The discharge will sometimes produce irritation or soreness of the vulva, or pruritus, which can only be cured by arresting the secretion.

Prognosis.—Because the symptom is one dependent upon such a variety of causes, therefore the prognosis is uncertain and can only be intelligently given when that is really ascertained. In fact it will depend upon the possibility of removing the cause, that is, the temporary or permanent character of the cause. Ordinarily, however, proper treatment will relieve, if not wholly cure.

Treatment.—The treatment again will depend upon the particular cause of the symptom, and it is well to determine as nearly as possible in each case just what that is. In young unmarried women who come to the physician for the cure of this symptom, it is seldom necessary, much less wise, to make any vaginal examination; but a careful inquiry into the history of the case and the general health of the patient will sufficiently locate the cause so that the regulation of the bowels, the correcting of unhealthy habits and exercises, the judicious use of tonics, iron, quinine, and strychnine, with possibly elixir of cramp bark compound for a week at the time of menstruation, combined with rest at this time, will give relief. Or to this may be added one astringent douche at bedtime, say 5 grains of sulphate of zinc or acetate of lead in a pint of hot water. Alum or sulphate of copper or tannic acid may be used instead. In other cases from 2 to 4 drams of fluid hydrastis may be used in the same
way. More important, however, than the particular drug used is the manner of using the medicated douche. In all of these cases the water should be hot, from 105 to 115° F. It should be used at bedtime and the patient should lie upon her back with hips elevated while taking it. The simple hot water douche thus used, or a 1 per cent. creolin douche, will often be efficacious.

In other cases the use of vaginal suppositories of various astringent combinations introduced up to the cervix at bedtime and allowed to remain over night, when they may be followed in the morning by a hot water douche, will prove satisfactory. The suppositories already prepared by Wyeth are very useful, but the physician may order any combination that suits his fancy and they can be put up by the local druggist. The most useful ones I have found are those containing from 2 to 5 grains of tannin.

Some of the most severe cases of leucorrhea are dependent upon a badly torn cervix which is ulcerated and inflamed, with the cervical canal badly involved, the inflammation extending into the depth of the follicles of this canal. Even when the cervix is not torn, if these follicles become chronically inflamed by an oft-repeated infection, a very obstinate form of endocervicitis, and hence of leucorrhea, is apt to develop. These can be cured only by local attention to the cervix. A laceration should be repaired, but pending the time necessary to get the patient's consent for an operation, the free application of Monsel's solution, tannin or nitrate of silver solution, 30 grains to the ounce, directly to the inflamed surface and then a dry tampon applied for twelve hours, after which it should be removed and a hot douche used every other day, will do much toward giving temporary relief. Before any local application is of value, the local secretion must first be removed by a swab of cotton or otherwise. The secretion from the cervical glands is so tenacious that it is difficult to remove when very heavy; and the most efficient means of
doing it is by the use of the hard rubber uterine syringe, after which the application may be made. The cervical canal may be sufficiently dilated with the Hanks dilators, to give access for a free application of the desired remedies. In all cases the general health and regulation of all the secretions is important.

In some of these bad cases of long standing nothing short of an operation, by which the mucous membrane of the canal, with all of its deep glands, is removed, will prove effective.

An exhaustive treatment of this subject would require an elaborate discussion of all the diseases of which this is but a symptom, would go far beyond my purpose, and would require more time than is at my disposal. It is intended in this paper only to point out the importance of recognizing leucorrhea as a symptom and treating it as such; and also the fact that in young girls, young women, and the debilitated or anemic it may be cured by attention to the patient's general health.
PREMATURE LABOR AND SEPTIC INFECTION.

J. A. ANDREWS, M. D., EUSTIS.

In the discussion of the subject chosen for this paper I do not purpose making a compilation, but to give some ideas of my own. We can all read text-books and journals, so I will refrain from copying to any extent. The one who can give relief at the bedside, whether he be able to quote from authority glibly or not, is the one most desired in time of trouble. There is no time when there is more anxiety in the home than when the wife is slowly sinking into collapse from loss of blood in a premature labor. The entreaties for help when one goes to the bedside always arouse him to his utmost endeavors to relieve. It brings a feeling that at no time is there more responsibility upon him.

A tower was erected at Alexandria four hundred and fifty feet high, and its light burned for sixteen hundred years and shone out over a radius of forty miles to guide ships laden with human souls safely past rocks and through breakers to a haven of safety. The medical profession has erected a tower so much higher that it reaches to the skies and its light not only penetrates a radius of forty miles, but extends over the entire longitude of the equator and from pole to pole and fills the soul of the suffering with a light of confidence so great that it inspires one to renewed energies.

The home is a sacred place and its sunshine is clouded when the life of the mother is in jeopardy. When the mother is gone the sunshine of the home has entirely faded. What can move a man to a feeling of deeper gratitude to the physician who has almost lifted the veil of death, and a wish to express something of what he feels in the following words:

"I will see that friend and make him feel
The weight of friendship, true as steel;
Some flower of sympathy bestow.
But time sweeps on with steady flow,
Until, with quick reproachful tear,
We lay our flowers upon his bier."
“Strew flowers, if you please, upon my grave,
And laud, if you wish, after I depart;
But to benefit me, bouquets now I'd have,
Of loving sympathy, to cheer my heart.
Speak the word now, while above the sod,
It may help a weary one nearer God.”

But while this may be the feeling immediately after
the services are rendered, it is liable to wane. Even
though this be the case, the physician feels he has saved
the wife and mother to the home. And though this
does not get bread and butter, yet when this same one
calls at twelve or one o'clock at night, the snow or rain
falling fast, the doctor tired and worn out, he can see
ten, twelve or fifteen miles through the dark and cold,
snow drifting or rain beating in his face and wetting
him to the skin for the purpose, I presume, of moisten­ing
the parched cuticle of his anatomy caused by the
burning of brimstone when he first arose. Positively
no pay, yet up and out, but biting the end of a cigar
vigorously to enable him to speak civilly to his driver.
After all there is a pleasure in the work and I like it,
and some of the warmest friendships of a lifetime are
thus cemented.

In my discussion of this subject I do not intend to
tell you the number of days or months till the expul­sion of a fetus is no longer an abortion or a miscar­riage, but a premature labor. Neither shall I attempt
to split the hair between immature and premature labor. If a pregnancy be thrown off before the end of
nine months, it is a premature expulsion, and I shall
call it premature labor. If I were lecturing to a class
of students instead of reading a paper to men and
women who hold diplomas and are, as I am, in active
practice, I would classify and give the different terms
and time of gestation at which it would be acceptable
to apply them, not necessary though any more than to
say I am wet, wetter, wettest. If more time were spent
in devising means by which to better our care of pa­tients we would do more good in the work of our pro­fession.

On meeting Dr. Brower of Rush Medical College a
few months after my graduation, he asked, "How are you doing?" The reply was, "Very well, I presume, for I've not yet signed a death certificate." The doctor said mildly, "Not much practice, young man, because much practice means death certificates." I find he was correct. Even though we bend every energy, there will be a loss now and then. Dr. J. Adams Allen was once asked while lecturing to his class, "What kind of students do you think make the most successful practitioners?" The old man's reply was, "Not the bookworm, but the man of good common horse sense, and one who is guilty of using his thinker instead of being a memorator." It does not take much of a philosopher to determine the truthfulness of the doctor's statement. I have always believed him right, and therefore do whatever seems best under the surrounding circumstances.

The practice in the country is far different from the city. In the city all conveniences are within easy reach. If your patient is not able to procure what you want there is a hospital near at hand where she may be taken and cared for. The three years that I spent in practice in the city taught me the difference between city and country practice. The per cent. of loss in the city is at least three times that in the country in accordance with my experience. The source of infection and atmosphere of a crowded city have much to do with the increased per cent. I never believed much in infection from air, for it seems the cases of atmospheric infection are in the fertile brain of a theorist far oftener than in the uterus of a patient. But after infection takes place there is no doubt of the influence of good air and clean surroundings. While the city has its advantages so has the country. In the city we find better houses, better facilities with which to work, but less vigorous women with whom to deal. Usually the manner of life in the country tends to make a woman stronger and gives greater vitality to resist the ravages of infection. The outdoor life of a country woman,
for it has been my experience that women who work outdoors are those more subject to premature expulsion of the product of gestation, makes her stronger. While the frequency seems to be greater, the manner of life seems to have prepared them the better to resist the shock. The history of this class of patients has been with me far more satisfactory as to results than those who have lived a closer indoor life. The causes in the city are more frequently specific or criminal than in the country. The percentage of premature expulsions in the country, barring specific and criminal causes, seems to be greater than in the city. I will not attempt to discuss causes or the prevention in these cases for the reason that the country practitioner is seldom called until the expulsion is evident, hence we are not called upon to attempt to prevent or combat causes, nor would time and space permit a thorough discussion of the causes. Our work is simply to take care of the case after the expulsion has begun, and to do the after treatment.

After the uterus has been emptied and cleansed we are very frequently discharged until further notice. The all-important subject to be considered in this discussion is treatment. Under no consideration can it be a routine work for every case. In no place does the truthfulness of Dr. Allen's statement above quoted apply more closely than here. It takes one who is resourceful to cope with the contingencies that so frequently arise in a country practice. In many cases we not only meet with the disadvantages of a sod house, mother earth for a floor, choke cherry and buck bushes for sheeting, sod shingles, and no ceiling, but we have to battle with all classes of vermin. We find a patient who has been in bed for a week or ten days without change of clothing, bed linen or bath, and flowing at intervals at least during the time. It is my habit universally when going to the bedside to elicit as complete a history as is possible to be had. Then under the strictest of antiseptic precautions I insist upon a thor-
ough examination of the uterus. After examination, if I find the history corroborating the facts obtained by examination, and am positive expulsion will take place, I invariably insist upon immediate evacuation of the uterus. I do not, however, always do this from the fact that the family insist upon having matters postponed and waiting for nature to take its course. Under such circumstances I always advise the family it is at their own risk if a postponement is allowed. (I inform them that my judgment is that the uterus should be emptied, and should serious results follow the blame will rest wholly with them.) Under such circumstances, I use an antiseptic vaginal douche of about 1 in 5000 bichloride as hot as can possibly be borne, after which I used sterilized water, also hot, then I tampon firmly with aseptic gauze. I leave my patient with the statement that I will see her the next day, and if pain or hemorrhage should become severe before my return, inform me at once. In most cases I write my instructions before leaving the house, then I cannot be blamed if instructions are not followed. Frequently I receive word the next morning not to return until further notice is given. Nothing more is heard from the patient for from five to ten days. At this time I am summoned, and upon arrival at the bedside find the patient with high fever, hemorrhage, pain, and exceedingly foul odor. Preparations without any further investigation are at once made for evacuation of the uterus. After instruments are boiled and the patient cleansed both by external bath and a vaginal douche with 1 in 5000 bichloride solution I immediately proceed with my evacuation. Upon investigation I find the os patulous and open, so much so that no dilator is needed in order that I may insert my curette. I am in the habit of using St. Cyr's evacuator. I never use the sharp or dull curette any more for anything except the exploration of the uterus to ascertain if all has been removed. Formerly I was in the habit of using an anesthetic almost universally, but of late years I
rarely use it from the fact that I can get better uterine contractions upon my evacuator which enables me to more thoroughly do my work. I have never found but one case in which I was unable to thoroughly empty the uterus without an anesthetic. In this case for twenty-three days after I had emptied the uterus with a sharp curette I had complete uterine inertia, of which case, later on, I will give data.

In cases where there is no infection I never give but one intra-uterine douche after evacuation, and that with hot sterilized water. Lest there are complications in the way of heart trouble or specific infection, my treatment is simply tonics, daily changing of clothing, bed linen, and vaginal douche of hot sterilized water. If there is specific infection, I follow the treatment already described with the addition of a vaginal douche morning and evening of a grain each to the ounce of sulphate of zinc and acetate of lead, and unless the case is very severe I find this to be sufficient. If it should be severe I give a daily intra-uterine douche of iodine water about the color of good dark sherry. Patient will complain of a leathery feeling of the parts, but I find the required results are obtained within a few days. If there is septic infection my internal treatment is strychnia sulphate for the circulation in such doses as may be required. Also citrate of iron and quinine five grains three times a day, and plenty of whiskey, upon which I place more stress than any other internal remedy. It is said that quinine is of considerable value, but the only reason I have of late for using it with the iron is for a tonic effect and the fact that so many recommended it. Outside of its being a tonic I never have seen any beneficial effects from its use. If I have constipation I suspend the use of iron until I get the effects of a large dose of calomel, after which I continue its use. For my local treatment, my custom is that as soon as I find that all the debris is removed from the uterus, the use of a daily uterine douche of as hot sterilized water as can pos-
sibly be borne. When I first empty the uterus, if the infection seems to be of a grave nature, I use the bichloride 1 to 5000, after which I invariably use the plain sterilized douche, always hot. I always use a mop of gauze after the bichloride douche in order that if there be any loose particles of placental debris remaining I may remove them with the gauze. My results with the foregoing treatment have always been as satisfactory as could be desired. I now give history of a few cases handled as above stated:

Case I.—May, 1894. Was called to see Mrs. U. in consultation with Dr. E. R. Walizer, May 25th. Patient had been delivered of an eight months gestation fourteen days before I saw her. Found patient in semi-comatose condition, covered with a red rash over entire body and extremities. Temperature 104½°, pulse 136, weak and thready. On examination I found uterus about the size of a five months' gravid uterus, discharging a foul-smelling dark-colored fluid. I at once advised a thorough emptying of the uterus. On operating I found a piece of afterbirth about the size of the palm of the hand, the rest of the contents being decomposing clots. After thoroughly cleansing the uterus, it was so widely open I thought it wise to thoroughly cleanse with peroxide of hydrogen, the only time I have ever used it in such cases. After then thoroughly mopping the uterus with a plug of gauze, I used the treatment as before described. I gave a hot sterile douche twice daily for four days; then one douche a day for the next four days, at which time the case was left in the hands of Dr. Walhizer. At the time I saw the patient last, pulse and temperature had gradually subsided to normal. Perfect recovery followed.

Case II.—In this case I will not give dates for the reason that recurrences were so numerous that I did not keep dates. I was called to see Mrs. T. in October of '94 in a full term confinement. I have since that time waited upon her in two full term confinements
and thirteen premature deliveries, usually at the end
of about two months. Two or three, however, were as
late as the middle of fourth month. In each of the
thirteen cases I was compelled to curette. I did not
have infection at any time. Dr. Wilson of Curtis saw
the case a number of times with me, and can vouch for
the correctness of my statements, which may sound
like a fairy tale. The woman, the last time I saw her,
was in comparatively good health and, as far as known,
not pregnant. I lately learned she is riding a wheel.

Case III.—Mrs. W., aged forty-two. Had borne two
children. Was called to see her in December of '96.
History given was slight hemorrhage, no pain, no dis­
comfort of any kind, except a fullness in the vagina.
On examination, I found a three and a half months' fetu
and afterbirth in the vagina. Membranes did
not rupture, and whole mass was removed intact. In
this case I did not use anything but a vaginal douche.
Patient made rapid and complete recovery without my
having seen her again.

Case IV.—In November of '96 I was called to see
Mrs. B., aged thirty-four. Had borne four children.
Found her at the close of the second week of typhoid
fever. She was in a sod house, no floor except the
ground. The roof of sod and brush, and a case of
scarlatina in the same room. I was asked to see the
child with scarlatina before I had seen the mother.
After having seen the child, and handling it, I was
informed that the mother was flowing freely and hav­
ning severe pains. I suspected the cause of hemorrhage
and pain and immediately sent for my friend, Dr.
Willis Wilson of Curtis. Did not touch the patient,
but put instruments to boiling, and had plenty of
sterilized water when Dr. Wilson arrived. He removed
about a three months' pregnancy which was already
detached and lying within the cervix. The usual treat­
ment was followed and recovery was uneventful.

Case V.—In October of '95, I saw Mrs. F. About
thirty years of age. A German of the class that they
call "low Dutch." She had been having hemorrhages for ten days before the fetus came away on Friday. I saw her on the following Tuesday. She had not had a change of bed linen or clothing, nor even a bath. The odor was so great that every room in the house was permeated. It was late at night when I arrived and not knowing what was the matter I had no instruments with me. I asked them to have plenty of boiled water and to give the woman a bath, and change the linen and I would return as soon as it was light in the morning. On my return I removed a badly decomposed afterbirth, as nearly as I could tell, of about four months. Her temperature was 105°, pulse 130. Temperature and pulse gradually subsided under the use of the usual treatment, until at the end of six days the patient was discharged and made good recovery. In about eleven months I delivered her of a healthy ten-pound girl.

Case VI.—In the fall of '96 I was called to see Mrs. C. On arriving at the bedside I elicited the history of a fetus having passed a week previous. She thought she was progressing all right until the day I saw her when she began to have severe pains. I removed a three months' afterbirth. Everything went well until patient was on her feet. About the middle of the seventh night I was summoned to her bedside. Upon arriving I found her complaining of severe pains in the chest and evidences of a pulmonary abscess. Four days later she died, evidently from metastatic abscesses of the lungs. My usual treatment had been followed until the pulmonary trouble began.

Case VII.—August, 1901, I was called to see Mrs. M. About thirty years of age. Had borne three children. I found her with severe pain and profuse hemorrhage and under the care of a midwife. I found positive evidence of expulsion, but was refused the privilege of curettage. I was told they would send for me when further needed. At the end of a week I was again called to her bedside. Upon arriving I found a temperature of 101°, pulse 130, and a very offensive odor.
I attempted to evacuate with a St. Cyr, but having a large flabby uterus and complete inertia, I was compelled to resort to the sharp curette. For some days I had daily to remove clots which had formed after my last douche. I then called my friend, Dr. J. H. Fochtman of Cozad, who agreed with my treatment as before stated. It was twenty-three days before any uterine contractions could be had even with the hottest of douches, after which perfect recovery ensued.

**DISCUSSION.**

Dr. A. S. von Mansfelde, Ashland: It is a pleasure to me to listen to such a scholarly paper and I only rise to add scientific correction. Is it not about time that we cease to give douches, douches, douches? And for no purpose whatever. Where is the surgeon, who is called to a case of injury, who does not dress the wound as well as he can and then let it alone? Does he go every day and lift the bandages and put in douches? When you have an abortion—a surgical lesion, clean it and then leave it alone. See that you have succeeded in the first place in cleaning it and then let your patient alone. Is that not scientific and correct? Do not use a bichloride solution. It is not good, in that place especially. It may poison your patient if you use enough.

Dr. A. B. Anderson: There are several points which will bear criticism. The doctor speaks of one case where he tamponized the vagina and then left the case, going home. The next morning the people sent him word they would not need him again. Now my practice is just like the doctor's only just the opposite. I would like to see the patient who could get rid of me until I get through with the case. I won't be dismissed for any reason except that of the people choosing another physician.

Dr. Butler: Just one point. The St. Cyr's curette has proven in my hands unavailing. I have two of them that cost $7.00 (any one can have them for much less), and have laid them by long ago. It may be that if we could select our cases and know just what case was adapted to this peculiarly scientific treatment, they could be used with success; but I have failed to find those cases to which these curettes were adapted. I have tried to use them on several occasions and failed signally. My lack of success with this instrument leads me to the conclusion that the instrument was a dangerous one, hence I have abandoned its use. I am much pleased with the doctor's paper in general as it is full of practical thought, and shows what a man of skill, tact, and perseverance can accomplish, though a combination of discouraging circumstances and elements be against him.

Dr. Berry: There are a few things I wish to say. One is this: Frequently we find cases about which we are in doubt.
Sometimes there is a slight hemorrhage and the patient gives a history of about one month's pregnancy. They are about the most difficult cases with which we have to deal. I have found cases where I was in doubt. There was a little pain present and I could not make any diagnosis. I could not introduce my finger into the cervix. In such cases, where there was no septic infection, I have waited. I give these patients hypodermic injections of morphine, and atropine. I have found almost invariably that, unless very adherent, the uterus will dilate and expel the product. The patient must be under strict observation for 24 hours, and the next day, if I call and find symptoms of septic infection, I immediately dilate, pass my finger to the fundus of the uterus and explore it. If I am unable to remove the product I use a dull curette. Having thoroughly cleaned the uterus, I frequently pass a strip of iodoform gauze to the fundus of the uterus. We know the uterus will make an attempt to expel the gauze. The next day, or in 12 or 24 hours afterwards, I remove that gauze by pulling on the end. The uterus is then left with the cervix well dilated and ready to expel any more of the secretions which are lying in it, and I have almost invariably had no more occasion to explore that uterus, not even with the douche.

Dr. B. B. Davis, Omaha: Just one word on what has just been mentioned by Dr. Berry, in regard to the packing with gauze. A strip of gauze is frequently an aid to drainage, but there are two ways of putting in that strip. If you take a probe and push the gauze in little by little and pack it up tightly, then you have a tampon that will absolutely prevent the drainage which you wish to promote. Fix the gauze on the probe and carry it up with a single motion and then withdraw the probe. Then you will have drainage. The first method is a dangerous one to use where you have infection.

Dr. Andrews (closing the discussion): Many thanks to the gentlemen who have done me the courtesy of criticising my paper. In regard to what Dr. Mansfelde has said about the douche, I will say that I do not believe the doctor believes what he says. I feel that way because if he was called to my bedside when I had a surgical lesion, he would never stop giving water as long as there was a drop of pus. When there is a tendency to clot or pus formation I am going to wash that uterus. I do not care who objects; just as long as I get good results from its use, I will continue it. I have treated over 200 cases and I have had but one loss.

While in Chicago, in my own work and with Drs. Faber and Sherwood, I saw about 300 premature expulsions and the treatment I have described was universally followed in those cases. That is the reason I say that the proportion of those cases in the city is greater than in the country, simply from the experience I have had in Chicago.

I use bichloride 1:5000 in the uterus because I do not want infection. We avoid every opportunity for ptomaines to be absorbed, and by using the gauze afterwards, I have more thoroughly cleansed the uterus of my patient than in any
other way. I use the hot sterile water, as hot as can be borne.

I remember a premature expulsion which happened in the middle of the night and in a covered wagon. I had to boil the water in a tin bucket outside. The woman is now up and perfectly well. I used bichloride in that case in stronger solution than I had ever used it before, because I did not know whether I had things aseptic or not. We frequently have to cope with such things out west.

When you clean the uterus, leave no gauze. Infection may be carried into the uterus from the vagina.

In regard to Dr. Anderson's suggestion to stay with a patient until the case is cured, would not be good policy in my position and I am not that anxious for a fight. A great many of our people where I am are foreigners and you have to do as they say in regard to coming or going.
A CASE OF EXTRAUTERINE PREGNANCY.

O. L. WILSON, M. D., RUSHVILLE.

Mrs. W., aged 29, height 5 feet 1 inch, weight 110 pounds, fairly nourished, mother of a boy 7½ years old, product of her only pregnancy up to the present. Menstruated last, May 15, 1899. August 8 following had sharp colicky pains, especially severe in right groin and back and accompanied by profuse hemorrhage and fainting. From this day on she did not see a well day. Early in October she again had slight hemorrhage and pain, but pain not so severe nor hemorrhage so profuse as in August. In November and January she again had sharp pains accompanied by moderate flow.

February 19, 1900, 276 days after last normal menstruation, I was first called to see her, her usual medical attendant being at the time sick. On vaginal examination the cervix was located just within reach of examining finger, high up and to extreme left of vaginal cavity. With persistent effort I was unable to introduce finger into external os, as entire pelvic contents seemed to have been drawn up into abdominal cavity. At this time there was slight bloody discharge but entire absence of the profuse vaginal secretion which immediately precedes labor. On inspection of abdomen the peculiar shape of tumor first attracted attention; the unusual distention suggested multiple pregnancy, but the thin abdominal wall and enveloping sac made it easy to definitely determine that we had a single pregnancy and its exact position, the long axis of the fetal tumor transversely across mother's abdomen, the head in left and breech in right lumbar region, with fetal heart sounds above and to left of umbilicus. By bimanual examination during the spurious labor pains I was unable to detect the slightest uterine contractions or descent of fetal tumor into pelvic cavity; the shape of tumor not altered, and the only evidence of nature's expulsive effort was feeble contractions of overdis-
tended abdominal muscles. In the absence of an emergency and the manifest spurious character of the pains, she was given an opiate and soon was resting. A provisional diagnosis of extrauterine pregnancy was made, her husband apprised of the danger attending her condition and I devoutly hoped her usual medical attendant would speedily recover.

I heard nothing more from the woman, only that she had not been confined, until one o'clock on the morning of the 27th of March, thirty-four days after my first visit and 310 days after her last normal menstruation, I was again called.

Vaginal examination showing same condition as at first visit with bloody discharge and shreds of membrane. An examination with speculum and reflected light revealed cervix in same position, high up and to extreme left of pelvis; it was hooked up with tenaculum, and after a number of bendings sound was introduced to the depth of five and one-half inches; this completed the diagnosis and council was called for. Dr. Davis, of Rushville, since deceased, and Dr. Elmore, of Gordon, responded promptly. They were each asked to make a thorough examination, told what my diagnosis was and asked to find, if possible, any error of judgment. They both confirmed the diagnosis and readily agreed there was very little hope of saving the mother and no hope of saving the child aside from abdominal section. The thirty-four days intervening between visits had produced a marked change in appearance of abdomen; the overdistended abdominal wall had become lax and transverse fetal tumor pendulous from partial absorption of liquor amnii; an ecchymosed spot from venous stasis, as large as palm of hand, surrounded the umbilicus. Nor was the change less marked in the patient herself; her anxious expression, rapid pulse and restlessness from loss of rest from intermittent spurious pains, which had now become violent, were exhausting her.

Under as strict antiseptic precautions as it was
possible to secure, and chloroform narcosis, delivery
was effected as soon as daylight came by a median
abdominal incision. When the sac was reached it was
found to be covered with peritoneum; there were no
adhesions at site of incision, and owing to the apparent
necessity of expedition no thorough search was made.
Gestation sac was opened immediately through pla­
cental site, a 10½-pound boy extracted, cord tied in two
places, cut between, and child given to nurse; sac
stitched to abdominal incision, remaining dark-colored
liquor amnii was sponged out and sac thoroughly
packed with iodoform gauze.

No attempt was made to deliver placenta on account
of profuse hemorrhage. A snug abdominal binder was
applied which controlled the bleeding and our patient
was returned to bed pulseless. She reacted very slowly
from the shock, after several hypodermic strychnia in­
jections and heat applied by hot-water bottles. Late
in the afternoon one-fourth of the gauze was removed
as it seemed to distress her.

The following morning the bowels were found dis­
tended with gas and a loop nearly as large as a man's
fist protruding from the upper angle of the wound un­
der the dressings. It was thoroughly washed with
sterilized water and returned, three through-and-
through silk sutures placed in upper angles of wound.
At this time her temperature was 102.4°, due, I
thought, to intestinal toxemia. She was given Ro­
chelle salts and rectal enema, thoroughly evacuating
the bowels and reducing the temperature to near nor­
mal. We had no rise in temperature after this above
100° until the third week.

On the morning of the 29th the gauze was removed
and the sac thoroughly irrigated with sterilized water
and repacked lightly with gauze. This process was
repeated twice each day until entire necrotic placental
tissue was washed away. Afterwards wound was
dusted with boric acid and iodoform until healing by
granulation was practically complete. She was dis-
charged May 28, two months after delivery, with small pinhole opening at extreme lower angle of wound through which menstrual blood appeared at menstrual periods for eighteen months afterwards. In the third week a phlegmasia of the left leg appeared, caused slight elevation of temperature, retarded recovery and resulted in permanent enlargement.

She menstruated in April following her delivery and continued to do so ever since with some pain in right pelvis and back. Her general health is good; she does her own housework for a family of four, laundry work included.

I have regarded this case as one of utero-tubal or possibly interstitial pregnancy. Pregnancy taking place near the uterine end of right tube, rupturing between folds of broad ligament, August 8, or the exact date of what would have been the time for menstrual period, and there developing to maturity, pushing the uterus to left of pelvic cavity and lifting it almost beyond reach of examining finger. Flowing again in October, November, January and February, I can but regard as menstrual attempts, nor was this function suspended after delivery. She has menstruated regularly ever since. The direct communication of uterus with fetal sac was demonstrated, after placental debris was washed away, by a small portion of irrigating liquid finding its way through the uterus into the vagina.

I report this case from the standpoint of a general practitioner, practicing in the country. In several particulars the management of the case could have been improved, but its results, a living mother and healthy boy now over two years old, are very satisfactory.
ATYPICAL CASES OF ECTOPIC GESTATION.
CHARLES C. ALLISON, M. D., OMAHA.

Ectopic pregnancy may be recognized promptly in most cases—in a reasonable number before and in a large proportion immediately after rupture of the sac. In some cases, however, the symptoms are less obtrusive; in fact they may be so vague and apparently contradictory as to throw much doubt upon a diagnosis. It is to emphasize some phases of this minority class of cases with irregular symptoms that I offer this paper based upon personal experience.

In the early months of tubal gestation the sac is almost always in Douglas' pouch, with a boggy swelling extending toward the fornix of the involved side. These findings will not be absolute, however, as the distended tube may be migratory and found upon the side opposite its normal moorings (Taylor, p. 32), as must be the experience of most operators with ovarian tumors and the less acute types of salpingitis. A more rare and misleading migration of the sac is anterior to the uterus, a condition made possible by retrodeviation of that organ. With the bladder empty, the swelling may be very well mapped out bimanually. Add in such a case the hypothesis that the mole is encysted, or that a lithopedion at two months is present, the case is additionally obscured.

In illustration we mention a case operated upon February, 1901, at St. Joseph's Hospital. The patient was 34 years old, had borne four children, the youngest three years. The history of her illness, which only partially disabled, included nearly a year; the early evidence was vaguely stated and indefinite, pelvic pain and irregular menstrual periods covering her unsatisfactory history. An examination of the pelvis revealed a retroflexed, fixed uterus, with a mass in front estimated to be the size of a small orange. A diagnosis was not made. It was found upon section that the
pelvic peritoneum was stained a brownish color and there was a small amount of liquid blood in the cavity. The omentum was firmly adherent to the mass, which proved to be an impregnated tube at less than two months, and so degenerated as to be only positively identified by the microscope. This patient reported four months afterward that she still had some pain, due probably to adhesions.

In addition to the anatomico-pathologic departures above mentioned we may also recite that the symptoms, instead of being classical and practically positively evidenced by severe pain, pronounced shock, hemorrhage, and tumor, may be so much subdued and the history so indecisive as to make a diagnosis a mere probability in some cases. In such a case we again declined a positive diagnosis in Mrs. S., aged 32, operated upon November, 1900, at St. Joseph's Hospital. Her history showed that her two children were 4 and 1 years of age; that since her last confinement she had complained constantly of pelvic pain; that she had not menstruated since her last child was born, and that it was still nursing. For five or six weeks she had been worse, and yet no acute onset nor definite symptoms were remembered. An examination showed a small fluctuating mass not larger than an egg in the cul-de-sac. There was but little tenderness and no fever. Subacute salpingitis-hydrosalpinx was diagnosed, but a vaginal section showed a fecundated tube with a small blood-clot. Upon subsequent interrogation she remembered that some five weeks before she had a severe pain, which made it necessary for her to rest for an hour; this of course cleared up the history and would have led to a probable diagnosis had it been given.

We would not underestimate the gross and classically recognized symptoms of shock, pain, tumor, and hemorrhage, nor of irregular flow and enlarged uterus, but they are not always so manifest. This catastrophe which is seen in two cases may be absent in a third.
In obstetric practice, as well as in every other branch of medicine, physicians generally hold different opinions as to the best mode of conducting their cases. This is due no doubt to the teaching received in different universities and also to the fact that as each one acquires experience, he treats his cases according to his best judgment.

There is no class of cases with which the physician has to deal that calls for more sincere and conservative work than does those met with in obstetric practice, as in many instances the lives of both mother and child are partly, if not wholly, dependent on the judgment used by the physician in charge; therefore it becomes his duty to terminate labor in such a way as to prevent injury to either, or in cases where this is found impossible, to reduce the injuries to a minimum. To do this, he must know when and how to act, as well as when to abstain, the latter being very essential, as many of the injuries caused are due to too early interference.

There is probably no other question harder to decide in obstetric practice than to know when the physiological limits have been reached and that further waiting is more dangerous than interference. Conditions may arise in the apparently simple case that call for active and quick interference, therefore the physician should always go prepared to meet and combat any emergency that may arise. The woman's temperament should be studied in each case, as well as her power of resisting pain. Any physician who has attended a hysterical primipara knows well the firmness with which he must act in order to abstain from too early interference. The woman may be told that her first labor should not be hurried and that it should
extend over a period of at least twenty hours. This procedure sometimes saves the physician a great deal of annoyance from friends and neighboring women usually present at such cases, and who are many times directly responsible for too early interference on the part of the physician. Labor pains are judged from the effects they produce and not from the amount of suffering entailed on the patient, and should in a normal labor be sufficiently strong to overcome the resistance met with. They should be of an expulsive character and should have sufficient rest between each pain to allow the uterine muscle to rest and the nervous system to recover from the shock of the pain produced.

At the first visit the patient and her surroundings are made as clean as conditions will allow. After the hands have been made clean the first examination is made to determine the presentation we are about to deal with and to inform those interested as to the patient's condition and the probable duration of labor. Regarding the latter the physician's statement should be guarded. During the first stage very few examinations should be made, probably not more than two or three where normal conditions exist, for the woman's safety from puerperal sepsis depends largely on the fewness of digital examinations made. In many cases, especially in the country, we find that several examinations have been made by an incompetent nurse before the arrival of the physician. This complicates the conditions the physician has to deal with and should be stopped, by telling the woman, where we have had a chance to make a previous visit, not to allow any one to make an examination before the arrival of the physician. In country practice, the majority of cases we know nothing of until called at the beginning of labor, and although our patients should be taught that it is best for the woman's safety to have the physician called a month or two previous to confinement, still the physician cannot well refuse when called upon in emergency.
The first stage should be made as easy as possible for the patient, and in primiparae lasts about ten to twelve hours, during which time the pains are sharp and irritating. Three or four one-grain opium powders may be left, one to be given every one to two hours as required. The patient will usually pass through this stage with very little pain, better able to withstand the nervous strain that usually accompanies it, and saves her strength until the expulsion stage has been reached. The patient may be warned against bearing down in this stage, as using her strength without gaining any material advantage. It is not advisable for the physician to remain at the house through this stage, as it might result in the too early use of the forceps against his better judgment. This is especially true in cases of primiparae. In multiparae the first stage is usually well advanced or complete at the first visit.

Vertex presentations alone are considered normal.

The left occipital anterior occurs in about 70 per cent. of cases.

The right occipital posterior occurs in about 27 per cent. of cases.

The left occipital posterior occurs in about 1 per cent. of cases.

The right occipital anterior occurs in about 2 per cent. of cases.

In either one of these four positions the occiput usually rotates to the front and appears under the pubes, except in cases where the child's head is small and the pelvis roomy.

When the first stage is completed the amniotic sac has performed its function in labor and usually ruptures. In cases where this does not occur the membrane should be punctured before it has descended half the length of the vagina, as after this it retards rather than assists labor.

Throughout the second stage the physician should be constantly in attendance, the patient may be told to empty the bladder and rectum as often as possible,
and in the case of retention the catheter should be used and a rectal enema given to clear out the lower bowel. Attending to the bladder before and after confinement is very essential. A full bladder will lessen the strength of the pains in the second stage and delay labor; besides this there is danger of rupture from over-distention. As I know of this accident happening within the last month with a fatal termination, I concluded to at least refer to it. (I may say that it did not occur within the practice of a physician eligible to membership in this society.) More examinations may be made during the second stage, and some of these should be made during a pain to ascertain the strength of the pains and the progress being made. In cases where labor is slow at this time, the woman being tired, which is usually associated with weak uterine pains, it is not advisable to give anything to excite uterine contractions, neither should the forceps be used before first giving the patient a cup of tea, coffee, or broth and following this with bromide of potassium 20 grains, choral hydrate 10 grains, where the heart will permit, or a hypodermic of morphia and allow to sleep for an hour. On awakening she will usually be found in a much better condition, the pains are renewed with increased vigor and frequency, and labor terminated in a large majority of cases in a natural way. I have never practiced pressure to the breech through the fundus in delayed labor, as a full uterus, in my opinion, might be easily ruptured in this way, and where the above procedure fails I prefer the careful use of the forceps to expression.

The chief duty of the physician in the second stage of labor is to prevent perineal rupture. The safety of the perineum depends largely on its elasticity. This may be increased by applying hot fomentations of a bichloride solution, 1 to 1,000 strength, every minute for fifteen minutes before expulsion of the head. The perineum is richly supplied with blood-vessels, the hot applications prevent venous stasis from pressure,
changes the color, and makes the perineum much more distensible.

The head is made to pass the vulva by its smallest diameter. This is accomplished by causing increased flexion with the forefingers pressing upward and backward on the anterior part of the head, while the thumb is used in directing the occiput forward under the pubic arch. The head is forced downward during each uterine contraction and again recedes during the interval following. This procedure should be carried on as long as possible, as it assists in softening the perineum. The head should not be allowed to pass the vulva when it would (if not interfered with). It should be held back for two or three pains, when it will be found that flexion is increased and the occiput advanced further under the pubic arch, while the head can be released at the will of the operator between pains. Undoubtedly perineal ruptures are lessened by holding back the head instead of supporting the perineum. The head should be closely watched during the last two or three pains, as perineal rupture is more likely to occur at this time. An anesthetic has probably its most value in labor when the head commences to distend the perineum and vulva. I have made a practice of giving it in every case at this time where the heart will permit. The chloroform or A. C. E. mixture may be given freely and the patient put quite asleep, a condition which she reaches easily, if told to breathe quickly with her mouth open. This keeps her from holding her breath and bearing down and lessens the danger of a too rapid expulsion of the head. The chloroform is given well diluted with air. When this precaution is taken it is rare that any bad results follow.

The anterior arm and shoulder is next delivered and should be raised well up against the pubic arch to lessen the danger of rupture by the posterior shoulder. From the time the shoulders are delivered there should be constant friction made on the fundus until the placenta is expelled to guard against relaxation and hem-
orrhage. The uterus is a bipolar organ, and by keeping the fundus contracted the cervix remains open and the placenta is more readily removed.

I have made a practice of not tying the cord until the pulsations have nearly ceased, except in cases of emergency. The changing of the child's circulation cannot be expected to take place in a moment's time. Early tying of the cord is apt to deprive the child of blood required to fill the pulmonary vessels.

Severe pressure should not be made on the uterus to expel the placenta without first tying the cord, as cardiac rupture might take place by forcing too much blood into the child's circulation.

There is usually a resting period of from five to ten minutes after the birth of the child before the uterus again begins to contract, during which time a tonic contraction should be maintained. When the uterine contraction returns, the placenta may be expelled about the third or fourth pain by the Credé method, together with slight traction on the cord. When a tonic contraction has been maintained in the uterus after the birth of the child, and where traction has not been made on the cord to remove the placenta during uterine relaxation, the condition known as "hour-glass contraction" will rarely occur. Under no consideration should there be pressure made on the fundus or traction made on the cord during the absence of uterine contraction, as inversion might occur.

Ergot may be given after expulsion of the placenta, and, if post-partum hemorrhage is threatened, an injection of ergotine deep into the gluteal muscles. If hemorrhage occurs before the placenta has been expelled, the uterus should be rapidly emptied. Probably the first indication we have of an approaching post-partum hemorrhage is a rapid rise in the heartbeat, the pulse running from 100 to 120, and should be a warning to the physician to act quickly.

It is well for the physician to remain at the house for at least an hour after the completion of labor, and
before leaving should give the woman a hot antiseptic douche; it is more cleanly and serves in removing soreness.

The bandage, to be of much use and comfort, should extend from below the trochanters to the upper part of the abdomen, completely enveloping the pelvis, the ligaments and cartilages of which must have been necessarily stretched during the passage of the child. A comfortably tight bandage will surely assist in restoring both the bones of the pelvis and tissues of the abdomen to their original state and should be applied after labor has been completed and worn for at least ten or twelve days.

FORCEPS.

The obstetrical forceps are for use in cases where in the judgment of the physician nature is about to fail in completing labor, or in cases where complications exist which necessitate quick delivery in the interest of either mother or child. Unlucky it has not always been confined to cases of this nature. I have known the instruments to be used within three hours of the beginning of a normal labor, and no doubt many others present have seen similar cases. The forceps have saved the lives of many children that otherwise would have perished from compression in a narrow pelvis, but it has also been used many times unnecessarily to the detriment of many others that would have been born in a natural way if only given the proper time to do so. It has also been of unmeasurable assistance to many mothers, but has made equally as many invalids for life by its too early and forceful use. The object of the physician when called upon to use the forceps should be to obtain the maximum of good with the minimum of harm. A great deal depends upon the skill with which it is used. As a physician acquires experience, he lessens the chances of injury to both mother and child.

I have made a practice, where no complications exist, to abstain from the use of the forceps until after the
woman has been in labor from seventeen to twenty hours where the labor is a first one, and from ten to twelve hours for the second or subsequent labors.

The forceps should not be used as a means of saving the physician's time. Force should not be used in applying the forceps; it is not necessary if the blades are allowed to follow the pelvic curve. After the blades have been introduced, traction should not be made before first examining the cervix, to be sure it is not contained within the blades. There are cases where this accident might happen, especially in primiparae, the membranes having ruptured early, the anterior wall of the cervix may become so thin from pressure that on examination one is led to believe that dilatation is complete and that he is feeling the uncovered head, but on examining further up and back toward the sacrum the undilated os may be found. Anteversion is usually present in those cases. I had such a case not long since in a primipara and was completely misled as to the time labor would be completed. Instead of ending in three hours, as I had expected, the labor was completed in a natural way twelve hours later. I mention this case because it was one that might have led to the too early use of the forceps and with bad results.

The membranes should be freely ruptured before applying the instruments, so as to prevent premature detachment of the placenta.

When it becomes necessary to use the forceps, the woman is anesthetized and may be placed on her left side, or, better still, in the dorsal position, and the hips brought to the edge of the bed, with the limbs held by two assistants. Traction should be made at first with very little force, and made to simulate the natural pains as much as possible, as well as in conjunction with the latter, where it is possible, and should last about one minute, with a rest of one to one and a half minutes before again applying traction.

As the forceps, no matter how delicately the blades
may be constructed, increase the diameter of the head, the blades should be removed before the largest diam­eter of the head reaches the vulva, but not before the chin of the child can be reached by the left fore-finger in the rectum, to prevent the head receding. At this time the head will be found under almost full control of the physician and may be released at will. The forceps, by elevating the handles, will lift the head off the perineum and lessen the danger of rupture, as well as pre­venting a too rapid expulsion of the head.

The injuries usually caused by the too early and forceful use of the forceps are generally limited to the cervix, vagina, perineum, and head of the child. Be­sides these there is the danger of applying traction during the absence of uterine contraction, as inver­sion might occur. In cases where the cord is abnor­mally short, or is around the child’s neck several times, this accident is sometimes unavoidable.

In conclusion, I may say that there are many other things that might have been said on the subject of this paper, but what has been said may be of some benefit to those who may be starting their medical career, while those who are older in experience may approve or condemn what has been said, in the light of their greater knowledge of the subject.
MONSTROSITIES.

W. R. HOBBS, M. D., OMAHA.

I.

From ancient times monstrosities have attracted attention and interest. We read in mythology of the centaurs, beings with bodies and extremities of beasts; the cyclops with one large eye; the fauns, whose lower extremities resembled a goat; while the fairy tales of every nation abound in legends of monstrosities, with two or more heads and double bodies.

From the time of Galen to the 16th century many incredible reports of monsters are seen in medical literature, without the semblance of truth; while the mention of mermaids and sea-serpents has scarcely died from the memory of to-day.

In his article on the teratologic records of Chaldea, Ballantyne makes the following statements: "Credulity and superstition have never been the peculiar possession of the lower types of civilization only. The special beliefs that have gathered round the occurrence of teratologic phenomena have been common to the cultivated Greek and Roman of the past, the ignorant peasant of modern times, and the savage tribes of all ages. Classical writings, the literature of the middle ages, and the popular beliefs of the present day, all contain views concerning teratologic subjects, which so closely resemble those of the Chaldean magi as to be indistinguishable from them."

II.

Maternal Impressions.—In Genesis, chapter 30, verses 37, 38, and 39, we read the following:

"37. And Jacob took him rods of green poplar, and of the hazel and chestnut tree; and pilled white strakes in them, and made the white appear which was in the rods.

"38. And he set the rods which he had pilled before
the flocks in the gutters in the watering troughs when
the flocks came to drink, that they should conceive
when they came to drink.

“39. And the flocks conceived before the rods, and
brought forth cattle ringstraked, speckled, and spot­
ted.”

That would be 1749 B. C. We get an idea here of
maternal impressions. From that day to this the world
has been full of this idea, and we would not be amiss
in stating today that five-sixths of the married women
have the belief that anything of a very exciting
nature, or anything that would make a profound im­
pression on them while pregnant would deform or mark
the child in utero and show itself after the child is
born. Up till the beginning of the 18th century it was
considered an absolute fact that maternal impressions
would affect the child. To-day there is a division of
opinion with reference to it. Some men claim that
certain things being seen mark or deform the child.
Others oppose this view and claim that they can see
no connection between the maternal impressions and
the fetus in utero.

III.

In favor of one view we read that Hippocrates saved
the honor of a princess accused of adultery with a
negro, because she gave birth to a black child. He
suggested that a painting of a negro on the wall, which
she constantly saw, was responsible, as it produced
the impression. Pan describes several cases; one a
girl with hair like a bear, whose mother had constantly
before her a picture of the hairy St. John. Van Hel­
mont cites the case of a tailor’s wife at Mechlin who,
during a conflict outside her house, saw a soldier lose
his hand at her door. When the child was born it had
one hand and the other a bleeding stump. Plat speaks
of a mother who was frightened by a mouse, whose
child, when born, bore the figure of a mouse. The Lancet
speaks of a case where a child resembled a dog in the
face, the mother having been bitten by one. Another:
A woman while pregnant, at seven months, was bitten on the right calf by a dog. The child, when born, had the marks of teeth on its leg corresponding to the laceration where the mother was bitten. Hunt describes a case where a pregnant woman at eight months was fatally burned. The day succeeding the burn a baby was born dead, with blisters and burns in the same location as the mother. Webb reports a case where a woman in a convulsion fell into a fire and burned the whole front of her abdomen. Artificial delivery was performed, when the child presented injuries similar to the mother. Graham tells of a woman, the mother of ten children, who while pregnant was feeding her rabbits; one of them frightened her by jumping on her with its eyes glaring on her. The child was hydrocephalic, with a face and mouth rabbit-shaped. Parvin mentions a case where a child had a red splotch on its face. The mother when pregnant was badly frightened by a fire in which cattle were burned. Also another case, called the "turtle man," who had limbs resembling a turtle. The mother, when pregnant, went to the cupboard to fetch something, when a turtle fell out. Copeland relates a case in which a woman was attacked by a rattlesnake when in her sixth month of pregnancy and gave birth to a child whose arms exhibited the shape and action of a snake and involuntarily went through snake-like actions. Beal mentions a case where a child was born with the left eye blackened, as by a blow, whose mother was struck in the eye eight hours before confinement. Mackay relates a case where a pregnant woman was informed that an intimate friend had been thrown from a horse and had his skull fractured. At birth her child had a red sensitive area upon the scalp in the same region as the injured rider, and continued so during life. Mashin, of Mobile, reports a case where a woman in the sixth month of pregnancy saw her husband shot, the ball going through the left breast. The woman told the doctor that her baby would be ruined, exclaiming, "When I saw the wound
I put my hands over my face and got covered with blood; I know my baby will have a bloody face.” The baby when born did not have a bloody face, but a well defined spot on the left breast just below the site of exit of the ball from the father’s chest, the spot being about the size of a half dollar.

IV.

Ziegler’s Definition.—Double monsters are instances of a duplication of the whole body or part of the body. The twins are always of the same sex and are mostly united together at corresponding parts of the body. The duplicated parts exhibit sometimes equal, sometimes unequal development. In the latter case one of the parts is dwarfed and appears as a parasitic appendage to the well-developed individual. This permits a subdivision into an equal and an unequal form of double monster. All double monsters come from a single egg, and develop from a single germinal vesicle.

Several views of the origin of double monsters may be entertained. First, it may be supposed that two embryonic areas arise in the wall of a single blastodermic vesicle, which grow, impinge one on another, and blend to a greater or less extent. A second possibility is the formation within a single embryonic area of two primitive streaks and two medullary grooves which either remain separate or partially merge one into another. A third case would be one in which the primitive streak was single, but the medullary groove was double either in a part or the whole of its extent. Finally, it may be that a duplication takes place at a later period of development, and then affects only individual parts. In all the above possible modes of duplication, the duplication takes place by a double formation at a certain stage in development, of a part that is normally single. In the first instance the duplication dates from the period of formation of the embryonic area, in the rest it begins within the embryonic area. In the first three instances it affects the struct-
ures in the body axis, in the fourth it is confined to such as do not lie in the body axis.

To explain the formation of double monsters it is essential to suppose a duplication of part of the blastodermic vesicle or of the embryonic area. The only question is, how far it may be possible for a doubling that has already taken place to disappear by a subsequent blending. Thus, if there are two entirely distinct embryonic areas, it may be asked whether only separate homologous twins can arise, or whether a merging can take place at an early stage. From the observations and experiments on this subject it may be accepted without question that embryonic areas which are already in the process of development can merge together. Tol supposes that by abnormal impregnation of the ovum by two, three, or more spermatozoa double and multiple monsters arise. Born claims that ova impregnated by two or more spermatozoa do not develop. According to Marchand, the duplication of the embryonic beginnings is to be referred back to conditions existing within the ovum previous to fertilization, or to the character of the fertilization. Wiedeman inclines to the view that the origin of the double monster dates from the moment of impregnation and is due to the impregnation of ova containing the blastodermic vesicles by two separate spermatozoa.

THE CHIEF FORMS OF DOUBLE MONSTERS.

Twins separated from each other and lying within the same chorion are designated homologous twins. They are always of the same sex, have usually a common placenta, and resemble one another very closely. If from any cause one of the twins dies after its body has been developed, it may be pressed flat by the further growth of its fellow, and a fetus papyraceus results. Twins equally developed and bound together occur in the following principal types:

1. Duplicatus anterior—duplication of the anterior portions of the body with union of the posterior portions.
2. Pygopagus—union of the twins in the region of the coccyx or of the sacrum.
3. Ischiopagus—union of the twins in the pelvis.
4. Dicephalus and diprosopus—duplication limited to the upper part of the trunk and the head or the neck and head alone.
5. Craniopagus—union in the cranial part of the head.
6. Dipygus—duplication of lower half of the body.
7. Thoragopagus—union of the twins by the chest.
8. Rachipagus—union with spinal region.
9. Cephalothoracopagus—with Janus head, union of the head, neck and trunk.

The specimen I wish to exhibit is of the cephalothoracopagus type. I was called to the case on January 19 last. The mother was 42 years old, 5 feet 8 inches tall; weight 140 pounds; general condition normal; third child. The first was deformed and born dead. Nature of deformity the parents would not state. Upon examination I found the bag of water broken with the feet projecting; good labor pains. Anticipating that I had a difficult case of twins to contend with owing to the presentation, I sent for assistance. After the arrival of Dr. Lord we put the case on the table, gave an anesthetic, then endeavored to push one twin up out of the way of the other. Finding our efforts futile we pulled down all the legs to make an examination, when we found the trunk united, and proceeded to deliver. After a considerable amount of effort we delivered the monster. The patient was on the table about an hour. We had a lacerated perineum of the incomplete form which was sewed up. The patient made an uneventful recovery, was out of doors in three weeks' time.

The details of the case are as follows: Full term; one placenta with one cord, the cord penetrating the trunk at the lower part, where there was an opening about four inches wide with viscera protruding. The viscera was returned and the opening sewed up to retain specimen. One face was complete. The other had
two eyes, an imperfect nose and mouth, with two ears where the chin should be. The occipital portions of the head are thrown to each side of the face. The neck is joined, front to front. The trunk, chest to chest complete. Each body has two well-formed arms and legs. Sex, both female. Weight 10 pounds. Head, from chin to vertex $4\frac{1}{2}$ inches; from upper part of occiput on one head to base of the other obliquely 8 inches; from mid-occiput to mid-occiput $7\frac{1}{2}$ inches. Length from head to foot $16\frac{1}{2}$ inches. Width of chest $4\frac{1}{2}$ inches; width of lumbar 5 inches.

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3. Ziegler's Pathology.
I have been impelled to the writing of this paper by a personal realization of inadequacy and incompetency in those branches which constitute its subject and of dereliction of duty in failure hitherto to sufficiently protest by word of mouth and deed of hand against modern commercial pharmacy.

To the medical nihilist it would no doubt appear that, were the passing of materia medica and therapeutics to imply the passing of drugs, it were matter for congratulation; but to the wisely-conservative physician, holding fast to that which is good, recalling the pain soothed by opium, the saving operations made possible by ether, the disgusting ravages checked by mercury and potassium iodide, the relief from nitrite of amyl to the patient in the throes of angina pectoris, the magical resolution of an hysterical seizure by apomorphine, the vast territories opened to settlement and the myriad lives saved by quinine, and many other noteworthy if less striking illustrations of the beneficent influence of drugs, to him inadequacy of knowledge of drugs and incompetency in their application must appear a retrogression in the general onward trend of medicine.

That to-day the therapeutist, seldom encountered, fails signally of recognition and appreciation, is undeniable, the equivalent for professional excellence in the medical as well as lay mind being either the keen diagnostician or the bold and skilful surgeon. Nevertheless, nowhere in medical practice is greater technical knowledge, judgment and discrimination demanded than in therapeutics. To so utilize therapeutic agents, food, baths, exercise, drugs, in the conduction of a case of cardiac disease through the shoals of failing compensation, past the reefs of muscular degeneration, preserving a useful life in comfort, delaying, it may be for
years, the fatal outcome, is a medical achievement of the first magnitude.

The passing of materia medica and therapeutics does not imply the passing of drugs. We are to-day confronted by a paradox. Signs are not a few that as a profession we are losing faith in drugs; and, at the same time, proof is not lacking that never before were drugs so much used. That commercial genius that controls our destinies has appropriated to itself the dispensing of drugs, as well as of cottons, and with intimate knowledge of human nature, untiring energy, infinite pains and prodigal expenditure, pushes its products where else they had not been welcomed. That materia medica and therapeutics should be those branches of medicine to first and most suffer from the blight of commercialism, is not difficult of explanation. The student of medicine, who heretofore has had little opportunity for bedside verification of therapeutic agents, has pursued these branches more or less perfunctorily; and has entered upon his professional career little impelled by enthusiastic interest to supplement the incomplete knowledge gained in the classroom. True to that human trait which demands for action the compulsion of necessity, because of which achievement is paralyzed by a plethora of opportunity, the young practitioner soon relinquishes text-books and monographs for a cursory perusal of the advertising pages of his medical journals and the advertising leaflets brought by every mail, beneath which he were soon entombed were it not for the merciful ministrations of fire.

While a price is set upon professional acquirement in clinical diagnosis, therapeutic application, surgical method or obstetric procedure, neither so readily lends itself to barter as does quinine or opium. The commercialist fails not to seize upon those agents in which inhere the possibility of enormous profit. In manifold forms and combinations, pleasing to the eye, delectable to the taste, exhilarating to the sense (a veritable crazy patchwork covering for lamentable ignorance beneath),
drugs legion are dispensed not alone by the local pharmacist, but as well, over the counter of the department store, at the soda fountain, in samples thrown in at our doors or sent us through the mails, self-prescribed or by the ubiquitous adviser, spiritual, lay, or far too often professional.

Ignoring if not forgetting the dictum prohibitive of polypharmacy, which if it prove effective does so by accident not aim, the practitioner who avails himself of ready-made complex pharmaceutic formulae misses the specific effect obtained from an intelligent and discriminating prescription of the individual drug. His results are in consequence often disappointing and his faith in the efficacy of drugs wanes. He comes to regard them as placebos, demanded by a superstitious and exacting public, and, as the least burdensome method of prescribing them, employs the ready-made formula of the large pharmacy, those therapeutic hand-me-downs, as ill-fitting oft-times as their prototypes of the tailor's shop.

While many advantageous drug combinations are offered by the various pharmaceutic houses, the claim that equally advantageous cannot be formulated by the physician and compounded by the local pharmacist, is a confession of ignorance on the part of both and of a sometimes justifiable lack of confidence on the part of the physician. Indeed, the local pharmacy is fast becoming merely a distributing center for the larger house, depending upon the soda fountain and too often the bar attachment for its profit, and the small pharmacist is losing the skill of his craft from the atrophy of disuse.

While it must be granted that for reasons of taste, convenience and accuracy of dosage, specific alkaloids for mouth administration can be most properly prescribed in tablet triturate form, and that the larger pharmacy, with its better equipment as to utensils and men, can more accurately and cheaply meet this demand, and, hence, claims in some measure our patronage, decent self-respect demands our resentment of its
dictation as to therapeutic combinations, and that the "
stamp of our disapproval be set upon its predilection for polypharmacy. It has been the expressed conviction of the wisest physicians from Hippocrates down that but few drugs are of real value, and to master these fully and prescribe them accurately and with boldness, constitutes most reasonable and effective practice; that, to quote from Dr. Oliver Wendell Holmes, in the time of need "good food and plenty of it, pure air and water, cleanliness, good attendance, an anesthetic, an opiate, a stimulant, quinine and two or three common drugs prove to be the marrow of medical treatment, and the fopperies of the pharmacopoeia go the way of embroidered shirts, white kid gloves and malacca joints."

It is certainly not commendable practice to construct one's prescriptions after the pattern of the grab-bag of the church social, containing a little of everything, in which, presumably, something of value exists for each. Dr. Holmes is his medical essays quotes Dr. Jas. Jackson, professor of the theory and practice of medicine at Harvard from 1812 to 1846, a physician honored and loved as no other of his time and a most successful practitioner, as saying: "When I first went to live with Dr. Holyoke in 1797, showing me his shop, he said, 'There seems to you to be a great variety of medicines here and that it will take you long to get acquainted with them, but most of them are unimportant. There are four which are equal to all the rest, namely, mercury, antimony, bark and opium.' And, continues Dr. Jackson, 'I can only say of his practice that the longer I have lived, I have thought better and better of it.' " Indisputably, since his day a small number of indispensable therapeutic agents have appeared, without which the physician were sadly handicapped, but I doubt not the limitation of the therapeutic armamentarium to twenty-five drugs, discriminately chosen, would redound to the comfort of the medical student, the efficiency of the physician and the welfare of the patient, it being questionable if many recent additions
to our pharmacopoeia supply us with any new power
not inhering in the old and tried preparations.

If in the opinion of the wise physician a century
ago there then existed such a plethora of useless drugs,
what words will adequately describe present conditions,
when new and strange products of pharmaceutic art
appear with such amazing rapidity that to master even
the nomenclature, much less their physiological effects,
were impossible within the ordinary lifetime of the
practitioner, and when to prescribe drugs recklessly
might well place one in the predicament of the doctor
immortalized by Thos. Hood, and from force of habit
call forth a like rejoinder; when informed of a patient:

"He's drawn his last breath, sir—
That dose was his death, sir."
"Yes, yes," said the Doctor,
"I meant it for that!"

Too often the physician is but the automatic register
of the therapeutic dictates of the pharmaceutic house.
Our medical journals exist on its advertising. In a
recent number of one of the leading medical weeklies
I counted 36 pages of drug advertising and 39 pages
of text. That the tentacles of the octopus of modern
commercial pharmacy tightly clasp profession as well
as laity, is a situation full of humiliation but too
palpable to be denied. The habit of use of proprietary
medicines is as firmly fixed with the laity as is their
prescription with the profession. We confess the sweet
thralldom suffered by the slave fortunately circum­
stanced. The burden of therapeutic direction is lifted
from our shoulders. For many of the conveniences and
much of the decoration of our offices we are debtors
to the hand that binds us. Our desk is supplied with
blotters, penwipers, penholders, thermometers; our
walls are adorned with calendars and portraits galore.
It is the old, old, story of

"Give grandam kingdom and it grandam will
Give it a plum, a cherry and a fig;
There's a good grandam."

As only children of a larger growth, we doubtless
delight in these toys that come as an emollient to an
irritated conscience; and it is to be hoped that the subconscious self does not dictate the prescription that will, uninfluenced by these attentions, would scorn, the right hand knowing not what the left hand doeth.

When visited in person by the generally agreeable representative of the pharmaceutic house, who vouchsafes much information regarding drugs (the lack of which I am far from denying) it is difficult to so stifle the instinctive impulses of hospitality as to deliver one's self of spleen against the interests which he represents. Especially is this true if one belong to that sex which, according to Pauline doctrine, should be ever becomingly submissive and profoundly grateful for all favors bestowed.

Our opposition to modern commercial pharmacy arises not alone out of a desire to protect a most vital part of medicine from the debasing influences of commercialism. Patients, be they lay or professional, are incapacitated for self-prescription, largely through the workings of that powerful factor in therapeutics—autosuggestion. They, like a certain sect in medicine, mistake symptoms for entities and prescribe subjectively. A drug prescribed for the relief of pain of certain origin under certain conditions may be continued indefinitely and indiscriminately with sometimes disastrous effect. The medical profession cannot evade a large responsibility for the vast deal of human misery arising out of induced drug habits. We hold the light but we hide it under a bushel. We fail to sufficiently warn the public against the use of proprietary medicines, containing, as they often do, injurious percentages of alcohol, opium, cocaine and other potent drugs.

To cease prescribing proprietary medicines and to return to the use of a few well-proven drugs, and to let pass no opportunity for protest against the gigantic evil of commercial pharmacy, seems to me the part of professional duty. Faithlessness to our trust in this, as in other particulars, will, I fear, inevitably bring us to that time, prophesied by Elbert Hubbard, when "the fallacy of the learned professions will be sloughed
into limbo” and people “will go to God direct and not through self-appointed agents.”

DISCUSSION.

Dr. A. S. v. Mansfelde: I think the members of this society know I am not given to gush, but more to criticism, but I want to say that in the last few days I have twice listened with pleasure to able addresses, one in Iowa by a lady and this of Dr. Philbrick’s.

I want to say that the journal which represents Nebraska in a way has published in its last issue a short history of the Nebraska State Medical Society which is to be printed and embellished and cast broadcast over the state. I have had something to do with it. I think it would be a great deal better if this essay could be made up in this way and hung in our offices so that we could see it always and abide by its teachings, for it is time we were doing away with the foolish work that is going on.

Dr. W. B. Ely: If the society will permit me, I will say that it appears to me that the doctors are about the biggest set of fools there are. They put their names to medicines, thereby recommending them, and the stuff is not worth a thing. I have certain knowledge of medicines that are now being sold and advertised on the strength of recommendations of the doctors who have put their names to them.

Dr. I. C. Philbrick (closing the discussion): I am sorry that the doctor who brought up the matter of inducing drug habits and self-prescribing for headache is not present. I should like to have had him say a few words. I should have liked to have had more discussion of my paper, but I know there is little time this morning. I feel that materia medica and therapeutics are branches of medicine which are being neglected. Many who are excellent diagnosticians or skillful surgeons fail in the matter of treatment. I thank those who have discussed my paper, and Dr. Mansfelde’s rather profuse flattery we must attribute, I think, to his being a German.
SUGGESTION AND AUTOSUGGESTION.

G. W. SHIDLER, M. D., YORK.

I have sacrificed much of the detail in this paper for the sake of brevity. I recognize that those not having given this subject any attention, and those who have delved much deeper than I, will not be interested in this paper to the extent that those will who are in calling distance, so to speak, as they are more in harmony with me. While I hope to start some to thinking along this line who have not heretofore given it any thought, I may at the same time call the attention of those more advanced than I to some points overlooked or forgotten and may stimulate all of you to give this very important subject more thought, in which case I will be satisfied with the results. I have avoided much detail by reference to Hudson, Bernheim, Loomis, Southworth, Parkyn, Weltmer and others. I would also state that I select my cases for this plan of treatment, on account of not having the time to devote to patients with trifling ailments and an extremely obtuse mind.

Patients with trifling ailments are not disposed to listen attentively to a new gospel, and then many have such a narrow mental capacity that it would be "casting pearls before swine" to offer to treat them in this way. It also often happens that the doctor's time is such that he cannot devote a full hour to explanations, and it would never do to allow a patient to go away with this plan of treatment only partially explained, as you are certain to be reported insane. For these and other reasons I select my cases at present, for this treatment, although I recognize that if carried to its logical conclusion one would be expected to cure all cases presented. We must, however, consider race beliefs, and superstitions present in both patient and doctor, which interfere with positive suggestions being given or received. I don't wish to be understood as inferring that everyone who does not see this in the
same light that I do is ignorant and superstitious, for that is the way that others treat me and is unfair.

I presume that many of those present, like myself, have given the law of suggestion more or less study with a view of utilizing it in the practice of healing the sick if it proved to be good, and of rejecting it if it proved to be worthless. Those of you who have tried treating your patients by suggestion will better understand the difficulties arising from such an effort than I can describe. Your sign, in all probability, reads “Physician and Surgeon,” consequently when a patient comes into your office for the first time he comes there to be drugged, and if you allow a certain class of them to get away without the drugging process they feel that they have not been properly dealt with and will possibly never return. Had your sign read “Divine Healer,” “Osteopath,” “Christian Science,” “Mental Healing,” or any other statements understood by the patient to indicate healing without drugs, you would have found him in rapport with you and ready to believe almost anything suggested to him, on account of his mind being prepared for that kind of treatment before coming into your office; but if he comes to your office for drugs and you decide he should be treated by suggestion, you will find that it will take you from one to two hours to properly prepare him for the treatment which you wish to administer, and if his mentality is of that dense variety that we frequently find, a certain per cent of your patients will go away so thoroughly disgruntled with you and your methods that they will never return. If the injury to you would only stop here it would not be so bad, but many of this class will report that you have gone daft, and many other ungenerous things. Those going to the office of the “Divine Healer” have their minds made up beforehand what kind of treatment they want and if they had drugs offered to them they would go away as much disappointed as the other class do from your office.

If you intend practicing suggestive therapeutics
you had better by far put out that kind of a shingle and have those coming to your office when you are young in the business and easily discouraged, come to you with harmony oozing from every pore. Many of you, like myself, do not like to entirely let go of the substance until you know what the shadow will be, and retain the sign at your door until you have satisfied yourself that all of the results that you read about can be obtained by this practice.

I have had some experience along this line that may be of service to some of you and I give it to you freely. I began by reading all of the works on this subject that I could procure, from Bernheim's Suggestive Therapeutics and the works of T. J. Hudson down to the present writing. I also subscribed for all of the journals along this line of new thought. It was not long until trouble began. I commenced with my first patient by telling him that he had two minds and two brains and that by turning the control of the abdominal brain over to me that I could run things much more to his advantage than he was doing, etc. He stared at me vacantly, admitted all that I had to say, and went away and reported me cracked. Of course they did not all do this, but enough of them looked at it in this light to make it mighty unpleasant for me. The thought occurred to me that if some of these densely ignorant specimens of humanity that cannot get ginseng and yellow root out of their mental vision could be hypnotized on the sly, I could so clear their mental atmosphere that they could be made to see things through my eyes. Upon investigation I found that only about 7 per cent. could be reliably hypnotized, and what was I to do with the other 93 per cent. to save them? and then the other 7 per cent. would not hypnotize on the quiet for me, and there I was. In this state of mind one consoling feature stood out more prominent than the rest and that was that I had not yet changed my sign. It still read "Physician and Surgeon" (with drugs understood). It occurred to me that had I changed my sign, or, in other
words, burned the bridges behind me, I probably would have made more of a success with the new thought of suggestion.

About this time I burned some midnight oil and by its flickering glare formulated a plan whereby I succeeded in taking the rough, uncouth mind nurtured by drugs through many reincinerations and in from one to two hours in unfolding that brittle unyielding brain, until I could impress it with the beauties of this treatment sufficiently to insure a return to my office for future treatments. I first endeavor to impress on the mind of the patient that there is a want of harmony in the workings of the different parts of his body and tell him that if I can succeed in establishing a harmonious action of the different atoms composing the body that the condition known as disease will have disappeared. I explain to him that he has two brains, a higher and a lower, meaning by the latter the solar plexus. That his mind for present purposes is divided into objective, which acts through the higher brain, and the subjective, which acts through the solar plexus. That the objective mind is the thinking and sleeping mind, and controls the action of subjective, which is the servant of the objective and never sleeps from date of birth until death. This I demonstrate to him by reminding him of his objective mind on retiring for the night, having frequently left an order with the subjective to awaken him at some particular hour in the morning and that the order was obeyed. I further call his attention to the fact that his subjective mind was complete at the time of his birth, causing every organ and every atom to perform its duty as perfectly at the time of birth as at any subsequent period, causing the digestive and assimilative organs, the heart, lungs, and in fact every part of the body, to perform its proper office, even to the development of the higher brain which at birth is little more intelligent than that much putty. The higher brain being undeveloped, the subjective mind is not capable of acting through it, and consequently the
subjective mind is subjective to, and receives orders from, the higher brain of his mother or father or nurse until a stage of development of the higher brain has been reached permitting it to give the proper orders for conducting the different functions of the body, when the mother's apron strings are cut, so to speak, and the higher brain furnishes in itself an instrument through which the objective mind, through the solar plexus, has charge of every organ and every atom in the body. There is neither growth nor retrograde metamorphosis takes place unless the order for such a change of construction is passed through the subjective mind and solar plexus. Take, for instance, a large tumor that is being nourished in the most approved way by an order from the objective mind to the subjective mind. It will continue to grow until it perhaps destroys the body, if not arrested. Suppose that the control of the subjective mind, which is attending to the growth of this, is ordered to obey me and I suggest that the process of development be reversed and that this tumor shall be torn down and removed from the body through the different channels for that purpose, and the result will be that from that minute the growth of that tumor will change and the destruction of it will follow rapidly or otherwise, owing to the harmonious thought force used for this purpose.

In order to make it still more plain I compare the body to a factory where there is a superintendent who has charge of everything, represented by the objective mind acting through the higher brain, and who knows no superior. Next we have a foreman, represented by the subjective mind acting through the solar plexus. This foreman is the servant of the objective mind and obeys every organ and every atom which represent the different workmen in the factory. This foreman will obey every order from the superintendent and when he orders that the foreman shall obey me as master and does it in an earnest, emphatic way, the foreman then becomes my servant, and, being under my control,
all of the organs and atoms composing the body are under my control; and if I now ask the foreman to put all the different forces of the body to working harmoniously with each other and each and every one of them to obeying the laws producing health and happiness, what will be the natural result? Evidently health must follow. This will be the result providing the superintendent gives his commands for the foreman to obey me in an earnest and emphatic way, just as surely as the foreman will awaken him to-morrow morning if ordered to do so. But if there are a number of provisions in the order and those provisions are not complied with, then the foreman refuses to obey me. To illustrate this: Suppose that the superintendent tells the foreman that he will leave town for awhile and that I am to assume his duties and be obeyed in every particular, but as this is a wagon factory he don't want anything made here but wagons. Upon assuming command I find everything working in harmony with me as perfectly as I might wish for until I announce that I intend manufacturing automobiles, when to my surprise the foreman and the workmen all rebel, stating that their orders are to make wagons only. I give this comparison to allay the fears of those that are afraid of hypnosis, to show them that before being hypnotized you can give orders that no work but that producing good health can be entertained here, consequently any attempt to take advantage of the patient will be frustrated by a previous autosuggestion.

I have here explained to him why a Free Mason cannot be induced to give away the secrets of the order while he is hypnotized. Why a virtuous lady need not be afraid to be hypnotized, as her autosuggestions will protect her, and the moment that an improper suggestion is made she will be wide awake. I now explain to him that the subjective mind and the solar plexus, through which it acts, have been in evidence ever since life began on this earth, whilst the objective mind and higher brain have been developed or unfolded since the
last 48 per cent. of time and refer him to T. J. Hudson’s Divine Pedigree of Man.

I also explain to him that it is not necessary to hypnotize patients to do them the most good and refer him to Herbert A. Parkyn, Weltmer, Southworth, Pitzer, and others who are actively engaged in treating disease by this plan known as “Suggestion and Autosuggestion.” I tell him that all that is necessary for him to do is to want to be cured in this simple and harmless manner, and for him to aid me rather than to try to prevent the success for which I am working. He is not required to believe all that I have told him but give it a fair unbiased trial, and if it proves to be a truth and a law, he will be cured and be just as anxious to admit it as I am; whilst if it proves to be false, he will have learned something and have exposed a fraud. I remind him that the laws governing steam and electricity have been ever since time was, and that, had we understood them, we might have been using these forces for ages, as the material (iron, water, and fire) has always been in existence. If he complies with the laws governing steam and electricity he not only need not in any way be injured, but may be the recipient of much good; and it matters not whether the compliance with these laws is made intelligently or ignorantly, the result will be just the same.

If this law is complied with, which requires, first, that there is a desire on the part of the patient to recover by this kind of treatment; second, that a state of relaxation and perfect quiet be obtained, and third, an absolute order from the superintendent that the foreman should carry out every order given by me for his relief. He should be made to understand that in case he should go to sleep he will awaken whenever you order him to do so; also that “cross-hypnotic suggestions” are out of date and cut no figure in this treatment, as he will not become hypnotized. I explain, that, after relaxing and becoming quiet for a time, his body, that at first seemed very heavy, will after
a short time begin to feel light and oftentimes feel as if he is floating around the room on air. There will also be a sleepy sensation and that of perfect comfort and happiness that will pervade him; that his blood and magnetic forces will be equally distributed to all parts of his body, giving rise to warm hands and feet. While at rest in this way he will develop a surplus of energy, which is the cause of the light, pleasant feelings. He should endeavor to put himself in harmony with me in every possible way. I further inform him that I shall place one restriction upon him, to the effect that he shall not tell anyone how I am treating him until he is well, when he is at liberty to divulge everything. This becomes necessary, because the person to whom he confides has not been instructed as he has been and will laugh at such a plan of salvation, thereby undoing all of the good that I may have started. He is further informed that every physical action of his body was first a mental action, the body following the mind much the same as a cart follows a horse. This being the case, it follows that the mind should be kept going away from disease rather than in search of it, and that whenever he talks about his ills he must of necessity think of disease, in which case his mentality is going the wrong way and his body must follow it, if it goes at all, which makes it evident that the less he talks about his disease the better for him and for me also, as I much prefer to have my plan of treatment explained after he is cured. I now have my patient in a relaxed and receptive condition. This plan of treatment, admitting many of my statements to be true without dispute, furnishes him a rather logical way of proceeding, and I assure him that if he is not satisfied after three treatments of the efficacy of this plan, I do not wish to treat him any longer. My percentage of cures since adopting this plan of treatment is far ahead of that by drugs alone and I succeed in curing a class of patients that are not amenable to drugs.

We must all admit that Christian science, mental science, osteopathy and divine healing are successful in
a certain number of cases, but you cannot show me a well authenticated case cured by any of them, without suggestion or autosuggestion being the fundamental principle involved in the cure, and I will go so far as to apply this statement to all kinds of cures outside of surgery. Take, for instance, a homeopathic physician who is called to attend a sick child. Upon his arrival he examines the patient with great care, asking the mother many puzzling questions, by which means he adds mystery to the case. After going over the ground thoroughly he informs the fond mother that he was called just in time to save her child; that had he been called just a little later no one could have saved it. With an air of confidence he assures the mother that he will save the little one so dear to her. He has by this time won her confidence and she is in harmony with his thoughts or statements. He asks for a glass of water and putting a drop of medicine into it tells her to give a teaspoonful every half hour, or every twenty minutes, as the case may be, and that the child will improve and by the time he returns it will be much better. On the departure of the M. D. the mother takes her babe up and with tears of delight in her eyes tells it to take the medicine, for the doctor said it would make it well. Through the long hours of the night she makes the suggestion of health every twenty minutes, looking constantly for the promised change for the better, and by the time the doctor returns the child is better and all concerned are happy. The doctor in many cases, the mother always, thinks that the few drops of medicine caused the cure, while it was the often-repeated suggestion that did it. This applies to the regular, eclectic and the whole list of M. D.'s, interested in the cure of disease. I will take one more by way of illustration, and call it the osteopathic form of cure. After carefully looking his patient over and finding that there are no bones that he will dare to call "dislocated," he discovers that there is a certain nerve or muscle that is displaced and proceeds to reduce the dislocation by pulling and twisting and rubbing the poor
wretch until when the doctor tells him that all is now in the proper place and that by the next day he will feel much better, he has so impressed his patient that he does not forget for a minute, if awake, of the treatment and likewise of the suggestion of health that will surely follow. He has been promised that as soon as his liver which was dislocated has time to eliminate the poisonous drugs given him by the last M. D. who treated him, he will be well. The doctor's suggestion has taken root and the patient looks for the promised health the last thing at night and the first thing in the morning, and in many instances recovers because the law of suggestion has been complied with, at least to a limited extent; and it matters not whether the compliance is the result of ignorance or intelligence, the result will be the same. If the objective mind can be induced to order the subjective mind to do a certain thing, believing that it is right and with faith that it will be done, the law has been complied with, and the results will be just as we want them. The reason why homeopathy flourished to such an extent was that the medicine was so diluted that it did no harm and the faith in the doctor and the suggestions made by him were in compliance with the law of suggestion. All of the different forms of treatment depend upon the above principle and when complied with produce health, and when violated, disease, no matter whether they are divine healers, faith cures, osteopaths, regulars, or what not.

There are to be given proper instructions for deep breathing, eating and drinking, as it is from these three sources that we obtain energy that keeps the source of life attached to our bodies, making us one with the universal source of life. This can be easily proven by withholding air, water, and food. The body has been known to go forty days without food, from seven to ten days without water, and only five minutes without air, showing clearly that air comes first in importance, water next, and ordinary food, last. I have clearly demonstrated to my own satisfaction that the energy produced by these three forces is distributed to the dif-
ferent parts of the body through the solar plexus. You
can demonstrate this by lying on your back, taking a
full breath, holding it, and then forcing the stomach,
liver, and intestines up and down as many times as you
can, until you require another breath, and keep this up
for five or six times and relax the body perfectly, and
you will feel the body fill up with energy. The solar
plexus, being situated just back of the stomach, is more
or less massaged by this process, and as the body lies
perfectly still thereafter, there is no energy thrown off,
but much more than ordinary is generated, and as a
result the body will soon be supplied with a surplus,
when possibly it had a deficit a short time before, and
the body that was heavy when you first lay down is now
growing lighter every minute, until a decided surplus
is obtained, when the body feels as if it is floating on
the air. It is this surplus of energy that gives you a
buoyant and elastic step and makes you feel jolly and
happy, whilst a deficit produces just the opposite ef­
fect. This in breathing above described, if practiced
every night, just as you retire, will not only generate a
surplus energy, but will produce good sound sleep
and regulate constipated bowels, and particularly
when accompanied with the proper suggestions. The
proper use of sun-baths, with fasting at proper inter­
vals, will also perform miracles. There are many other
points of interest along this course of treatment, but
as you can well understand, it is impossible for me to
enter into the details as I would like to do.

There are some sentences in this article that might
be misconstrued to indicate reflection on my part as to
your store of information, on account of your not be­
lieving as I do on this subject. Such is certainly not
intended, but I will close by stating that if any of you
not advocating the views here expressed will give the
subject even as much study as I have, you will be fully
as strong an advocate. I thank you.
The great desideratum in dealing with sickness is first to learn what is the matter, then to find and apply the proper remedy. When the student or young doctor looks over the vast array of drugs at his command, he is delighted in contemplating the bountiful supply and believes that the only thing necessary is an intelligent selection of the proper remedy to meet the given case, and the future looks bright and rosy. As he goes on making the selections and accumulating experience, he soon begins to realize that all is not gold that glitters. He learns that either his selections were not properly timed or that the words of the enthusiastic professor of therapeutics, who has “almost a specific” for each and every ailment, are “as sounding brass” and the bright halo begins to change to uncertainty, or possibly to gloom. The manufacturing chemist tries to come to his aid and relieve him of the necessity of making the selection. He has only to name the disease and the remedy is forthcoming, and sometimes even the diagnosis is made for him.

At the present time this new factor in the problem is assuming wonderful proportions and activity. And the end is not yet. In the mad search for new remedies and combinations methinks we are sometimes in danger of overlooking and discarding some of the old friends which are worthy of better treatment. In taking up the subject of apocynum cannabinum I may be accused of threshing old straw, but the experience of the past two or three years with its use prompts me to hope that some grains may be found worthy of consideration.

In talking with a medical friend, he spoke with some enthusiasm of his experiences with it, and having some cases of dropsical conditions at the time which had failed to respond to more modern and up-to-date meth-
ods, I assayed to give it a trial. Not, however, with much hope, but because I was at the end of my string and for want of something better. Since then, and after using it in a number of cases, I am satisfied that in properly selected cases of dropsical conditions it has no equal. In looking over the standard text-books I find that the literature is very meagre. The U. S. Dispensatory disposes of it with a few lines. Ringer and Hare make no mention of it; neither do several other standard authors. Some few journal articles give it space. The best article which I could find is in Sajou's Cyclopaedia.

In the edema accompanying the varicose condition and varicose ulcers in elderly persons I have found it particularly effective. This is in keeping with the experiences of others who have used it most. This condition we know to be due to a variety of pathological causes; general debility and lack of tone from any cause, age, cardiac insufficiency, either from valve lesions, exhausting diseases, infections, etc., with capillary stasis. In many of these cases it is an efficient auxiliary to the usual means of relief such as mechanical supports, tonic treatment, etc.

I had a case recently of an old man very much prostrated by influenza. The legs and feet, from the knees to the toes, were enormously distended, the veins turgid and the tissues filled with serum. By the use of two-minim doses every three hours the edema disappeared gradually and steadily, being gone in three or four weeks. In another case of general anasarca following a pregnancy and confinement in which all of the connective tissues were filled with serum (waterlogged), with profound anemia or hydremia, after hydragogues with tonics had utterly failed to have any effect and the case seemed desperate, the same doses, with no other treatment, produced a wonderful change in a very short time, and the case went on to a complete recovery. Other cases might be cited, but I deem these sufficient.

How it acts is a question. We know that it slows
and steadies the action of the heart, lengthening diastole, increases blood pressure, stimulates the action of the kidneys, probably by dilating their arterioles, and it seems to have a tonic effect on the vasoconstrictors of the general capillary circulation, lessening the tendency to transudation of serum. In the presence of a lack of arterial tone its effects are almost wonderful. In the cases of valve insufficiency when compensation is failing, with the usual symptoms, the heart is slowed, cough from bronchial stasis lessened, cyanosis decreased and a general amelioration of all symptoms. Of course, there would be a limit to its possibilities in extreme cases, but it has given me more satisfaction in the cases in which I have used it than has any other drug.

An enthusiastic faith, based only on theory, no matter how attractive the theory and not supported by clinical experience, is often delusive. But a clinical fact is more valuable in practical results than any theory. In a general way it seems to act like digitalis, but with no cumulative tendencies and no unpleasant effects, given in moderate doses. To quote from a Russian observer (Grozdinsky): “Seven cases of mitral and aortic insufficiency with disturbed compensation in which the fluid extract of apocynum, 15 drops three times a day, was used. Great improvement noticed within three days. The cardiac impulse grew stronger, the pulse became more regular, fuller and slower, its frequency in some instances decreasing from 130 or 120 to 56 or 48 per minute in forty-eight hours. The blood pressure rose, cyanosis and pulsation of the cervical vessels vanished, the area of cardiac dullness decreased, the daily quantity of urine increased (in one case it rose from 450 to 2,800 cubic centimeters), the body weight fell, the diminution varying from thirteen to twenty-one Russian pounds. No unpleasant accessory effects from the drug noticed.” The preparation which I have used most is Lloyd’s tincture in doses of 2 or 3 minims in water every three or four hours.
lished, necessitating an increase of dose. In large doses it is said to cause a sense of fullness and pulsation in the cerebral vessels, with copious watery discharge from the bowels and an increased flow of urine. I have had none of these extreme effects, owing probably to the moderate doses which have seemed to be sufficient.

I have never used it in the dropsy accompanying acute nephritis, as in scarlet fever, etc. Would hardly expect it to act as in the more passive conditions. It is said to be of value in chronic Bright’s disease, lessening albuminuria and casts as well as anasarca.

DISCUSSION.

Dr. A. B. Anderson: I want to add my testimony as to the value of this drug. I have been using it in cases similar to those suggested by the doctor, for the past ten or fifteen years, and I have had some of those signal victories in cases I thought there was absolutely no hope whatever. However, I cannot say it is curative, but it gives relief sometimes for a year or more. Dr. Williamson, a member of this society who died last fall, told me he received more benefit from this drug than from anything else. The action of the drug is certainly upon the heart as well as on the kidneys, for it gives relief in those cases. The objection to it is its disastrous effect on the stomach. I have not been able to continue it for any length of time on account of this. I use the tincture in 5-drop doses.

Dr. J. S. Butler: I do not know that I desire to extol the merits of this drug, but having had some experience recently and reaching pretty good results it would seem that success succeeds. The trouble caused by the irritation of the stomach in the use of the drug can be relieved by giving smaller doses and more frequently. In the few cases in my hands recently treated where this drug was used with good results, we gave it in drop doses, diluted in water, every hour, at the same time giving the so-called dry diet, with buttermilk as a drink. The drug produces large, copious watery discharges, which is essential in these cases, as it must not be lost sight of that when more fluids go into the body than come out of it, the bloatings and dropsy will accumulate instead of being eliminated. While this remedy has proven about the best thing I have used in these cases, I do not believe it is a specific for this diseased condition.

Dr. J. L. Greene: I have used this drug for six or seven years, and in the beginning of its use I found the difficulty which Dr. Anderson mentions, namely, that its administration in the amounts ordinarily recommended produced nausea and finally intolerance to the drug. Of late I have been giving it in smaller doses and at more frequent in-
ervals, the dose generally given being one minm every hour or two. With its use in a recent case I used the tonometer of Professor Gartner, of Vienna, which enables me to keep tab upon the blood pressure. The remedy being one which raises the blood pressure, particularly the intracranial pressure, care must be used to withdraw it when the pressure reaches 120. It is only when the blood pressure is above the normal that the nausea appears.

DR. M. L. HILDRETH (closing the discussion): I thank the members for this discussion. I did not know but what I had struck something new, but you have dispelled that idea. I learned one point from Dr. Greene, and that is the use of the tonometer, which I intend to get. As to the unpleasant effect of the drug on the stomach, I have never gotten it with the preparation of Lloyd, which preparation is pretty accurate. In full doses, it may produce head symptoms, or disturbance of the stomach. The main point in using it is to select your cases very carefully. I give generally two or three drops two or four times a day in a little water.
PROGRESS IN THERAPEUTICS IN THE DISEASES OF CHILDREN.

GEORGIANA GROTHAN, M. D., ST. PAUL.

We will spend a short time in the discussion of the diseases of children which up to this time has not received a great deal of attention before this body. It is with pleasure that we welcome this section to our society and trust that in the future it may prove to be a valuable addition.

As to the advance made in therapeutics in the diseases of children during the last few years it has been rapid along various lines. The treatment of the diseases of children is a difficult but interesting subject and one with which we cannot too well acquaint ourselves. Not only is it so on account of the difficulty in diagnosis many times, but the young practitioner is often perplexed to know the proper dosage of the more dangerous drugs to give a young child and the frequency with which to administer them. The results obtained by giving drugs is greatly overestimated, and many times in simple acute cases medication may be dispensed with entirely where attention given to diet, hygienic surroundings and careful nursing will promptly effect a cure. Hence the importance of relying on local measures so far as possible for the treatment of minor ailments. In severe cases unnecessary medication must be avoided in order that digestion may not be disturbed. Mixtures should be prepared as simply and palatably as possible and it is very important that nauseating or irritating drugs should not be employed. These are small details but the physician must look well to them if he would succeed in the management of children's diseases.

There is no doubt that drugs have been employed too freely in the cases of young children, and one step in the advancement of our therapeutics is the dispensing with this overmedication.
An important factor, also, is the proper dosage. Owing to the delicacy of the infant organism, and the more rapid absorption and elimination of drugs, it is readily seen that small, oft-repeated doses are more efficacious than large ones given at longer intervals, and the failure in many cases to bring about desired results is not so much the fault of the drug employed as the manner in which it is used. Our irregular brethren have the reputation of being particularly skillful in the treatment of children's diseases. Their success in a measure depends upon this rule of administering small doses frequently. They dissolve some powerful remedy in a quantity of water and direct that a teaspoonful be given every fifteen or twenty minutes. Better results are thus obtained than had the doses been given in a more concentrated form and at longer periods.

As we know of certain drugs children can tolerate a larger dose proportionately than the adult; thus arsenic, belladonna, chloral hydrate, the bromides, iodides and mercurials are all well borne by children, but their effects must be watched, for children are liable to manifest idiosyncrasies rather more than the adult. The use of massage, baths and Swedish movements are aids to therapeutics which are beneficial in many cases and must not be overlooked. In a very able article on the treatment of dysentery, Dr. Hobart A. Hare speaks of the purgative plan which has come forward so largely in the medical press during the past year; also the giving of intestinal antiseptics, which he considers not of sufficient importance to justify their employment to the exclusion of other remedies. He speaks at length of the value of high intestinal irrigations, and the method of giving intestinal lavage. He prefers cold injections, but in cases where cold is inadvisable very hot water may be used. Tepid water has the disadvantage of producing a relaxing and enervating effect and does not possess the healthy stimulating effect of marked cold or heat. It is best to employ normal saline solution, since by this means maceration of
the intestinal mucous membrane and ulceration are avoided.

We notice occasionally new treatments for the so-called children's diseases. Recently the treatment of whooping-cough by formol has been brought to our attention. In twenty cases reported treated by the inhalation of paraform over an alcohol lamp, the vomiting and paroxysms ceased in twenty-four to seventy-two hours in all but two of the children. In the others the cure was complete in eight days with no treatment after the first seventy-two hours. Bromoform has been found an efficient remedy in some of these cases but has not proved sufficiently successful to justify its popularity.

Dr. Hare gives a thorough resume of the results accomplished by the use of the various antitoxins from the aspect of both preventive and remedial medicines. The diphtheria antitoxin of course is the most widely and effectively employed. We are already familiar with the extraordinary results that have been obtained by the use of this antitoxin. It has been found useful in other maladies, as asthma, croupous pneumonia and various cases of sepsis, but as yet the results reported are too small in number to justify us in reaching any definite conclusion.

The benefit derived from the use of the antitoxin of tetanus is encouraging. As yet the number of cases in which it has been used is limited owing to the rarity of the disease in man. According to statistics collected by Hewlett, the average mortality of all cases of true tetanus is about 75 per cent., yet in sixty-one cases collected by this writer which were treated by tetanus antitoxin the mortality was only 36 per cent.

A definite opinion cannot be formed until a much more extensive trial has been given the remedy. It must be remembered that in tetanus there is no characteristic lesion at the spot of infection and a diagnosis is arrived at only when the disease is far advanced, consequently treatment is commenced at a late stage and analogy with the experiments conducted upon
animals renders the prospect of success not very hopeful.

Antitoxin serum has been used in the treatment of croupous pneumonia, but the statistics are scanty thus far and by no means favorable. The treatment of septicemia by the use of antistreptococcic serum has been more successful and promises greater results than the two last mentioned. Much depends upon the cause of the septic infection. If it is due to the streptococcus organism the use of the antitoxin is of some possible value, but if the toxemia is due to other micro-organisms it is useless. Antistreptococcic serum has been used in the treatment of erysipelas with marked amelioration of symptoms. Marmorek has employed the antistreptococcic serum in almost a hundred cases of scarlet fever with benefit. In every case there was a most favorable influence exerted on the swollen cervical glands and the albuminuria was decreased. Marked general improvement was produced and there were no serious effects from its use. This serum is worthy a further trial in scarlet fever. A marked streptococcus infection in addition to the infection of scarlet fever seems necessary in order that this treatment shall be useful. The treatment of scarlet fever by this means seems rational as many of the serious results in this disease are produced by the streptococcus infection and not the specific micro-organism. Statistics are few as to the value of antitoxic serum in the treatment of various diseases, as measles, whooping-cough, scarlet fever and smallpox. The thyroid gland in its pathology and therapeutic relations to myxedema and cretinism are of great interest to the pathologist and physician. The favorable results of thyroid medication in rachitis, according to Ausset, indicate that the thyroid gland plays a larger part in its production than has been hitherto credited. Arrested development of the sexual organs is another indication for thyroid treatment and possibly also scleroderma, hemophilia and chronic rheumatism. Children are peculiarly susceptible to intoxication from thyroid medication and conse-
quent it should always be closely supervised, with especial care in respect to the heart and kidneys, commencing with very small doses and frequently suspending.

Of late the treatment of chorea by the use of the hydrobromate of hyoscin hypodermically has received some attention, but as yet the literature on this subject in the medical press has not been very extensive. We have used it with uniform success in a number of cases. The one case which I will report was the most severe case of chorea that has ever come to our notice. In March last Mr. T. called at our office accompanied by his daughter, twelve years of age, suffering from rather severe symptoms of chorea. The girl was thin and very anemic, tongue coated, temperature normal. This was the first attack and no cause could be assigned. The attack came on suddenly while the girl was attending school. At this time she was hardly able to stand, while the muscular twitchings over the entire body were severe. Two days later we were called to see the patient, who was suffering from the symptoms in the most exaggerated form. Constant involuntary movements of the arms, legs, and muscles of the trunk were present. The movements of the face were simultaneous with those of the extremities. A few days later the patient was unable to swallow liquids and solids and the bladder and bowels moved involuntarily. She remained in an unconscious condition for two or three days. Sordes collected on the lips and teeth, pulse was 130 and temperature 102° throughout the greater part of the attack. The case presented a melancholy aspect.

The treatment was as follows:

Liq. potass. arsenitis in four-drop doses four times a day. Hydrobormate of hyoscin 1.75 gr. was injected once a day. Chloral and potass. brom. were given. When patient was unable to swallow the chloral and bromide mixture, ten or fifteen drop doses of the deod. tinc. of opium were substituted. The hyoscin was the only remedy that would quiet the patient, 1.75 of a grain producing sleep for about four hours. Owing to
the fact that she lived some distance in the country, but one injection daily could be given. At the end of six days the muscular movements had ceased. Patient was able to be about and the treatment was soon discontinued.

In the Therapeutic Gazette for April, Ewing commends this plan of treatment. During the last year this author has used the hydrobromate of hyoscin in twenty more or less severe cases of chorea and only with the most favorable results. In some of the cases no direct cause of the attack could be given while a good percentage could be directly traced to fright. All were under twenty years of age and with one exception poorly nourished. The severe cases yielded equally as well as the mild ones. It has generally been this author's practice to use the hyoscin in conjunction with Fowler's solution, yet in several of the cases he has used the hyoscin alone after having given arsenic for a more or less extended period with no apparent good results. The dose of hyoscin used in the several cases varied from 1/200 to 1/50 gr., according to the age and the severity of the attack. Another fact noted both in the maniacal excitement and chorea and for which no reason can be given, is that in some cases the hyoscin when given by the mouth has no effect, yet when administered hypodermically acts very promptly and this when the digestive functions seem to be normal. None of the cases treated had a second attack.

DISCUSSION.

Dr. Berry, South Omaha: This paper ought not to go through without discussion. It is quite a valuable paper. I rise to make emphasis of some of the points which the essayist has brought out, namely, that of care in medication in childhood. As Dr. Philbrick this morning made mention of there being so few drugs of use, applies more surely to diseases of children than we can imagine. In regard to the treatment of the diseases of children, their organisms are delicate and more susceptible to the action of strong drugs than a great many physicians imagine. I would say that a great many works on the diseases are misleading to the young practitioner. They advocate the use of drugs in a great many instances in diseases of children where drugs are not needed at all. Especially the use of the hypodermic
syringe. I would like to emphasize that point. I have not been a practitioner for many years, but I have practiced long enough to know, and I have never yet given a hypodermic of any sort of the stronger drugs, especially morphine. The main point I wish to bring out before the society is the excessive amount of drugs given to babies when local applications can be better administered and with less danger.

DR. GROTHAN (closing the discussion): I have nothing to add except in speaking of using hypodermic injections in the case of children. I have never used them but once or twice. That was in the case of convulsions, and I think the relief did not come so much from the morphine injection as from the rectal injection of chloral and bromide, and the use of inhalations of chloroform.
INANITION FEVER IN THE NEWLY-BORN CHILD.

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

This term is not an altogether satisfactory one, for the simple, and at the same time one of the best of reasons, the cases do not seem to be very well understood. The term is adopted to indicate the rise of temperature and the condition of starvation. Starvation fever would be an appropriate term. Under this head is included those cases seen during the first five days of life, mostly from the second to the fourth day, in which an elevation of temperature is present, due to the fact that the infant gets little or no nourishment from the breast of the mother. It is further noticed that the temperature falls when the function of milk secretion takes place in abundance.

Hall states that the first to call attention to this condition was Dr. McClane, of New York, in 1890, who reported a case to one of the medical societies. In his case the infant was found on the sixth day to have a temperature of 106°, at which point it had remained for about three days. The child was being nursed at the breast, which was found to be absolutely dry. A wet-nurse was procured, the temperature fell to normal in a few hours, and the child, which was in an apparently hopeless condition, was soon well. Since that time observations have been quite extensive; over three thousand cases reported from the Sloan Maternity and Nursery and Child’s Hospital establishing the fact that a rise to 102° or 104° of temperature is common in the newly-born infants during the first few days, and the fever accompanied by no evidence of local disease ceasing with the free establishment of milk secretion in the mother, the fall of temperature being rapid, dropping to normal in a few hours, thus clearly establishing the fact that the condition was due to starvation, so to speak. The symptoms, being uniform and clearly characteristic, make for these cases of
fever in the very young infant a class by itself. Not
being confined to any particular class of infants, as it
is seen in the strong, vigorous infant as well as in
those who are delicate, it is important that this fever
and its cause be recognized early, as it certainly gives
a timely warning of a condition which, if not soon cor-
rected, may prove fatal. This fever is distinct in and
of itself and can hardly be confounded with a fever
due to pyogenic infection which does not, as a rule,
begin previous to the fifth or sixth day. Every prac-
titioner has met cases of this fever and recognized it
at once if the little patient was examined carefully.
In every instance a grave mistake is made if we do
not give these cases the careful examination due them.

Although practicing at a cross-roads town in a coun-
try district, it has been my lot to meet with a few of
them in twenty-four years' practice. It seems to be
the commonly accepted theory and opinion, with doc-
tors generally, also authors, not to feed the young in-
fant, simply allowing nature and nature's methods to
sustain or not sustain it, as the case may be. Any
practitioner who has largely to deal with children has
learned by experience that it is not at all a safe and
reliable rule to follow. It seems to be the rule, espe-
cially in country practice, as soon as the third stage of
labor is completed, to give both mother and child over
to the care of a so-called nurse; whose general careless-
ness and general ignorance are about equal. Unless
practitioners become more considerate and interested
in looking after the infant, mortality from this source,
at least, will remain about as it is. When called to
see one of these cases mentioned above, of infant
starvation fever, it should be our duty to know that
our directions are carried out implicitly, otherwise we
will find, to our regret, that our little patient succumbs
to the inevitable. If seen in time, these cases all begin
to improve the very hour appropriate means and meas-
ures are used, which consist in the careful administra-
tion of proper nourishment, food and water, followed
up systematically at stated intervals.
CARE IN VACCINATION.

S. R. TOWNE, M. D., OMAHA.

With the history of our epidemic of three years past in mind, an epidemic styled by some dozen names like yaws, Cuban itch, and hydroa, and with the probability that it may remain with us possibly many years more, I choose this subject, "Care in Vaccination."

Scientific progress, in both study and practice of immunity in general, has been very gratifying of late. This one practice, an accidental discovery over a century old, which has so changed the face of civilization, has become somewhat unsatisfactory. This is in part because the times demand greater accuracy. Nearly all vaccinations are safe—scientific accuracy requires all to be so.

Modern individualism refuses the slight temporary discomfort from vaccination for its own and the public safety and accepts the chances of a severer variola it cannot appreciate and hopes to escape. Our difficulties have increased in so mild an epidemic, but in the face of a 20 per cent. death-rate, as on our Atlantic seaboard, our work would be easier. In the light of these conditions, it behooves the medical man, first, to secure the best lymph possible; second, to select the best methods of inoculation, and third, to aim at perfect results by attention to slightest detail.

Vaccinia is that modified form of variola which is occasionally produced in the cow, by inoculating her with the virus of variola. It is thus so modified as to become a benign disease and to reproduce itself typically as such both in the cow and man. It is almost never accidentally communicable, but is not so modified but that it confers immunity to variola vera which may be made permanent and complete by repetition.

A characteristic primary vaccination should by the eighth or tenth day show an annular milky elevation a half inch broad, surrounding a depressed center, all
surrounded by an areola two inches or more across. With its full development there should attend a systemic reaction for a day or more, and the resulting scar should be smooth, shining, and white, paler than natural skin, with several depressed dots, remains of the hair follicles.

For the first half of the nineteenth century humanized virus was in use. It has its dangers, but "takes" one or two days quicker and, aside from syphilis and tuberculosis, conveys fewer extraneous organisms, as the streptococci and staphylococci, and so is less troublesome. The immunity resulting is far more permanent. In Mexico, where humanized virus is used, revaccination is rare and seemingly uncalled for. Negri, of Naples, first cultivated calf virus in 1842, and twenty years later it had come into general use. We await the discovery of the specific organisms of vaccinia, since the extraneous organisms attendant upon its cultivation upon the calf often render it too severe and uncomfortable.

In May, 1895, Dr. Gustav Futterer, of the Chicago board of health, in seventy-five bacterial examinations found fifty-five specimens with staphylococci and streptococci. Upon further study it was demonstrated that fifty to sixty days in glycerine destroyed them, the vaccine virus remaining active forty to fifty days more only. Since then, the sixty days' emulsion is the requirement of that board. Every installment of lymph is tested bacterially and clinically, and Dr. Garrott, after the use of 200,000 tubes, says: "I have never found any vaccine so promptly and uniformly successful in producing typical results. I have noted a diminution of the usual inflammatory areola surrounding the vaccine vesicle, less constitutional disturbance, freedom from suppurating sores, inflamed glands and lymph vessels, and it produces a more active and typical vesicle than occurs with virus dried upon an ivory or quill point, resulting in regular, uniform, typical cicatrices." And the 800,000 tubes used by the Chicago
board of health at the close of 1900 fully justified these statements of Dr. Garrott.

In 1891 Dr. Monckton Copeland, of London, suggested glycerine with the vaccine pulp as a preservative, Dr. J. J. Kinyoun, of our Marine Hospital Service, being associated with him at that time. One of the reports to the London government board is entitled "Methods of Clearing and Preserving Vaccine Lymph Indefinitely," and another, "Four Weeks' Exposure to Glycerine Disposes of All Extraneous Organisms." The preserving power is not accepted in this country, and in England not practically, since glycerine tubes are guaranteed only one week.

Before the Academy of Medicine, New York city, February 20, Dr. Roseneau, of the Marine Hospital Service, spoke of glycerine virus from a bacteriological standpoint. He found some makes having more colonies than dry points. Some tubes have very little vaccine. This latter fact explains some of our troubles here in the west. No doubt some glycerine virus is made of vaccine pulp so full of extraneous organisms that by the time the glycerine has destroyed them the vaccine is dead also. But most certainly it is proven that if vaccine virus is carefully prepared in the first place and then treated a proper time with glycerine, a much better class of results is obtained from its use than can yet be obtained in any other way. Too much pulpy material put on the market green makes sore arms, and kept late, gives results lacking in characteristics in vesicle, areola, constitutional effects, and the sought-for immunity. That there are makes, however, uniformly reliable, that with proper care secure immunity without severity, I believe I have practical proof. From the observations quoted above, and from practical results, glycerine virus is preferable to the dry point. But the profession should demand an article prepared by public expense or under public supervision that is uniformly moderate and effectual. There is no excuse for a glycerine product bacterially worse than the dry point.
Dr. Kinyoun, at the meeting of the New York Academy of Medicine, said he had ever since 1891 advocated glycerinated lymph. He had since inspected most of the vaccine institutions of Europe and the Orient, and without hesitation he declared the superiority of glycerinated lymph over dry point could not be questioned. Quite recently, in Japan, he found smallpox thoroughly controlled by revaccination. At Manila glycerinated lymph could not be kept, and used green gave much trouble. Dr. J. H. Huddleston, of New York board of health, declared that no proof had ever yet been adduced to show that tetanus had been inoculated with vaccine. Filtration he mentioned as being impossible, as it would remove the efficiency, the solid matter of good vaccine, with the extraneous organisms. Dr. W. H. Park, of New York, on April 30, at the Association of American Physicians, declared that filtration would not destroy its power.

The Operation.—Clean a space the size of the palm with soap and water, boracic solution, or preferably alcohol, as this with friction leaves the true skin uncovered, is antiseptic and quickly evaporated, not injuring the virus. Second, scarify with a common carpet needle, just sterilized by a flame, a space one-eighth inch square, making three or four marks each way deep enough to show serum but not blood. Third, place the lymph and rub it into the scarification for fifteen or twenty seconds with the sterilized head of another needle, when the marks will show quite red, and the surface be perceptibly raised by the irritation. Fourth, place over the wound several layers of sterilized gauze four inches square, held to the arm by its upper corners by plaster. This should be renewed daily at home, certainly from the fourth day on, the gauze or boiled cheesecloth to be kept in a clean napkin. Fifth, the patient should “keep Lent” for the next ten days in his diet. Keep bowels open and avoid violent exercise. Wear some sign upon the sleeve to avoid injury. Sixth, by the eighth or tenth day inspection should decide upon the character of the result. Vaccinia (primary) should
show the historical Jennerian "dewdrop on a rose," a half-inch annular milky elevation upon an areola two or three inches in diameter. A revaccination may have less marked results but should simulate the primary. There should be some general reaction for a day or more. Without an areola I would doubt much immunity to follow. A mulberry elevation may convey immunity for a few weeks only. Seventh, the gauze dressing should be continued, but without bandage or moisture even from the bath, except, should the gauze become glued to the sore, boiled water may be used to moisten it enough for removal. Should the crust become irritated or fermented, it may easily be controlled by peroxide followed by dry boracic acid, but if allowed to continue untreated, a deep ulcer will occasionally form. The patient may be told this when seen upon the eighth or tenth day and annoyance saved, though immunity will hardly be affected if it does occur. Eighth, the cicatrix should be quite white, smooth, and shining and remain so, excepting a few dots for hair follicles. If the skin soon returns to its natural color, I would suspect the virus.

I would vaccinate all persons exposed, from the newborn babe, in whom reaction is slight and variola severe, to late in life.

Revaccination should occur in youth and early adult life and whenever contagion is about, since no two persons are alike in retaining immunity.

I cannot better close than with Dr. Reynolds' creed:

"We, the undersigned, hereby publicly profess our firm belief, based upon positive knowledge, gained through years of personal experience and study of smallpox and vaccination—

"First. That true vaccination—repeated until it no longer "takes"—always prevents smallpox. Nothing else does.

"Second. That true vaccination—that is, vaccination properly done on a clean arm with pure lymph and kept perfectly clean and unbroken afterwards—never did and never will make a serious sore."
"Third. That such a vaccination leaves a characteristic scar, unlike that from any other cause, which is recognizable during life, and is the only conclusive evidence of a successful vaccination.

"Fourth. That no untoward results ever follow such vaccination; on the other hand, thousands of lives are annually sacrificed through its neglect—a neglect begotten of want of knowledge.

"ARTHUR R. REYNOLDS, M. D.,

"Commissioner of Health, City of Chicago."
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Dawson, J. O...... Lincoln
Dayton, W. L...... Lincoln
Dean, W. W....... Stromsburg
Deardoff, B. M.... Clatonia
Dearing, W. H..... Alma
Deck, M. B...... Bennett
Demaree, E. W..... Roca
Demaree, H. C..... Roca
Dillon, I. H...... Auburn
Dodson, P. F...... Wilber
Dorsey, F. P...... Hartington
Doty, C. W...... Beaver Crossing
Drummond, P. A... Wymore
Dwyer, J. C...... Valentine
East, J. H....... Rising City
Edmiston, A. W..... Omaha
Eigler, C. O...... North Bend
Elmore, J. Q...... Gordon
Ely, W. B........ University Place
Evans, C. D...... Columbus
Everett, H. H...... Lincoln
Everett, M. H...... Lincoln
Fall, C. P....... Beatrice
Farley, B. F....... York
Feese, J. P...... Franklin
Finley, H. L....... Pawnee City
Fitzsimmons, A. Tecumseh
Fletcher, E. R...... St. Paul
Foehchtmann, J. H. Cozad
Foote, J. S....... Omaha
Francis, H. W...... Bancroft
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Oklahoma City, Okla.
Furay, C. E....... Chadron
Gafford, C. C...... Wymore
Gage, W. V....... McCook
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Galbraith, W. J..... Honolulu
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Hunt, W. N...... Washington
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Ira, G. W....... Santee Agency
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<td>Wolcott, R. H.</td>
<td>Lincoln</td>
</tr>
<tr>
<td>Woods, R.</td>
<td>Shickley</td>
</tr>
<tr>
<td>Woodward, D. S.</td>
<td>Hastings</td>
</tr>
<tr>
<td>Wright, S. A.</td>
<td>Pawnee City</td>
</tr>
<tr>
<td>Yeakel, W. K.</td>
<td>Durand, Ill.</td>
</tr>
<tr>
<td>Young, W. R.</td>
<td>Ansley</td>
</tr>
<tr>
<td>Zellers, M. T.</td>
<td>Hooper</td>
</tr>
<tr>
<td>Zigler, C. H.</td>
<td>Vesta</td>
</tr>
</tbody>
</table>
INDEX.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abdominal Surgery, My First Year's Work in</td>
<td>70</td>
</tr>
<tr>
<td>Acromegaly, Case and Autopsy</td>
<td>255</td>
</tr>
<tr>
<td>Address of Welcome</td>
<td>7</td>
</tr>
<tr>
<td>Aikin, J. M.</td>
<td>140</td>
</tr>
<tr>
<td>Allison, C. C.</td>
<td>299</td>
</tr>
<tr>
<td>Anderson, A. B.</td>
<td>239</td>
</tr>
<tr>
<td>Andrews, J. A.</td>
<td>283</td>
</tr>
<tr>
<td>Anesthetic, Schleich</td>
<td>206</td>
</tr>
<tr>
<td>Apocynum Cannabinum in Some Dropsical Conditions</td>
<td>335</td>
</tr>
<tr>
<td>Appendicitis, Some Cases of</td>
<td>239</td>
</tr>
<tr>
<td>Appendix Disease, An Experience with Some Atypical Cases of</td>
<td>234</td>
</tr>
<tr>
<td>Arrangements, Report of Committee on</td>
<td>9</td>
</tr>
<tr>
<td>Auditing Committee, Report of</td>
<td>21</td>
</tr>
<tr>
<td>Autointoxication in Relation to Nervous Disorders</td>
<td>133</td>
</tr>
<tr>
<td>Bicknell, G. H.</td>
<td>111</td>
</tr>
<tr>
<td>Blair, E. S.</td>
<td>181</td>
</tr>
<tr>
<td>Brain Abscess, Shall the Ear Surgeon Operate for</td>
<td>115</td>
</tr>
<tr>
<td>Brain Abscess, Two Cases of</td>
<td>123</td>
</tr>
<tr>
<td>Bridges, W. O.</td>
<td>234</td>
</tr>
<tr>
<td>Bryant, D. C.</td>
<td>119</td>
</tr>
<tr>
<td>Bullard, J. W.</td>
<td>75</td>
</tr>
<tr>
<td>Business Phase of Our Daily Work</td>
<td>225</td>
</tr>
<tr>
<td>Butler, F. A.</td>
<td>347</td>
</tr>
<tr>
<td>Cameron, J. J.</td>
<td>301</td>
</tr>
<tr>
<td>Cancer, X-Ray Treatment of</td>
<td>92</td>
</tr>
<tr>
<td>Cerebral Thrombosis</td>
<td>147</td>
</tr>
<tr>
<td>Chairmen of Sections</td>
<td>5</td>
</tr>
<tr>
<td>Christie, W. H.</td>
<td>261</td>
</tr>
<tr>
<td>Clark, A. J.</td>
<td>270</td>
</tr>
<tr>
<td>Committees</td>
<td>5</td>
</tr>
<tr>
<td>Congenital Hernia of the Liver into the Umbilical Cord</td>
<td>75</td>
</tr>
<tr>
<td>Cornea, Ulcer of the, in Smallpox</td>
<td>119</td>
</tr>
<tr>
<td>Corresponding Secretary, Report of</td>
<td>11</td>
</tr>
<tr>
<td>Coulter, F. E.</td>
<td>147</td>
</tr>
<tr>
<td>Credential Committee, Report of</td>
<td>19, 20</td>
</tr>
<tr>
<td>Crummer, Le Roy</td>
<td>167</td>
</tr>
<tr>
<td>Daily Work, The Business Phase of Our</td>
<td>225</td>
</tr>
<tr>
<td>Demaree, Emma W.</td>
<td>161</td>
</tr>
<tr>
<td>Diphtheria, and Serum Therapy</td>
<td>261</td>
</tr>
<tr>
<td>Ectopic Gestation, Atypical Cases of</td>
<td>299</td>
</tr>
<tr>
<td>Edema, Acute Suffocative Pulmonary</td>
<td>167</td>
</tr>
<tr>
<td>Election of Officers</td>
<td>32</td>
</tr>
<tr>
<td>Ely, W. B.</td>
<td>41</td>
</tr>
<tr>
<td>Everett, H. H.</td>
<td>70</td>
</tr>
<tr>
<td>Gifford, H.</td>
<td>115</td>
</tr>
<tr>
<td>Greene, J. L.</td>
<td>9, 14</td>
</tr>
<tr>
<td>Grothan, Georgiana</td>
<td>340</td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>-----------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Hall, E. L.</td>
<td>21</td>
</tr>
<tr>
<td>Hamilton, H. P.</td>
<td>81</td>
</tr>
<tr>
<td>Hatch, Fred, Rev.</td>
<td>7</td>
</tr>
<tr>
<td>Henry, W. O.</td>
<td>279</td>
</tr>
<tr>
<td>Hepatic Abscess, A Case of</td>
<td>161</td>
</tr>
<tr>
<td>Hernia, Best Suture in the Repair of</td>
<td>81</td>
</tr>
<tr>
<td>Hildreth, M. L.</td>
<td>335</td>
</tr>
<tr>
<td>Hobbs, W. R.</td>
<td>310</td>
</tr>
<tr>
<td>Inanition Fever in the Newly-born Child</td>
<td>347</td>
</tr>
<tr>
<td>Infectious Diseases, Duty to the Public in Acute</td>
<td>158</td>
</tr>
<tr>
<td>Influenza</td>
<td>181</td>
</tr>
<tr>
<td>Intestinal Obstruction</td>
<td>250</td>
</tr>
<tr>
<td>Intranasal Sarcoma</td>
<td>111</td>
</tr>
<tr>
<td>Jonas, A. F.</td>
<td>84</td>
</tr>
<tr>
<td>Kidney Disease, Circulatory Changes a Factor in</td>
<td>191</td>
</tr>
<tr>
<td>Labor, Premature and Septic Infection</td>
<td>283</td>
</tr>
<tr>
<td>Lavender, W. R.</td>
<td>191</td>
</tr>
<tr>
<td>Lemere, H. B.</td>
<td>106</td>
</tr>
<tr>
<td>Leucorrhea</td>
<td>279</td>
</tr>
<tr>
<td>Limitation of Medical Colleges</td>
<td>41</td>
</tr>
<tr>
<td>Lord, J. P.</td>
<td>9, 92</td>
</tr>
<tr>
<td>Lying-in Room, Management of</td>
<td>270</td>
</tr>
<tr>
<td>McKinnon, A. I.</td>
<td>66</td>
</tr>
<tr>
<td>Mansfelde, A. S. von</td>
<td>19, 22</td>
</tr>
<tr>
<td>Materia Medica, The Passing of</td>
<td>317</td>
</tr>
<tr>
<td>Medical Legislation, Report of Committee on</td>
<td>28</td>
</tr>
<tr>
<td>Medical Literature, Rubbish in</td>
<td>172</td>
</tr>
<tr>
<td>Migraine, Etiology and Treatment of</td>
<td>140</td>
</tr>
<tr>
<td>Milroy, W. F.</td>
<td>225</td>
</tr>
<tr>
<td>Monstrosities</td>
<td>310</td>
</tr>
<tr>
<td>Necrology, Report of Committee on</td>
<td>29</td>
</tr>
<tr>
<td>Nephroptosis, Significance of</td>
<td>84</td>
</tr>
<tr>
<td>Nervous and Mental Disorders, Autointoxication in Relation to</td>
<td>133</td>
</tr>
<tr>
<td>Nesbit, A. D.</td>
<td>158</td>
</tr>
<tr>
<td>Normal Labor, The Management of</td>
<td>301</td>
</tr>
<tr>
<td>O'Connell, J. M.</td>
<td>200</td>
</tr>
<tr>
<td>Officers</td>
<td>5</td>
</tr>
<tr>
<td>Orr, H. W.</td>
<td>11</td>
</tr>
<tr>
<td>Our Duty to the Public in Acute Infectious Diseases</td>
<td>158</td>
</tr>
<tr>
<td>Owen, F. S.</td>
<td>123</td>
</tr>
<tr>
<td>Philbrick, I. C.</td>
<td>317</td>
</tr>
<tr>
<td>Pickett, I. N.</td>
<td>225</td>
</tr>
<tr>
<td>Pinkerton, W. J.</td>
<td>250</td>
</tr>
<tr>
<td>Pregnancy, A Case of Extraterine</td>
<td>295</td>
</tr>
<tr>
<td>President's Address, Report of Committee on</td>
<td>31</td>
</tr>
<tr>
<td>Pulmonary Edema, Acute Suffocative</td>
<td>167</td>
</tr>
<tr>
<td>Recording Secretary, Report of</td>
<td>10</td>
</tr>
<tr>
<td>Reorganization</td>
<td>28</td>
</tr>
<tr>
<td>Roberts, J. G.</td>
<td>133</td>
</tr>
<tr>
<td>Sarcoma, Intranasal</td>
<td>111</td>
</tr>
<tr>
<td>Septic Infection and Premature Labor</td>
<td>283</td>
</tr>
<tr>
<td>Serum Therapy, With Especial Reference to Diphtheria</td>
<td>261</td>
</tr>
<tr>
<td>Title</td>
<td>Page</td>
</tr>
<tr>
<td>------------------------------------------------------------</td>
<td>------</td>
</tr>
<tr>
<td>Shall the Ear Surgeon Operate for Brain Abscess</td>
<td>115</td>
</tr>
<tr>
<td>Shidler, G. W.</td>
<td>324</td>
</tr>
<tr>
<td>Slabaugh, W. H.</td>
<td>196</td>
</tr>
<tr>
<td>Smallpox Problem, The</td>
<td>196</td>
</tr>
<tr>
<td>Smallpox, Ulcer of the Cornea in</td>
<td>119</td>
</tr>
<tr>
<td>Stone, R. M.</td>
<td>206</td>
</tr>
<tr>
<td>Suggestion and Autosuggestion</td>
<td>324</td>
</tr>
<tr>
<td>Surgery, Abdominal</td>
<td>70</td>
</tr>
<tr>
<td>Surgery, Tendon</td>
<td>66</td>
</tr>
<tr>
<td>Sutherland, J. L.</td>
<td>172</td>
</tr>
<tr>
<td>Therapeutics, Progress in</td>
<td>340</td>
</tr>
<tr>
<td>Therapeutics, The Passing of</td>
<td>317</td>
</tr>
<tr>
<td>Thrombosis, Cerebral</td>
<td>147</td>
</tr>
<tr>
<td>Towne, S. R.</td>
<td>349</td>
</tr>
<tr>
<td>Treasurer, Report of</td>
<td>14</td>
</tr>
<tr>
<td>Turbinate, The Middle</td>
<td>106</td>
</tr>
<tr>
<td>Typhoid Fever, Some Phases of</td>
<td>200</td>
</tr>
<tr>
<td>Vaccination, Care in</td>
<td>349</td>
</tr>
<tr>
<td>Voice Culture, Anatomical Essentials in</td>
<td>100</td>
</tr>
<tr>
<td>Wilkinson, A. D.</td>
<td>10</td>
</tr>
<tr>
<td>Williams, J. P.</td>
<td>100</td>
</tr>
<tr>
<td>Wilson, O. L.</td>
<td>285</td>
</tr>
<tr>
<td>X-Ray Treatment of Cancer</td>
<td>92</td>
</tr>
</tbody>
</table>