PROCEEDINGS

OF THE

NEBRASKA

STATE MEDICAL SOCIETY

TWENTY-SECOND ANNUAL SESSION.

HELD AT

BEATRICE, MAY 13TH TO 15TH, 1890.
## OFFICERS--1890-91.

- **D. A. WALDEN**, President.
- **C. INCHES**, 1st Vice President.
- **H. B. LOWRY**, 2nd Vice President.
- **M. L. HILDRETH**, Secretary.
- **L. A. MERRIAM**, Corresponding Secretary.
- **W. M. KNAPP**, Treasurer.

## COMMITTEES

### Credentials

### Arrangements

### Grievances

### Necrology

### Auditing

### Practice of Medicine

### Surgery

### Obstetrics

### Gynaecology
- **W. F. Milroy**, P. D. Halderman, A. Shipman.

### Nervous and Mental Diseases
- **C. Gapen**, W. M. Knapp, F. A. Butler.

### Anatomy and Physiology

### Ophthalmology and Otolology

### Materia Medica and Therapeutics

### Public Health and Medical Legislation

### Pathology and Histology
- **A. B. Anderson**, W. H. Wilson, I. N. Pickett.

### Laryngology

### Dermatology

### Medical Jurisprudence, Medical Chemistry and Toxicology
MINUTES
OF THE
TWENTY-SECOND ANNUAL SESSION.

BEATRICE, MAY 13TH TO 15TH, 1890.

Beatrice, May 13, 1890.

The society was called to order at 4:15 p.m., the President, Dr. J. C. Denise, in the chair.

The following named members signed the roll during the session: M. L. Hildreth, Lyons; W. M. Knapp, Lincoln; J. C. Denise, Omaha; L. A. Merriam, Omaha; J. F. Armstrong, Beatrice; J. K. L. Duncan, De Witt; D. A. Walden, Beatrice; P. A. Butler, Howard; G. O. W. Farnham, Beatrice; W. J. Harris, Beatrice; C. F. Kirkpatrick, Ashland; G. L. Humphreys, Kearney; J. J. Long, Wakefield; J. W. Bullard, Pawnee City; E. Smith Burchard; I. N. Pickett, Odell; J. O. Carter, Lincoln; J. E. Hall, Weeping Water; F. A. Long, Madison; B. B. Davis, McCook; C. Inches, Scriber; L. J. Abbott, Fremont; A. B. Somers, Omaha; L. A. Wright, Pawnee City; M. W. Stone, Hastings; J. P. Lord, Omaha; M. T. Zellers, Hooper; A. B. Anderson, Pawnee City; J. L. Devries, Fremont; L. B. Smith, Fremont; A. F. Jonas, Omaha; B. F. Farley, York; C. B. Aukes, Courtland; B. T. Whitmore, Lincoln; B. F. Crummer, Omaha; E. A. Benton, Central City; J. C. F. Bush, Wahoo; H. B. Lowry, Lincoln; T. J. Farleigh, Johnstown; N. R. Hobbs; Elmwood; A. Conrad, Crete; W. L. Dayton, Lincoln; A. Bowen, Nebraska City; W. O. Henry, Pawnee City; W. H. Wilson, Table Rock; G. L. Fritchett, Fairbury; M. A. Perkins, Trumbull; B. F. West, Nelson; W. O. Bridges, Omaha; S. W. Dodge, Fairbury; W. F. Milroy, Omaha; D. Macrae, Council Bluffs; H. C. Demaree, Roca; W. Ackley, Juniata; A. B. Stuart, Cedar Bluffs; J. T. Wade, Arlington; H. Gifford, Omaha; G. H. Peebles, Lincoln; H. Link, Millard; J. H. Miller, David City; D. C. Bryant, Omaha.

Two members of the Committee on Credentials being absent, Drs. Duncan and Humphreys were appointed to fill the vacancy.

Adjourned till 8 o'clock p.m.

Evening session called to order at 8:15.

Committee on Credentials reported favorably on the following named candidates, and they were elected to membership: J. D. Miles, Schuyler; M. W. Walton, Beatrice; L. D. Ames, Wahoo; M. H. Blackburn, Filley; J. S. Butler, Superior; M. B. Newhouse, Hickman; J. I. Gumaer, Blue Springs; J. C. Mosshart, Chester; L. C. Gillette, Omaha; E. C. Underburg, Stanton; H. E. Harrington, Bertrand; T. D. Thompson, West Point; F. H. Broyles, Beatrice; M. L. Arthur, Pender; Robert McConaughy, York; W. F. Race, Kearney; Ira Doan, North Bend; M. Kirkpatrick, South Omaha; C. P. Fall, Beatrice; C. A. Bradley, Beatrice; E. L. Patterson, Odell; M. T. Zellers, Hooper, G. F. Wilkinson, Omaha; W. F. Reynolds, York; R. C. McDonald, Fremont; H. W. Strader, Omaha; E. W. Martin, Fremont; Clark Gaden, Omaha; H. L. Burrell, Omaha; Elizabeth Grabe, Beatrice; C. Rosewater, Omaha; T. M. Warnock, Liberty; E. Bates, Beatrice.

By advice of the Credentials Committee, the Secretary was instructed, by vote of the society, to write a kindly letter of caution to one of the candidates (Dr. Underburg) upon matters pertaining to questionable advertising.

SECRETARY'S REPORT.

I herewith submit my report as Secretary for the year ending May 13, 1890:

Assuming the duties at the Kearney meeting, and not being familiar with the workings of the office, it is but natural that some incompetency on my part should be manifest. The duties are not insignificant, neither would I underestimate the honors pertaining to it. The desire has been to do the work faithfully.

The number of new members joining at the last meeting was 19.

Deaths during the year, as far as reported, 3, leaving a present membership of 255.

Dr. A. B. Newkirk, having removed to California, wishes to be dropped.

The matter of binding the proceedings of '88 has been a source of no small annoyance to the publisher of The Clinic and the Secretary. This can be looked upon only as an unfortunate accident, as all parties concerned, and especially Mr. Penfold, have used every reasonable means to obviate the difficulty, and if all have not been supplied with copies it is because enough copies could not be secured for binding to meet the demand.

Regarding the matter of mailing the board proceedings to members, would suggest that the society enter into an agreement by which for a consideration (the necessary expense) they be mailed direct from the publisher to the members.

Concerning the publication and binding of the proceedings of '89, I have to report that the publisher of The Clinic has fulfilled his contract to the letter, and would recommend that a similar contract be made for the coming year, if possible.
There has accumulated in the Secretary's office during the past few years about three hundred (300) copies of bound proceedings of different years—1877-87 inclusive.

There are certainly so many of them, neither ornamental or useful. If the society can devise any means of disposing of them where they will do good, it would be well to do so.

Delegates' credentials to the last meeting of the American Medical Association were issued to the following named members: Drs. F. A. Long, R. B. Knapp, and to the Colorado State Society to Dr. B. T. Whitmore.

It will be noticed that no report of discussions of papers at the Kearney meeting was published. The Committee of Arrangements had made provisions for a stenographer, but at the last moment he was called away by an order from the courts, for which he was an official reporter. Another was secured, but he, too, after reporting part of the session, disappeared. Hence no report. No blame is due the committee.

In the revised list of members published a few errors appear. These are, to a certain extent, unavoidable. Members change their places of residence and do not notify the Secretary. In a society having several hundred members a secretary cannot have a perfect knowledge of their wanderings. In this connection it would be proper and well to publish list of members in each volume of transactions, and if members would be more careful to notify the Secretary of changes it would save him and themselves much annoyance.

The following named State societies are holding meetings simultaneously with us: Arkansas, Indiana, Kansas, Kentucky, Louisiana and Washington.

Respectfully submitted,

M. L. Hildreth, Secretary.

FINANCIAL STATEMENT FOR 1889-90.

Nebraska State Medical Society, in account with M. L. Hildreth, Secretary:

1889. Debit.

May 25. To stationery and postage $1.85
June 6. To stationery and postage 4.10
June 8. To express 80
June 22. To postage for Dr. Mansfield 5.50
July 1. To postage 1.00
July 8. To postage 5.00
Dec. 21. To postage 5.00
" 24. To postage 2.40
" 31. To postage 10.00
" 31. To stationery and printing 2.50
" 31. To freight on Transactions 1.00

1889. Credit.

May 23. By cash $100.00

1889. May 19. To cash, accompanying statement 40.85

REPORT OF CORRESPONDING SECRETARY.

In presenting for your consideration this, my third report, and a review of the transactions of medical societies as I have received during the past year, I take pleasure in noting the excellent work done by some societies. The Omaha Clinic, containing our transactions of last year, also a bound volume, have been sent to all the societies in the United States. I have written to every secretary of every society in this country, including Canada, New Brunswick and Nova Scotia. A few have had the courtesy to respond. The proceedings of the Canadas, Nova Scotia and New Brunswick, and several special societies in our country, I have not been able to obtain, because they do not publish them for distribution.

In reviewing these thirty-one volumes of more than 7,700 pages, and 600 different papers, I have been often amazed at the lengthy literary effort, full of pathos, humorous stories, well rounded periods, and elegant rhetorical figures, but containing no notes of scientific progress. This style of paper seems to prevail extensively in the Southern states. The members of Florida State Medical Society are to be commended for their earnest and untiring efforts to secure a State Board of Health. Only five papers were presented and three of these were upon Yellow Fever. In a country where this disease is likely to prevail, it is indeed surprising to me that their ideas should be so antiquated. Nothing is mentioned relative to the method of treatment taught by Dr. Domingos Freire, of Rio Janeiro, in 1887, nor anything relative to the hygienic directions for its prophylaxis and treatment as prepared by the Paris Commission, composed of Drs. Gelineau and Grand, and reported by Dr. Goyard in 1887.

In New Hampshire proceedings, 1888, is an excellent paper on Auto-infection by Dr. J. J. Berry, of Portsmouth. Dr. Adams in his discussion of Report on Surgery, recommends for the treatment of burns, a paste composed of newly made water-slaked lime mixed with linseed oil and used quite warm, claiming it is thicker than the old method of lime water and linseed oil and keeps the air out better. A Society of 98 years' existence ought to do more and better work.

Connecticut Society is also 98 years of age and ought to do better work. Of the nineteen papers published, six had been read at some County Society prior to this time. The attendance is not stated, but from a membership of 508 it seems as though the attendance was twenty. Four votes were cast during election of officers.

The literary and scientific work of the Society really consisted of the President's most excellent address and seven papers read, which averages about one paper from each member during his life, supposing he lives to an old age.

In New Hampshire proceedings, 1889, Dr. Stackpole advocates bleeding in pneumonitis. I am surprised that the Doctor has not learned that there is a better way to manage these cases. As Dr. Cogswell says, "Doctors wait too long in this disease." Dr. Adams holds that pneumonitis cannot be diagnosed until evacuation has set in. The Doctor should learn to treat the dynamic conditions that give rise to this evacuation. We do not treat diseases, but we do, or should, treat conditions. It is unnecessary for diseases to run through their various stages when taken in time. The dynamic conditions that precede the evacuation in pneumonitis, may be diagnosed and the case jugulated in its early stages.

Tennessee, 1889. Prayer at opening of each daily session printed in full in proceedings. Dr. Omohundro recommends to relieve severe cases of vomiting of pregnancy, to aspirate and remove a portion of the liquor amnii, thereby taking off the
tension, relieving the patient and allowing her to go on to full term.
Missouri, 1889. Dr. A. B. Miller advocates the disuse of opium in peritonitis, and the substitution of saline cathartics. His plan was supported by several physicians and is in accord with the modern idea of physicians who rely upon the use of alkaloidal remedies. This Society ranks far above the average and speaks well for the standing of the profession in the state.

The proceedings of the New York Medical Association, 1888, is a magnificent product of thoughtful and scientific men. It needs to be read to be appreciated, and every member of this society who desires to keep pace with the progress of events, should own a copy. I cannot transcribe the many valuable thoughts and suggestions therein contained, but do desire to again invite your attention to the method they adopt in securing papers for the society. A paper is read introductory to a discussion of some particular topic. The various divisions of the topic are then parcelled out to several physicians, who each prepare a paper upon the special sub-division allotted him. These various papers are then discussed in an impromptu manner by those present desiring to do so. I urge upon the members of the Nebraska State Medical Society to adopt this method, and for this purpose I have prepared similar questions on medical and surgical topics, for the annual session one year hence and trust I shall find no difficulty in securing members to prepare the papers. Several Societies have recently been considering the wisdom of publishing their proceedings in some medical journal. A few have already adopted this plan. This is a step of progress I was glad to find.

Dr. L. A. Merriam, Cor. Sec'y, Omaha, Neb.

N. B.—All published Transactions of other Medical Societies should be sent to the above address. Report referred to committee on publication.

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<th>SOCIETIES</th>
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Excellence papers worthy a careful perusal.

Excellent papers worthy a careful perusal. Recommended that the proceedings be published in a medical journal. A very wise suggestion.

An elegant volume, worthy a place in the library of every progressive physician.

An excellent working society.

Excellent papers only. Fair discussions; nothing new or interesting.

Lengthy scholarly papers; 172 members reside in Baltimore.

Fair papers. Brief discussions.

Excellent papers. Good discussions.

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TREASURER’S REPORT.
MAY 13, 1890.

To the Officers and Members of the Nebraska State Medical Society:

Your Treasurer hereby submits for your consideration the following report for the year ending May 13, 1890:

DEBITS.

On hand as per last report, May 20, 1889 .................................. $806 70
Received from Secretary, initiation fees 19 new members ........... 95 00
Received annual dues from members ..................................... 231 00

Total receipts ........................................................................ $632 70

CREDITS.

By voucher No. 1 ................................................................. $100 00
By voucher No. 2 ................................................................. 50 00
By voucher No. 3 ................................................................. 40 00
By voucher No. 4 ................................................................. 300 00
By voucher No. 5 ................................................................. 300 00
By voucher No. 6 ................................................................. 90 00

Total paid out ........................................................................ $121 50

Balance on hand .................................................................... $211 20

I also submit herewith a list of 33 member who are dropped from our rolls by the action of the society at the last meeting at Kearney. I find that we have, as shown by the books, 242 members still in good standing, and that these members are indebted to the society in the total sum of $926, much of which will probably be paid in at this meeting.

W. M. KNAPP, Treasurer.

BEATRICEmay 14, 1890.

We, your Auditing Committee, respectfully submit the following report:

After examining the Treasurer’s ledger, bills, vouchers and report, we find them to be correct, and recommend that the report be adopted. We also recommend that attached bill of Dr. Knapp for $13 be allowed.

J. W. BULLARD,
Geo. O. W. FARNHAM,
L. B. GILLETTE,

Committee.

Report adopted.

Reading of communication from Beaumont Hospital Medical College. Also a circular letter on “Uniform Medical Legislation” from W. B. Atkinson, Secretary of the American Medical Association, consideration of which was deferred until the evening of the 14th.

WEDNESDAY MORNING.


Short address of welcome from Hon. J. L. Tate, Mayor of Beatrice.

Responded to by the President, Dr. Denise.

Report on “Progress in Practice of Medicine” read by Dr. Macrae and discussed.

Paper by Dr. Butler on “Chorea.” Discussion. Referred to Committee on Publication.

Paper by Dr. Butin, in absence of writer, was read by title and referred.

Reading paper by Dr. Hildreth on “Some Thoughts on Specialties and Specialists.” Discussed and referred for publication.

Drs. Ware, Moore and Geiger, visiting delegates from Illinois, Minnesota and Missouri, were invited to seats upon the stage, and to the privileges of the society. Voted that all visiting physicians be made “members by invitation.”

WEDNESDAY AFTERNOON.

Called to order at 3:30.

Reading of congratulatory telegrams from absent members and from other State societies in session. Secretary instructed to reply.

Paper on “Cystotomy for the Relief of Vesical Catarrh,” by Dr. Jonas, read and discussed.

Reading by Dr. Bridges of paper on “Fractures Through the Head of the Radius.” Discussion.


Exhibition of apparatus for draining and wash-out cavity in empyema, with remarks by Dr. Gapen.


Reading and discussion of paper by Dr. Somers on “Antiseptic Midwifery.” Adjourned.

EVENING SESSION.

Called to order at 8 o’clock.

By vote, the matter of the communication from Secretary Atkinson, of the American Medical Association, on “Uniformity of Medical Legislation,” was referred to a committee—Drs. Gapen, Crummer and F. A. Butler.

Reading of the minutes dispensed with, by vote.

The following resolution, introduced and passed at last meeting, and having been omitted from the record, was ordered recorded:

Resolved, That hereafter any member shall have the right to submit for publication as elaborate a paper as he wishes, but he shall be limited to twenty minutes in the reading and ten minutes for closing the discussion, and members rising to discuss papers shall do so but once for each paper, and not occupy more than five minutes.

By vote, Lincoln was chosen as the next place of meeting.

The resolution introduced by Dr. R. C. Moore at the last meeting to repeal the amendment to Section 3 of the Constitution was considered and, by vote, lost.

The following eulogy was sent Dr. O. C. Reynolds, Chairman, by Mrs. Dr. Lane, wife of the late Milton Lane.

The subject of this sketch, Dr. Milton Lane, was born on his father’s farm in Boone county, Indiana, on the 14th day of August, 1847.
In his boyhood he was of strong and rugged frame and when he reached maturity, he possessed a perfect physique. Of a mental constitution in keeping with his physical strength and activity, he made the most possible of the crude and insufficient facilities afforded by the country schools at that period. He supplemented this by a constant attendance upon institutions of a higher order for the five years preceding the attainment of his majority—a large portion of this time being spent at the Indiana University at Bloomington. He subsequently taught school, and having chosen medicine as his profession, he entered upon its study with the same zeal and energy that had characterized him as a pupil and a teacher. He began the practice of medicine at Reelsville, Putnam county, Indiana, in 1863, and received his diploma from Jefferson Medical College in 1869, six years after commencing the practice of medicine.

From the beginning he was markedly successful. He was abundantly endowed with those peculiar mental qualities essential to the competent practitioner. Zeal, patience and research characterized him in an eminent degree, and he soon rose to a high rank in his profession. Of a retiring and modest disposition, he made no effort at the display of his talents, but quietly pursued his way, content with the approval of his conscience, the love of his friends and the confidence of his patients. In his personal character he was a thorough gentleman, a warm friend, a kind husband and father, and a possessor of a perfectly rounded character in all the relations of life. As a physician, Dr. Lane was a constant student and an advanced thinker. His keen eye penetrated every new suggestion pertaining to the profession, and his powers of analysis informed him at a glance how much he should adopt, what he should discard. In diagnosis he was especially acute, and his information was fully abreast of the latest discoveries in pathology and treatment.

As a surgeon he achieved a distinction quite as marked as that which attended his general practice, presiding in many difficult and dangerous cases with skill and success.

The last ten years of Dr. Lane’s life were spent in Lincoln, where he had gained a personal and professional standing second to no physician in the state. He was one of the founders of the Lincoln Medical Society and this Society is indebted to him for its present standing, as his devotion to its interests, carried it over periods of time when it would have ceased to exist, had he been less faithful. To the youngest members of the profession he was a guide, counselor and friend. He was a tireless worker, and his last illness was chiefly due to over-exertion and disregard of fatigue.

He died September 16th, 1889, of Peritonitis. His wife, Dr. S. M. Lane, and their only child, Bessie, survive him.

We regret to say that we did not have the pleasure of a personal acquaintance with Dr. Lane, as did the Lincoln physicians, but have no doubt, however, that this eulogy, although written by a near friend, is not at all too lavish in its portrayal of the virtues of the Ex-President of this State Medical Society. However, we would endorse this paper by adding that the deceased was a member of the State Medical Society for a period of years, and that he creditably filled the office of Vice-President during the session of 1887 at Omaha, Neb., also that of President in 1888 and 1889 at Kearney, at which time he appeared to be in the best of health and had as good prospects for a long and useful life before him, as any member present.

If any other deaths have occurred in our ranks during the year just passed, we have not been made cognizant of them.

We would recommend for the assistance of future committees on Necrology, that all deaths of members of this Society be reported to the Omaha Clinic for publication.

Respectfully submitted by the committee on Necrology.

O. C. REYNOLDS,
D. D. POTTER.

Report of Committee on Secretary’s report:
We, your committee to whom was referred the report of the Secretary, report that we find the financial statement correct, and we recommend that the report be adopted by the society.

J. F. ARMSTRONG,
F. A. BUTLER,
J. C. MOSSHART,
Committee.

The following resolutions were introduced by Dr. Knapp:

Resolved, That the thanks of this society be extended to the profession of Beatrice for their zeal and efforts which has done so much to contribute to the pleasure and profit of our present meeting, and especially to the citizens of Beatrice for their earnest and active interest in providing for our entertainment and pleasure while here; also to the various railroads centering in this beautiful city for courtesies extended.

Adopted by unanimous vote.

By Dr. Knapp:

Resolved, That the delegates from the Nebraska State Medical Society to the American Medical Association be instructed to use all honorable means to second the efforts of the Omaha Medical Society to secure the location of the next meeting of the Association in the city of Omaha.

Carried by unanimous vote.

By Dr. Duncan, DeWitt, Neb.:

Be it Resolved, By the Nebraska State Medical Society now in session, that hereafter this society will not permit the exhibition of “proprietary remedies” within the building or among the exhibits before said society.

Carried.

By unanimous vote the names of Drs. O. C. Reynolds and D. D. Potter, of Seward, were dropped from the roll of membership at their request.

By vote $100 was appropriated for use of the Secretary for the coming year.

Election of officers. Drs. Milroy and Duncan appointed tellers:

President,....................D. A. Walden, Beatrice.
First Vice-President,.........Dr. C. Inches, Scribner.
Second Vice-President, Dr. H. B. Lowry, Lincoln.
TWENTY-SECOND ANNUAL SESSION

Secretary, .............. Dr. M. L. Hildreth, Lyons.
Corresponding Sec'y, ....... Dr. L. A. Merriam, Omaha.
Treasurer, ............... Dr. W. M. Knapp, Asylum.

Adjourned.

MORNING SESSION.

May 15. Called to order by the Secretary. Dr. Picket elected Temporary Chairman. Reading list of delinquent members to be dropped in accordance with resolution adopted at last meeting.


Voted that the dues of Dr. J. C. Campbell be remitted.

Exhibition of specimens of diseased ovaries by Dr. Summers, Jr.

Reading of paper by Dr. J. W. Ballard on “Pendulous Abdomen as a Factor in the Causation of Difficult Labor.” Referred.

Paper by Dr. Humphreys, “An Unsuccessful Case of Cesarean Section.” Referred for publication.

Paper by Dr. I. W. Pickett, “Quinine as an Oxytocic,” discussed and referred.

Paper by B. B. Davis on “Induction of Premature Labor in Habitual Death of the Fetus.” Read by title and referred.

Chairmen of committees for 1891 announced with the request that each chairman name his associates.

Paper by Dr. E. Smith on “A Case of Labor with Occiput in Hollow of Sacrum.” Discussed and referred for publication.

“Case of Malformation of Fetus, with specimen,” by M. A. Perkins. Referred.

Reading of paper on experiences by Dr. Bowen.

Paper by Dr. Lord on “Abortion” read by title and referred.

Paper by Dr. Crummer on “Diagnosis and Management of Salpingitis.” Read and discussed.

Adjourned till 1:15.

AFTERNOON SESSION.

Called to order at 1:15 p.m.

Paper on “Errors of Refraction and Headaches” read and discussed.

Report on “Progress in Laryngology,” by Dr. Benton, read and discussed.

Voted that “all papers forwarded to the Secretary, and not otherwise disposed of, be recorded as read by title and published.”

Adjourned sine die.

M. L. HILDRETH, SECRETARY.

MAY 15, 1890.

REPORT OF PROGRESS—SECTION OF PRACTICE OF MEDICINE.

By Donald Macrae, M. D., Council Bluffs, Ia.

In presenting this report on the progress of medicine, I am unable to call your attention to any striking or important discovery made during the past year. Sudden and important discoveries are rare in medicine. Clinical experience and important facts from many observers, go to make up the sum total of our advance. Brilliant discoveries are made almost by chance. General advance, and improvement all along the line, are attained by patient investigation and laborious research. Slow and gradual, but sure in their progress, they are absorbed by practitioners almost unconsciously, until, on looking back through a course of years, we are astonished to find that the ordinary routine and methods of the past are almost unknown in the medication of the present.

The efforts of investigators are still largely directed to a search for the underlying cause of disease, for the presence of a preconceived germ, and for some method of applying and administering remedies, which, while they will produce no injury to the living tissues, will destroy these germs and effectually prevent their destructive influence. The Bergeon method of administering gaseous emanations of sulphuretted hydrogen, for the destruction of the tubercle bacillus, is a nearly forgotten instance of a seemingly possible endeavor in that direction. Creasote is still being employed by many physicians to the same end and, while I presume the bulk of opinion is not strongly in its favor, some practitioners
speak highly of its good effects. They claim that it retards the development of tuberculosis, and sometimes remedies and cures the condition. In the same line, the inhalation of hot air has been recently recommended in such strong and glowing terms that many physicians have made use of the same, without, however, improving the condition of their patients.

The treatment of typhoid fever by the administration of antiseptics, and even by the application of germicides to the actual seat of disease, has received and is receiving much attention. Salol is much employed by some practitioners with this object in view, indeed, in general septicemic affections its administration is highly recommended. It has been recently recommended for the disinfection of the urine in kidney diseases and diseases of the bladder and urethra as well. In dysentery the injection through a long tube of sublimate solution has proved effective. The strength used, as reported, was one in five thousand, of which six ounces was injected, with the result of quickly relieving and curing the patient. Creolin has also been used in the same way. It is recommended on account of the greater safety of the medicinal and the less danger of toxic effects. The drug was used by the observer, a Russian physician, in the shape of enemata made of from five to eight pounds of a half per cent. solution, and administered twice and sometimes three times and even four times a day. The patient was placed in the knee-elbow position, with the abdominal muscles as relaxed as possible; the fluid was injected from a funnel connected by means of a long India rubber tube, with another long, soft, elastic tube inserted high up into the rectum. The method was used in sixteen cases of epidemic dysentery of a severe description, all occurring in soldiers, and the cases recovered promptly.

Dr. J. C. Wilson, of Philadelphia, highly recommends chloral hydrate as an efficient remedy for scarlet fever. While it is antiseptic and sedative in character, he claims that it is eliminated by the kidneys, and has a decidedly diuretic effect. He gives it to patients of all ages, and during the whole course of the malady. Salicylic acid is extolled by Dr. Shakowksi for the treatment of scarlet fever. He gave it in one hundred and twenty-five cases of grave scarlatina in children. He made a prescription of one part of salicylic acid to seventy-five of water and thirty parts of syrup of oranges; of this a dose was given every hour during the day and every two hours at night. The temperature, he avers, was rapidly reduced, and all traces of fever disappeared after the tenth day. The mortality was three and one-half per cent.

In the treatment of diphtheria many new remedies have been introduced—all more or less antiseptic in character. The theory of treatment remains the same, viz.: sustaining and antiseptic. The bi-chloride of mercury is still preferred by most practitioners, I believe, and those who have seen the most cases, seem to me, to use larger and still more frequent doses. Local treatment, however, is more generally and thoroughly insisted upon. While ablation of membrane and antiseptic cauterization has been recommended by some authorities, less severe measures are usually adopted. Frequent gargling and inhalations are insisted upon; syringing of the nares being considered most important. The injection ought to be made to pass in at one nostril and out at the other, or through the mouth, and the process should be continued day and night as long as any membrane remains. For laryngeal diphtheria the inhalation of steam,
either from boiling water impregnated with turpentine and oil of eucalyptus, or from slacked lime, is still approved of. The only effect this can have is to loosen the membrane and aid its detachment from the surface. In this connection, the administration of the iodide of sodium is recommended by Dr. Sanders, of Grand Island. He introduces the remedy and gives a series of well-defined cases of croup where it was used successfully. The benefit of the treatment has been corroborated by several observers since his paper was given to the public. In the hands of the writer the iodide has done wonders. Fifteen cases, all occurring since January 1st, have been subjected to this treatment with seventy-five per cent. of recoveries.

The particular antiseptic used for the destruction of germs, both for local and general use, seems to depend upon the dictum of the prescriber. It seems to me that carbolic acid ought not to have been relegated to the list of obsolete remedies quite so soon. A sufficient amount of carbolic acid can be put in the blood to arrest and prevent the growth of disease germs, with safety to the patient. It is necessary, however, that the carbolic acid should be pure. If absolutely pure it is a safe and efficient remedy; if in the least degree impure it is a very dangerous one. The phenic acid of Declat can be safely used in very large doses. Dr. Glenn, of Nashville, reports that he has used Dr. Declat's preparations of carbolic acid, both internally and externally, with gratifying results for the last ten years. During this time he says that he has employed phenic acid as his chief remedy in all cases of malarial, typhoid and scarlet fevers, diphtheria, erysipelas and blood poisoning, as a local application to all wounds, whether the result of accident or surgical operation, and has found the result so satisfactory that there is little left to be desired. Since he has followed this plan of treatment—in typhoid fever, for instance—he has never had a diarrhoea occur in any of his patients; never a hemorrhage from the bowels, never a serious tympanites, never a death.

Quite the most notable event of the year and the one which gave rise to the most excitement in all circles, medical as well as lay, was the publication of Brown Sequard's communication on the rejuvenating effect of testicular fluid. The subject was taken up by the public as well as the medical press, and so extravagant were the statements, and so unbounded were the expectations, that it is not surprising that the subject is now seldom adverted to. It was forgotten that all that was expected from the process, was the rejuvenating, to a certain extent, of an otherwise healthy, aged man, and that the process had nothing to do with the cure of disease. It must be admitted that Dr. Brown Sequard, with all the care and carefully guarded experiments and statements of the eminent savant, has proved his point. His would-be followers, however, by clumsiness of detail, and carelessness in selecting cases, have prevented and otherwise destroyed any chance of following up Brown-Sequard's experiments on anything like an extensive scale. The Dr. has recently published a paper recounting the details of the method and producing additional evidence of its value. He is still firmly persuaded of the value of his discovery. "There is no doubt," he says, "that injections of the dilute juice extracted from the testicles of living or recently killed animals, exert a marked dynamo-genic action upon the nervous centers, at least in a large number of cases. There is also no doubt that these injections are without danger when made with the precautions which intelli-
gent physicians know to be necessary when animal matter is to be introduced beneath the skin.

A report of this description would not be complete without a passing notice of the recent epidemic of influenza. Heard of first in distant Russia, traversing Europe with lightning-like speed, leaping across the Atlantic, this peculiar malady on a sudden, disturbed and sickened our whole continent. It is interesting to study the symptoms of this affection as described by Cullen over a century ago, and to note the aptness and similitude of his classical description to our recent outbreak. Nor are we any nearer to a to a correct conclusion in regard to the cause of influenza, nor can we account for the astonishing rapidity of its progress. The bacillus of influenza has been carefully searched for, but its identification is extremely doubtful. Forty or fifty years ago, an hypothesis was enunciated which, for all I know, is as nearly correct as more recent theories. It was to the effect: "That in certain conditions of the atmosphere, there are developed myriads of extremely minute substances possessing life, either animal or vegetable. These float about, and are driven by currents of air hither and thither. So driven, they are brought in contact with the mucous surfaces of the air passages, upon which they exercise an injurious influence." It would also seem from past records, that the atmospheric condition referred to, is one of suddenly increased temperature. This condition was present during the course of the late epidemic and the occurrence of cold weather put a stop to its course almost as suddenly as its advent.

In conclusion, with some hesitation and extreme regret, we note the demise of a somewhat recent but highly valued friend. It has been the subject of the most laborious and pains-taking research, the model for innumerable pencil sketches, and photographs, and the theme for many an instructive and interesting essay. All this labor and burning of the midnight oil may not have been absolutely useless, but it certainly was unremunerative. We are sorry that it could not have stayed with us for a longer period of time. The malarial bacillus can be manufactured on the spot by the application of heat to any specimen of blood, so says Dr. Salmon in La Medicine Modesue for March, and his statement is confirmed by several well informed microscopists. Dr. Salmon says that in preparing and mounting specimens, heat is a pre requisite in the technique of the proceeding, hence the rise and fall of the bacillus of Laveran.

CHOREA.

By F. A. Butler, B. S. M. D., Harvard, Neb.

Chorea is sketched for the first time in the writings of the English father of medicine, Sydenham, as a sort of convulsion that attacks boys and girls from the tenth year until they have attained their growth, commonly known in this country as St. Vitus' dance, the dance of St. Guy in France, and the dance of St. Weit in Germany.

This is a disease too well known by the medical profession for me to undertake to describe by picturing in glowing terms anything essentially new, and but for the discussions of the subject I hope to bring out, should not have chosen this theme for the presentation of a paper at this meeting.

It is a well known fact that chorea may come on at a much earlier period than the tenth year of age; perhaps the greatest number of cases we are called upon to prescribe for are from the age of eight to twelve. At the same time we have all seen cases that were much younger or older than this period.
Chorea is no doubt a neuropathic disease. The movements are the most characteristic feature of the disease. They seem to consist in a series of clonic spasms, unattended by pain, and resemble, not infrequently, a child out of humor, usually somewhat more perceptible and marked upon one side of the body than the other, at first not infrequently being confined to one side. The movements seem to be always increased by any attempt to exercise the will or under any emotional excitement. As a usual thing they stop when sleep is induced; at times some of the movements of the face are very characteristic, want of muscular power is shown by the readiness by which the patient becomes tired; sometimes paralysis seems to be a marked feature; as a rule the muscles most affected by the movements are those which are most paralyzed.

It is apparent from my observation that not infrequently chorea and paralysis are closely allied, for in paralysis properly so-called, the paralyzed parts are affected by movements which, without question, are not marked by many variations of movements from those of chorea.

There is often a feeling of numbness, and, Trousseau says, that numbness, when present, is usually accompanied by tingling. The vacancy of expression resulting from the semi-paralyzed condition may, in some extremes, suggest idiocy, but this expression should not be taken as a gauge by which to measure the mental condition of the patient. At the same time there may be more or less dullness and listlessness than fretfulness.

Patients who suffer from chorea, the authorities tell us, are very impressionable and emotional, and quite liable to derangements of the nervous system. Not infrequently in tracing out the history of a patient with chorea, there were spasms during teething, and seemingly a predisposition to other disorders of the nervous system. Frequently the mother had at or before time of puberty, an attack of some one of the following disorders: Spinal disease, so called, hysteria, epilepsy, or chorea, and insanity could sometimes be traced in the family history.

Chorea is sometimes symptomatic; sometimes idiopathic. Among the many causes to be enumerated, and the one I am desirous of calling attention to in this connection, is fright, a frequent cause where the tendency and predisposition existed. Again, some authorities state that the causes of chorea and rheumatism are closely allied, if not identical. Chorea seems to be a disease common among the poor and ill-nourished; scarce, comparatively speaking, among the rich and well favored. Does not the same thing hold good for rheumatism, in being more prevalent in a cold, damp climate than in a warm, dry climate? The season of the year does not seem to influence the development of chorea very much; however the cases I have met with in Nebraska, were mostly in the winter and spring of the year. Sex has, somewhat, a controlling influence. In summing up cases of chorea there are on an average of over two in girls to the cases existing in boys. This may be accounted for in the fact that the emotions are stronger in girls, since in them the nervous system predominates, the muscular power being weaker than in boys. This is a partial explanation of the fact, at least, which statistics fully establish, that choreic boys on an average to choreic girls is less than one-third.

Not desirous of criticising our public school system in particular, however it must not be lost sight of that the severe discipline and the arduous tasks to
which many of the pupils are subjected in pursuing too many studies at once, by more than half, thus increasing the strength of the emotions by an overtaxed mental strain, weakening the control of the muscles with the peculiar changes occurring in the female at or near the period of puberty, is another reason for the excess of female cases. On the other hand the changes in the male at puberty do not appear to increase the liability to the disease, and cases in the male after the twelfth year of age are comparatively rare. According to Smith anaemia is one of the most common predisposing causes, exhibiting itself by pallor of the countenance and other characteristic signs.

The peculiar neuropathic state, referred to already, is no doubt largely dependent upon impoverishment of the blood, and in some instances entirely due to it. Of course there might be enumerated many other ingenious theories regarding the prime causes of chorea based on a hypothesis more theoretical than practical. Further and more extended scientific observations are necessary to elucidate how much truth there is in some of the theories produced upon this subject. These theories are too numerous and extended for me to undertake to reproduce them in this paper. Some of the early writers record epidemics of chorea occurring in the middle ages and spreading through villages, but in modern times it is rare that the disease originates in epidemic form, however, occasional examples have been recorded. We are unable to find any account of cases spreading by imitation in modern times that did not seem to belong to the same form of chorea; traceable to the same cause. Where a number of children in the same family were afflicted at the same time, or instances where an epidemic broke out among the pupils of a boarding school, in both instances the cause could no doubt be traced to overtaxed mental strains, food of an insufficient quantity, or unwholesome in quality, or to both these causes combined, producing a disintegration of the nervous forces, and anaemia, which is without doubt one of the most potent factors in the production of chorea.

In the recorded epidemics of the middle ages and classified as chorea major, the symptoms differing materially from those of chorea minor, it is a question whether they should have the same generic terms. It is of itself a curious and interesting disease in its physical and pathological aspect, being rare in modern times, that knowledge of it is of little practical importance, and instead of being classed chorea major, a more appropriate classification would have been Religious Ecstatic Passive Monomania, due to excitement of a vague religious character.

During the past year I have been called upon to prescribe for about a half dozen well marked cases of chorea in children ranging from the ages of six to fifteen years. I desire to give in brief the history of one of the worst cases I have seen in Nebraska with treatment used in this case, which was about the same with some variations used in the other cases, and was successful in controlling the disease in five or six weeks. It is my opinion the disease is amenable to remedial agents if treatment is begun in time.

On Saturday, February 15, was called by telegram to Stockham, Hamilton county, to see Maggie W——, a girl aged ten years. On arriving found a thin, anaemic, badly nourished child, whom, the parents stated, had been afflicted with rheumatism a month or so previous. The mother had noticed during the past few days much restlessness that
had become very much aggravated during the previous night; tossings and jerkings becoming general, standing or walking not possible, and no power of articulation, an occasional spell of crying and weeping, features continually being twisted into the oddest grimaces, when asleep seemed wanting in expression, indicating the idea of silliness—becoming so changed that she was hardly recognizable by the friends as the bright-faced, quick-witted, intelligent school girl of a short time previous—saliva dribbling from the mouth; food, which she could only get by being fed, was with difficulty kept from falling from the mouth, mastication and swallowing a matter of much difficulty, tongue unsteady, pupils dilated and sluggish, pulse weak and quick, hands cold and moist; had not slept any only at short intervals for two days, bowels constipated, urine scant and high-colored, soon becoming offensive on standing. In examining chest with stethoscope, a basic anaemic murmur was perceptible over the region of the heart. On account of the distance was only able to see this case once in five days, after the second visit. Nourishing food of a liquid form was advised to be given frequently, a tablespoonful of port wine three times a day and an alcoholic bath once each day, with the following prescription, constituted the treatment—one teaspoonful of each, alternately, every three hours.

Number 1.

     Fowler's Sol. Arsenic....... 2½ dr.
     Syr. Simp. a. d. q. s........ 4 oz.
M. Sig. One teaspoonful every six hours.

Number 2.

R.   Fl. Ext. Scutellaria......... 1 oz.
     Tint. Digitalis............... 1 dr.
     Syr. Simp. a. d. q. s........ 5 oz.
M. Sig. One teaspoonful every six hours.

Visited this case three days after the first visit; no material change, excepting the bowels were well regulated, the child slept better, and had a greater disposition to take nourishment. Treatment continued with some alterations. In making inquiry regarding the family history, the mother said she had an attack of spinal complaint that lasted about a year at the time of puberty. Was very susceptible to sudden emotional changes—could shed tears one moment and laugh the next. Visited the patient about once in five days, for five weeks. Improvement became apparent; power of articulation returned about the middle of the third week, at the same time the child had gained strength sufficient to stand and take a few steps with assistance. From this time on, improvement was rapid. At the end of the fifth week all trace of any involuntary, uncontrollable movements had ceased. Compound syrup of hypophosphites, one teaspoonful after each meal, was now substituted in place of the treatment that had been followed. Recovery was complete, satisfactory and I believe permanent, if the advice and precautions given are followed.

ICTERUS NEONATORUM.

By Mary R. Butin, M. D., Dorchester.

I was prompted to write upon this subject by a case which occurred in my practice, it being the fifth babe in seven of the same family, to die of this cause. The literature of the subject is at variance in regard to the causes producing icterus. Flint and Pepper agree essentially on the same points, which are briefly:

First, a disorganization of blood which is called haematogenous.

Second, materials of the bile which it is the office of the liver to remove from the blood and which are not disposed of.
Third, that the bile, after being formed by the liver is absorbed into the blood, because of an obstacle to its escape, which condition is called hepatogenous jaundice.

Flint regards interference with the respiratory movements which aid in the propulsion of bile and a lowering of blood pressure in the portal vessels as productive of the latter kind, stating that no certain differential symptoms between haematogenous and hepatogenous icterus have been established. The first and second theory, which, if it exists, is of little importance compared with the third. For the theory which holds that the bile is taken up into the blood after it has been formed by the liver is the one universally accepted.

We turn from some of the older writers to current literature. In the *Weekly Medical Review* of February 20, 1886, appears an article by Ashby calling attention to the theory of Quinck, who maintains that icterus is due to a persistence after birth of the ductus venosus. He gives a case where at the autopsy the duct admitted an ordinary groove director. Silberman, in the *Lancet*, Nov. 15, 1887, says he has arrived at the conclusion that it is a jaundice of reabsorption, and of a hepatogenous nature. He thinks congestion of the vessels is brought about by the changes in the hepatic circulation that arises soon after birth, and which is one effect of a general change of blood plasma. This change being due to a fermentation depending upon the destruction of red blood corpuscles shortly after birth, which process affords material for the formation of bile in excess.

The *Journal of American Medical Association*, April 28, 1888, contains a comprehensive article from the able pen of Dr. A. Jacobi. He deals first with three rather unimportant kinds, as much as they require no treatment. They are in brief, the deposit of haematin in skin, by the rapid transition from foetal to post natal, circulation, that which is caused an increased amount of blood in the circulation, and that induced by the opposite condition, a deficiency of blood which encourages an exasomatic transition of bile into the adjoining blood vessels. He enumerates duodenal catarrh also, which of course yields to proper treatment. He mentions icterus resulting from congenital obliteration of the large biliary duct, cirrhosis, fatty degeneration and epidemic haemoglobinuria, as those being incurable. My case was peculiar from the fact that so many in one family had died from it, and I endeavored to find, if possible, any inherited tendency. The father and mother were Germans, and aged respectively thirty-eight and thirty-five, came of a good family. The father had no enlargement or tenderness of the liver, but has coated tongue, bitter taste and sick head ache. The mother, very sallow in appearance, suffers from constipation, but her liver is normal in size. At this, her sixth confinement, and my first attendance upon her, she was delivered of twins, as once before she had. The first was a male child and well developed, weighing about seven pounds. The second a female, poorly developed, and weighing five pounds. The latter was a shoulder presentation and was not alive when born. The first lived until the evening of the third day and was deeply jaundiced. The mother assured me it was just as the others had been. My request for a post mortem was granted and on the following afternoon, in company with a student I made an examination of the abdomen. After making the usual incisions the flaps were turned back and the liver was seen to occupy the whole of the abdominal
cavity extending past the spleen in the left hypochondrium. Upon raising the lobe the stomach was seen to be entirely crowded out of position and the small intestines were crowded downward. The milk curd in the stomach were yellow with bile and all the tissues stained with it.

We removed the liver for closer inspection. We found it weighed 43, 65, and measured, in length, five inches; in breadth, 4 inches; in thickness, 1 1/2 inches.

The gall bladder contained a few drops of mucous.

The cystic duct was closed and thread-like in appearance, so also was the hepatic duct and the ductus communis.

Unfortunately we did not examine into the condition of the ductus venosus.

Whatever cause may be assigned for jaundice it is evident to my mind that this case was one of congenital occlusion of the bile ducts.

Whether the four who preceded this died of the same difficulty or not, nothing but post mortem could certify. But I have the statement of the parents that the symptoms were the same.

I would like to be satisfied as to the cause of the occlusion. Whether the rather billious type which both parents present, was sufficient to induce the condition, or whether allied to those congenital defects of antenatal life, for which there is no accounting.

FRACTURE THROUGH THE HEAD OF THE RADIUS.

By W. O. Bridges, M.D., Omaha.

Uncomplicated fracture through the head or neck of the radius is so rare that its occurrence is denied by some authors. Holmes, in his Principles and Practice of Surgery, writes: "Fracture of the upper part (head or neck) of the radius is another of the proved complications of dislocation, and is believed by some authors to occur independently, but without anatomical proof."

Sir Astley Cooper, in the American edition of his Dislocations and Fractures, says of fracture of the upper extremity of the radius: "I have heard it mentioned as of frequent occurrence, but there must be some mistake in the statement, for it is an accident which I have never seen, and if instances do present themselves (which I do not mean to deny) they must be very rare."

Hamilton, in his Fractures and Dislocations, writes: "Fracture of the neck of the radius as a simple accident, uncomplicated with any other fracture or dislocation, is exceedingly rare," and further along: "While, therefore, the presence of what appear to be the rational diagnostic signs has compelled me to record one case as an uncomplicated fracture of the neck of the radius, and two others as fractures at this point accompanied either with a fracture of the humerus or a dislocation of the ulna. I am prepared to admit that some doubt remains in my own mind as to whether, in either case, the fact was clearly ascertained; nor do I think — speaking only of the simple fracture — that it will ever be safe to declare positively that we have before us this accident, lest, as has happened many times before, in the final appeal to that court whose judgment waits until after death, our decisions should be reversed."

Lewis A. Stimson in the Reference Handbook of the Medical Sciences writes these few lines: "Partial fracture of the head of the radius has been several times observed as a complication of dislocation of the elbow backward, and also as the result of direct violence, and a few specimens of fracture of the neck have been seen. Union may follow, or the fragment may remain loose in the joint,
or suppurative arthritis may ensue. The
diagnosis may be difficult or impossible.
The treatment is prolonged immobiliza­
tion of the joint.”

Dr. John H. Packard, in the Interna­
tional Encyclopedia of Surgery, writes of
fracture of the neck of the radius: “But
no instance is known to me in which it
has been ascertained to be broken by
itself.”

With the foregoing statements of stand­
ard authorities, the surgeon may well be
disposed to thoroughly investigate a
case before he makes a diagnosis of this
accident.

In the winter of 1888, Dr. Charles A.
Powers, of New York, reported a case of
this injury, to the Academy of Medicine,
in which there could be no mistake in the
diagnosis. It was the only one of one
thousand and twelve cases of simple
fracture of the radius treated at the
Chambers-street Hospital, in which the
head of the bone is noted as the seat of
lesion. His diagnosis was based on these
facts: “On placing the thumb of the left
hand on the head of the radius, and ro­
tating its shaft with the right hand, the
head was felt to roll beneath the thumb;
but a diffuse, bony crepitus was both felt
and heard. This manipulation occa­
sioned very severe pain; pressure over
the head of the radius also detected a
deeply seated point of tenderness. The
inner half of the head could be fixed be­
neath the left thumb, then on grasping
the outer half between the thumb and
fore-finger of the right hand and ‘rock­
ing’ the parts, the outer half was dis­
tinctly felt to move on the inner.”

This case was seen immediately after
the injury, before any swelling had oc­
curred. In the article reporting it, which
may be found in the New York Medical
Record of February 25th, 1888, Powers
gives a brief synopsis of fourteen cases
(including his own) which he was en­abled to find recorded. Of the fourteen
he writes: “Eight were complicated
either by a fracture through some por­
tion of the ulna or by a dislocation of
the forearm; three are pathological
specimens without history, and one was
discovered during an operation for sup­
purative arthritis of the elbow. There
were but four cases in which a diagnosis
was made and treatment adopted; and
of these four only three were uncompli­
cated.” In view of the foregoing facts
the following experience in my recent
practice may be of some interest.

Mr. D——, aged 30, a stout, muscular
man, while walking on a frosty sidewalk
on the morning of December 30th, last,
lost his footing and fell backwards, re­
cieving his entire weight on his right
hand, with the forearm in extreme exten­
sion. He felt something give way at the
elbow, and made the remark to a com­
panion that he had broken his arm. He
appeared at my office within ten minutes
subsequently, when the following condi­
tion was observed: The forearm was
semi-flexed and midway between pron­
ation and supiration. There was no
swelling about the elbow. He could flex
and extend the forearm, but with con­
siderable pain referred to the head of the
radius. Efforts at pronation and supi­
ratio were attended with much pain
and on this account were not successful
to any degree. By the usual methods of
examination fracture of the humerus or
ulna and dislocation of the elbow were
excluded. Forcible pronation and supi­
ratation occasioned very severe pain over
the head of the radius. Efforts at pronation and supi­
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to any degree. By the usual methods of
examination fracture of the humerus or
ulna and dislocation of the elbow were
excluded. Forcible pronation and supi­
ratation occasioned very severe pain over
the head of the radius, and with the
thumb of the left hand placed at this
point the head of the bone was felt to ro­
tate, the movements producing distinct
bony crepitus which was plainly heard
both by the patient and myself, and dis­
tinctly felt by the thumb as occurring at
this point. There was great tenderness
on making firm pressure over this region. Diagnosis was made of fracture of the head of the radius. A temporary retentive apparatus was applied with the forearm flexed at a right angle and semi-pronated, and he was sent home with instructions to apply hot water, continuously, to the elbow until I called. Ten hours later some swelling had occurred about the elbow and a large area of ecchymosis existed over the upper forearm. The parts were again thoroughly examined, the forearm placed in the position before noted, and a plaster cast applied from the wrist to the upper third of the humerus. There was considerable pain referred to the outer side of the elbow and extending downwards, for two days, after which no further disturbance occurred until the fifteenth day, when the cast was removed on account of its having become quite loose. A new plaster bandage was applied without disturbing the elbow joint. On the twenty-seventh day this was taken off, when the following condition was noted: There was much thickening about the upper extremity of the radius, so that it was quite impossible to make out the bony relations in this region; a large area of ecchymosis existed along the front and side of the forearm; flexion could only be made to slightly more than a right-angle; extension to about one hundred and ten degrees; pronation and supination almost nil; measurement around the elbow indicated one and three-quarter inches greater than on the sound side. He was now directed to douche the elbow and upper part of the forearm, daily, with hot water, for fifteen minutes, to be followed by rubbing and passive motion, both of the elbow and radio ulna joints.

On March 15th, considerable improvement was found to have taken place. The circumference of the elbow was found to be one inch less than on the previous examination, and flexion and extension had increased markedly in degree. There was only a slight change in the power to rotate the forearm. He was instructed to use the arm as much as possible and to persevere in daily forced movements. On May 7th, four months after the injury, the following conditions were found: Circumference of the elbow, ten and one-half inches, being one-quarter inch more than on the opposite side, and one and one-half inches less than when the cast was removed; he has power to extend the forearm, unaided, to about one hundred and sixty-five degrees, and to flex to about forty-five degrees; there is considerable improvement in rotation, the maximum power being, I should think, about one-fourth the normal; the position is very favorable to the general use of the hand; the head of the radius is noticeably enlarged, when compared with the opposite one, and the increased size more manifest posteriorly when the forearm is pronated to the utmost. In every other regard the conditions are found to be normal. Undoubtedly increased power in the use of the arm will be ultimately attained; but I doubt if there will be any material change in the degree of pronation and supination.

It may be true that this injury is much more common than the books would lead us to believe. Injuries about the elbow joint result in so much swelling in a short time, that when the surgeon is applied to, there would be great difficulty in determining this accident. Then, again, unless particular pains be taken to investigate for it, it might readily escape detection. The signs which are recognized as determining are: bony crepitus, revealed by the thumb over the head of the bone when the forearm is rotated; severe pain at this point...
on firm pressure and when pronation is attempted; a false point of motion, when recognizable. It is important also to exclude all other injuries about the joint. If there be a question of the diagnosis it is best to treat the case as though its existence was positive, and any doubt might be removed by the presence of callus about the head and neck of the bone after the swelling has entirely disappeared. The prognosis, so far as a perfect arm is concerned, is unfavorable. The loss of the rotating movement, to a great degree, results from the most appropriate treatment, and the patient should be so advised at the time of application of the dressing.

The indications for treatment are: the correction of any deformity when present; flexing the forearm midway between pronation and supination, at a right-angle, and the application of a plaster bandage or a proper splint from the wrist to the upper third of the humerus. I much prefer the plaster cast in all fractures about the elbow joint, as giving perfect fixation, the most even pressure and the greatest comfort and feeling of security to the patient. When properly applied it does not need to be disturbed, and in its use we avoid the annoyances so common in the loosening of bandages and the displacement of splints. It is generally taught, that in injuries about the elbow joint, particularly fractures, that whatever dressing is used should be removed at the end of ten days, passive motion with care, resorted to, the dressing re-applied, and this repeated every two or three days, until union has occurred, and this, I believe, is the ordinary practice to-day. It is argued that, by this means, a false ankylosis of the joint is prevented, and, although there is some risk of displacing the fragments in the frequent change of appliances and the manipulation, yet the result on the whole is better. This theory, I believe, has been shown to be erroneous. Dr. Powers, in the fall of 1888, read a paper before the New York Academy of Medicine, in which he reported fifty cases of fracture in the vicinity of and involving the elbow joint treated with the plaster bandage and permanent fixation, until firm union had occurred. Passive motion with massage and douching was then resorted to, and the most satisfactory results in the function of the joint were obtained. Phelps and others have also shown that non-use of a joint does not, of itself, lead to ankylosis. How often do we all treat inflammatory affections of the hip, knee and ankle for weeks and months by permanent fixation, and yet do not fear ankylosis when the inflammatory condition has disappeared. In using the plaster bandage, if it be applied before swelling has occurred, it is best to put it on rather loosely and allow for swelling; if the latter has occurred to any degree, then it should be applied more tightly. In Powers' cases he preferred to apply it at once, maintaining that it exerted equable pressure, limited swelling, and seldom did it require removal on account of swelling. To one who is not frequently accustomed to its application, I think it is better to wait a few hours until some swelling has occurred, as there is much less risk in its removal and re-application fifteen or eighteen days subsequently on account of looseness, than in two or three days on account of swelling of the hand from its being too tight.

SOME THOUGHTS ON SPECIALTIES AND SPECIALISTS.

By M. L. Hildreth, Lyons, Neb.

Supply and demand are relative terms. In medicine, as in commerce, whenever and wherever an abundant supply of a
kind or product exists, the inference is that there is a demand; and as a rule this inference is correct.

There is a noticeable feeling in the minds of many in the ranks of general medicine, that the specialist is an unnecessary product—that he is absorbing and abrogating their rights. This we believe to be a wrong impression and a groundless fear. While the process of differentiation and evolution seems to be quite free and rapid, there is no danger, as yet, that the office of the family physician is to be abolished. The demand for this product is the most imperative in the whole range of medicine, and this demand is based upon relationships, so sacred and intimate that they cannot be set aside.

This fear, while in some cases it may be an honest one, and prompted by honest motives, is in the main fostered by petty jealousy and envy, and has no place in the thought of the busy, broad-minded physician.

In the early days of medicine, before process of evolution in theory and practice had become so prolific, the demand for specialists did not seem to be so manifest. But in these later years, when statements are not accepted facts, when theories must be substantiated, when the science has broadened until it has subjugated to its use all of the other sciences, when it has grown to be of such magnitude that the duration of life is too brief, and the mind of man too finite too master it all, there is a demand that the work shall be divided, and this demand existing, we may as well foster it, and direct it into proper, safe and pure channels.

We know that there is in all of the cities, and outside of the cities also, many so-called specialists (God help them) who, without any right to their pretentions, would draw from every available source, and by any and every means, a fund to enhance their glory and fill their pockets.

These are beneath our notice. They are like the barnacles which cling to the body of the ocean steamer. But the true, worthy, equipped specialist (and by equipped we mean one who has had the opportunities for special study, fortified by a thorough knowledge of general medicine, which is indispensable to the specialist) should be sustained, and we, as general practitioners in the interests of science, and with a sincere desire for the good of humanity, are under obligations more binding than personal motives to sustain them.

To a certain extent, in a given case, it is a matter of opinion when the office of the physician ends and that of the specialists begins. This point has probably been the subject of more discussion than any other in this connection, and here is where conscience and that oft-forgotten principle, the golden rule, should be our guide. Can I do as well for this patient as any one else who is available? is the question we should ask ourselves and answer it thoughtfully by our subsequent course. Some would say that we are erecting a standard higher than is consistent with human weakness. This we deny. That it is attainable, and is the guide of many, is demonstrated all over the world every day. If this was not the case the profession could not hold the position of honor and trust which is accorded to it, for, while the mysterious and strange are, to a certain degree, factors, they are not the basis on which we rest.

The act of calling in the aid of the specialist, in the line of operative surgery, is one which engages our attention perhaps more than any other, and we believe here that there are more operations done than should be by general
physicians, which should go to the hands of those who are better fitted by reason of special training, and facilities for special work. Can anyone gainsay this? How often do we hear one say, "I would like to do an ovariotomy if I could get the chance," when, in fact, he has never seen an operation of the kind, to say nothing of having done one. And again, "O, we have to begin, or we will never do these operations." Had we ought to begin at the necessary cost?

If the hidden records of the capital operations, and of operations of election, too, could be published, it would be a ghastly commentary. The fact that a few of the bright triumphs in surgery have been achieved under adverse circumstances and amid surroundings bad, does not prove anything. Search these records carefully, and we will find that they were operations of necessity generally, and as a rule they stand as monuments to the genius and skill of the individuals who have performed them.

In operations of necessity we have no choice; duty calls us to do the best we can, and we should use all means possible to make ourselves as well fitted as may be, but when there is abundant time and expert help may be had reasonably, we should look to the best interests of the patient. It does not compromise or detract from the ability of a physician to say in a given case, "I want help," when an honest conscience tells him that the interests of the patient demand it. On the contrary it adds to his usefulness, makes him more of a man, and in the end will pay him dividends.

The matter of the judicious or injudicious combining of the general practitioner and specialist in one individual, is one of some importance. Judging from the professional cards in the local papers one would say we were all specialists. This is a point which certainly needs renovating.

We do not need any ironclad "code" to tell us how far we may go in this direction. A student may take all of the special courses he pleases, and they will do him no harm, provided he does not neglect his education while giving his attention to specialties. Would it be accounted as treasonable to sigh for the good old days when students were educated for physicians, and not for specialists? The doctrine applied to the artist, that "he is born, not made," must be reversed to apply to the expert in medicine and surgery of to-day. He is made not born. It does not come as the result of a few months of student life which is crowned with a diploma. It is made by friction. By honest work. Slowly. And this grinding process might be compared with the grinding of precious stones from the rough, the softer the stone the sooner it is ground and finished. The signs of the times indicate that the system of medical education is being improved in this respect. The polyclinic and the past graduate school, is taking the place of the old regime of student specialists of a few years ago. This is as it should be, and still there is room for improvement in this direction. It has been too common for schools to be surrounded by a constellation of specialist makers, each one vying with the other to see which can issue (honestly of course) the greater number of special certificates, at twenty dollars each.

This for students, but when a physician comes out with a card as follows: "A. B. C., M. D., Ph. D., etc., graduate of the University of so and so, late of Vienna and Paris. Special attention to diseases of the eye, ear, mouth, throat, chest, kidneys and rectum," we are apt to ask: What is left for the rest of us?
Now this is no picture of the imagination, as we can see by glancing at the columns of many of our state newspapers. In some few cases, there may be no intention at quackery and wrong doing, but most of them are contrary to the laws of decency, prompted by a desire to mislead, and are in violation of all principles of ethics and professional morals. A physician's taste may direct him into a special line of study, by way of recreation, as it were, or perhaps with a view of giving his entire attention to it later, when circumstances render it practicable, and no one can complain. If his motives are pure, his actions will demonstrate it. But when he seeks to parade it before the public, as a catch-penny scheme, still holding on to his general work, he becomes a fit subject for missionary work or pity. While the general physician and specialist are dependent upon each other, this dependence cannot be honored by embodying the two in one individual.

The recent decisions of the Chicago courts that a physician has a right to advertise his attainments and ability, as loudly as he pleases, have no bearing upon this issue. We all know the difference between a legal and a moral right, and we would urge upon our thoughtless brothers and sisters to be careful in this respect. Do not degrade yourself and help to drag down a profession than which none has a right to a higher place. If you imagine, that by such acts you are widening your field of work and building yourself up, you are mistaken. The public is not a class of fools, and taken for a life one sells for about what he is worth.

It is generally the case that one does not enter the filthy realms of quackery at one step. He cannot kill his manhood by one blow, but will smother it by slow stages. We know that most of the so called successful quacks, have, in bygone days, been ranked among us as worthy and upright physicians; but, like Esau of old, they have bartered their birth-right. And it is a noticeable fact that a large majority of the outlaws begin their career young. Adversity, poverty, sharp competition, etc., as well as dishonest intentions, are factors. In this connection it is the duty of the older members of the profession to be very careful, in their intercourse with the younger, not to treat them in such a manner as to cause them to wander from the path of rectitude. An act, a word, which would have no effect upon the career of one in middle or advanced life, will often be the means of injuring the reputation and doing irreparable damage to the young physician. It is safe to assume that the first decade of a professional life, generally marks it for the whole life. And it is safe to assume that if the young physician, possessed of ordinary ability, will be honest for a few years, he will succeed, and it will become second nature for him to do right.

These thoughts are not uttered with a caustic motive, but as a gentle stimulant and alterative to urge upon our fellows to be careful if treading on dangerous ground.

At first glance it would seem strange that one may not, in a modest way, tell the public that he is giving special attention to diseases of women and surgery, but at the same time he is doing all of the general practice which one is as well fitted to do as the other, besides holding an equal place in the general work. In conclusion, and by way of apology, if apology for plain
talking is necessary, at this time when so much is being done to elevate and purify, as well as to drag down, the duty of bearing our part in this work seems more imperative as individuals, and as a whole.

SURGICAL SECTION—A REPORT ON TWO CASES OF INTRA-CAPSULAR FRACTURE OF THE FEMUR.

By M. V. B. Clark, M. D., Sutton.

Case No. 1.—Mrs. H——, native of Denmark, aged 68 years, fell in an icy spell and fractured the hip joint, right side.

On the third day after the fracture I was called and diagnosed intra-capsular fracture.

The limb had great tendency to rotate outward, with not great, but perceptible, shortening.

Raised the heel slightly upward on an incline board, well padded, so as to get counter extension, with the weight of the body towards the head of the bed. Extension was secured by weight and pulley secured to limb below knee with adhesive strap, and fastened to the wall opposite bed, which secured such an amount of extension as to fully reduce the shortening of the limb.

In a fracture of this kind once before I observed accidentally that pressing firmly on the heel upward in the line of the limb, immediate and complete relief from pain resulted. So, in this case, the same manipulation resulted likewise.

This patient bore the confinement to the bed well, never complaining much, and had no trouble with bed sores, and in six weeks got the patient out of bed and had her stand upon her feet; but she never would even attempt to walk, or use cane or crutches, or in the least help herself.

Her son believes she can walk, if she would only try, but I am in some doubts as to the exact facts in the case. I then, when the case was closed, made up my mind to treat my very next case without extension and observe the effects.

Case No. 2.—Mr. K——, Sarronville, Neb., native of the United States, aged 66 years, had a fracture of the hip joint, left side. It was caused by getting his foot caught in the dump of an elevator, and then twisting around, falling at the same time, to extricate himself, fracturing the head of femur within the capsule with dislocation.

Spasmodic contractions of the posterior group of muscles of the leg set in with such extraordinary violence that he was involuntarily thrown off the cot upon which he was laid, reminding one of the tonic spasms of strychnine poisoning. I again observed that, in a very marked degree, firm pressure on the bottom of the foot upward gave instant and complete relief to all pain at the hip joint, confirming, in my own mind, that I had a case of intra-capsular fracture.

There was some shortening in this case, as in the former.

Turned a bandage on the leg above the knee to steady and relieve the spasm of the muscles, which continued annoying and painful for many days. Applied a well-padded long splint, to the lower end of which was nailed and braced a foot piece; to this foot piece the foot was secured by numerous turns of bandage. In the upper end of this splint, which reached near the axilla, were two holes through which the two ends of the perineal roll were tucked, and when an assistant pulled gently downward I tied the ends of the perineal roll in such a way as simply to steady the limb—not caring to reduce any shortening which was present.

Every three or four days caused all dressings to be removed from the limb,
sponged with warm water and thoroughly rubbed, and reapplied the original dressings.

The case proceeded uneventfully, save the tendency to spasm, which was mitigated with full doses—especially nights—morphia sulph., and flatulence, which was controlled by the following:

Rx. Potass chloras........................................5i.
Aqua calcis.............................................fi7ii.
Tr opii et camphra.................................fl7iv.
Glycerinae...............................................fl5iss.
Aqua q. s..............................................llgiv.

M. S.—Take one teaspoonful when necessary, or three times a day, two hours after meals.

In three weeks patient began to show evidence of bed sores—the curse and worryment of the surgeon.

In all this time he had never turned from his back, where he was first placed, and had not in the least moved the hip joint.

Took off the long splint and after sponging the limb it was enveloped in cotton batting and a continuous bandage applied from toes to hip. A starched bandage was then applied in bits about fifteen inches long dipped in a paste made of one part of glue and ten parts starch, and then all sleeked over with plenty of paste, with the hands. In four days this was dry, when there was moulded to the limb a layer of wet, heavy paste-board, obtained from paste-board boxes, reaching from the ankle to well up around the hip. An extra heavy layer was placed on the posterior aspect of the limb to prevent any possible bending of the limb, which indirectly would disturb the fixation of the hip joint.

Short, starched bandages were again applied the full length of the limb, and over all was turned a continuous bandage and the whole left to dry, which occupied a week.

Then cut this paper shell open by splitting it down the outside. Once off, I cut out a strip an inch wide and made holes on either side every six inches, then secured it to the limb again by a lace-work of bandage in the holes in the edges of the paper splint. In four weeks from date of injury the patient learned to help himself on to his feet alone, by placing a two-by-four post between the ceiling and floor, within his reach, when he was allowed, with crutches, to move about the house and then out of doors. This case eventuated in a complete cure and from now on I shall continue to treat cases of intra-capsular fracture, in the aged, with but little, if any extension, and use the stiff, full-length, paste-board and starched bandage splint and not confine them long in bed.

I offer, as an original thought, in intra-capsular fractures of the femur, the trial of pressing upward on the bottom of the foot with its accompanying relief from pain as an aid to their diagnosis, which, at best, is obscure.

It may not be new, but I have never before heard of the plan or seen it in print.

CYSTOTOMY—WITH CASES.

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

Our worthy president has seen fit to make me chairman of the section on surgery. Custom and precedent have imposed upon the chairman of the surgical section the duty of preparing a report upon progress. Of all subjects brought before a medical body, none are to me so wearisome, so uninteresting and so unprofitable, none exert such a hypnotic influence as the recital of a long list of clippings from the current surgical literature, usually termed a "report on the progress of surgery." Such a report is unprofitable, because the time allotted is entirely too inadequate to give more than the barest outline of the points of progress. To speak of a new surgical
procedure without giving all the details of its performance can benefit us very little. I have not succeeded in imposing upon myself the necessary patience to prepare such a report. It occurred to me that I might make a report of my own surgical experience in the past year, detailing all my cases, but on more deliberate reflection it seemed that that would savor too much of advertisement. Then I recalled a number of atypical operations, but I recollected a remark made to me last year at Kearney (when I had finished my paper on hip joint resections) by one of the oldest, most influential and respected members of the society. He said: "I do not understand why you surgeons will persist in bringing before us such major operations that we never expect to perform nor take any interest in. Why do you not give us something more practical, something that we all can do?" In looking about for something practical, I finally decided to report a number of cases of chronic catarrhal cystitis, where we resorted to operative measures with both diagnostic and therapeutical intentions.

Catarrhal cystitis we meet with frequently. The majority of cases recover under the mildest treatment, some under indifferent treatment and many in spite of treatment, and most frequently under no treatment at all. Yes, so confident are many practitioners of their ability to manage these cases successfully, that they eagerly inform you of their infallible specifics, and yet in conversation with specialists and others you will find that they frequently exhaust the entire list of remedies, including the highly lauded panaceas, and still no relief.

In spite of the most carefully conducted treatment of acute cystitis, a large percentage become chronic, accompanied by such unpleasant complications as catarrhal ulcerations, sub-mucous abscess, especially a great thickening of the vesical walls. The bladder loses its dilatability; its capacity is greatly reduced, able to retain only a small amount of urine, causing a constant desire to evacuate the bladder, almost incessant distressing tenesmus; or the bladder may become paralytic with constant retention, or incontinence may ensue. Not so seldom do we find such complications as catarrhal inflammation of the mucus lining of the uretus and pelvis of the kidney, developing pyelitis, or an extension to the kidney substance, resulting in nephritis.

It is not necessary to detail the long list of approved internal remedies, for experience has taught us that it is a long, unsatisfactory and "round-about-way" to attack a chronic purulent cystitis by the administration of remedial agents by mouth. It cannot be denied that many cases recover under the influence of agents given per os, but many are not affected at all, and we are haunted with the doubt that our remedies had nothing to do with the recovery.

When local treatment was brought into practice by the French and became popularized mainly through their efforts, our percentage of recoveries increased, but still many seemed beyond the reach of this apparently radical method. Chopart, Devergie, Dupuytren and many others spoke of irrigation in the highest praise. Their results demonstrated the importance of directing our attention and treatment to the local affection. They recognized the fact, that by this method alone could a direct influence be exerted upon the catarrhal disturbance of the mucous membrane and the decomposing urine. In their investigations they employed every variety of solutions, especially ferri sesquichloride, chloride of sodium, and nitrate of silver. Later,
when antiseptics became known, carbolic acid and salicylic acid, benzoic and boracic acid became favorites. We will not take the time to enumerate all the agents employed, for they are as numerous as there are authors.

In spite of this long array of remedial agents, every practitioner has encountered cases in which the most pains-taking and persistent care failed to produce a beneficial effect, or the improvement was only temporary, all the distressing features soon returned.

As a rule there are that class of cases that are characterized by a strong alkaline decomposition of the urine, and the presence of an enormous quantity of micro-organisms. The failure of the local treatment is in part dependant upon the weak medicated solutions that must of necessity be employed. A solution sufficiently strong to destroy with certainty the micro-organic life, would be disastrous to the cellular elements of the vesical mucous membrane, or it would be taken up in the circulation and expose the entire organism to its toxic effects. Besides the frequent use of the catheter, employed for the purpose of irrigation, may in rare instances be a source of danger. Again, some of our failures are due to the fact that the bladder usually lies in folds around the end of the instrument, and when the double current catheter is used, the irrigating fluid comes in contact only with the upper edges of the folds, which lie immediately contiguous to the instrument, and does not penetrate between them. It is between these folds that the greater part of the decomposing substance secretes itself. The stream of fluid passing out of one opening, in the double-current catheter, returns immediately through the second opening, having come in contact with a very small part of the surface of the vesical walls.

Attempts have been made, especially by Ulzmann, of Vienna, to introduce the fluid through an ordinary catheter, of such quantity to distend the bladder completely, so as to bring the medicated fluid in contact with every part of the vesical lining, and with such force as to stir up all the sediment that may be lodged in the base of the organ and between its many folds. This procedure has been productive of many good results, but many patients complain of such intense pain following the injection that they frequently implore us not to repeat the operation. The conditions that we find in purulent cystitis are very analogous to a wound with recesses and pockets filled with decomposing secretions from which there is imperfect drainage. Although we employ most careful irrigation, we are unable to reach the depths of the recesses and pockets, and the decomposition remains unchecked. Now, if we can bring about a state to permit an unimpeded exit of the secretions, the germs of decomposition will cease to increase in numbers for a want of nourishment, and we soon bring about a healthy condition of the wound. The same principle is applied to the bladder in a state of chronic purulent inflammation. If the urine is drained off as rapidly as it is secreted by the kidneys and not allowed to remain in the bladder sufficiently long for decomposition to take place, we remove the culture medium and prevent micro-organic growth; in other words, if we establish a drainage of the bladder we may hope to institute a condition analogous to a drainage of an irregular abscess cavity. Such a condition can only be brought about by free incision and the introduction of a drainage tube. It is unnecessary to bring to the support of our theory the result of the labors of Bouchardat, who first treated
this affliction by operation as early as 1803; nor of Furgesson, who operated in 1855; nor of Willard Parker, who was the first to publish this method of treatment in this country; nor need we discuss the views held by Craith in 1867; nor analyze the statistics of Wier or Keyes or Sir Henry Thompson; again the results of Simon and Fritsch in irrigation and constant drainage of the female bladder would add nothing to the support of a principle so well established. The female urethra is short and may be easily dilated; but in the male we find a passage too long and too indirect, so that a catheter (of sufficient size) cannot be retained sufficiently long. The urine cannot pass off with the necessary rapidity.

What I have here attempted to show I will seek to exemplify by the following cases, which you will permit me to detail:

CASE I.—James D., aged 60, wagon-maker. Claims never to have suffered from venereal infection. Says that since three years has had frequent desire to micturate as often as every half hour. Urine is usually passed in an irregular stream and frequently "stops suddenly," before the bladder is empty. Complains of severe pain in the glans penis and region of the bladder. About four weeks since, the symptoms grew rapidly worse. There was constant desire to urinate; pain in the bladder and glans penis "unbearable;" appetite entirely gone; great thirst, but the patient has been "afraid to drink" because he feared his trouble might become aggravated.

Status praesens, May 11, 85.—He appears extremely prostrated and feeble. The facial expression indicates most extreme suffering. He rolls and tosses himself almost constantly; says he is compelled to use the vessel every few minutes; complains of incessant pains in the region of the bladder, particularly in the glans penis. The act of urination is always closed with extreme pain in the perineum. He has a temperature of 99½° F.; pulse is 100; skin dry, tongue pointed and coated with a brownish fur in center and red at edges. Rectal examination reveals a slightly enlarged prostate; a No. 9 Eng. Nelaton catheter can be passed quite easily. About four ounces of urine escapes, which is of a strongly alkaline reaction with a disagreeable odor, containing triple phosphates (ammonia—magnesium—phosphates) large prominent epithelial cells; pus corpuscles in large quantity; albumen in considerable quantity and a few red blood corpuscles; no cylinders; specific gravity 1022. He has had an operation for hydrocele of the left testicle. The same trouble has developed on the right side. Abdomen is slightly tympanitic, but no tenderness except over the bladder. A sound—No. 19 charriere—is readily passed, but if the point of the instrument, which is free in the bladder, is moved, our patient complains bitterly. A catheter is now introduced for the purpose of irrigation; the patient protests, saying: "That has been tried before and always causes great suffering." An irrigation is made in spite of opposition, and on the three following days, and with the most distressing symptoms as a consequence. Morphine and belladonna suppositories were used liberally, but without effect. The prostration has now become alarming. On May 14th the patient is placed under chloroform, a careful search with a sound, for the possible existence of stone, is made with negative results. The bontouniere operation is then decided upon, for the purpose of establishing a permanent drainage, forming essentially the same condition that
Simon produced in the female bladder, with a retention catheter, for similar affections.

After introducing a lithotomy staff, an incision is made in the raphe of the perineum about one inch in length, beginning one-half inch anterior to the margin of the anus; the membranous portion of the urethra is laid open sufficiently to admit the index finger; the pars prostatica is dilated with some difficulty. The increased size of the prostate together with the spasm of the sphincters, formed an impediment that was finally overcome by firm and persistent pressure. The vesical mucous lining is greatly thickened and covered with a thick, tenacious, stringy mucus; the base of the organ imparts a rough and rigid sensation to the finger; the digital examination reveals nothing more; the mucus is carefully removed with the index finger. After a thorough toilet of the bladder, a rubber tube 1½ cm. in diameter, carefully rounded at one end, is introduced through the pars prostatica, extending slightly into the bladder; the perineal wound is firmly packed with iodoform gauze; the tube is sufficiently long to extend over the side of the bed into the vessel containing carbolized water. A siphon like action is thereby established, draining the urine away as rapidly as it trickles from the ureters. The patient rallies kindly from the anaesthetic and expresses himself as greatly relieved.

The recovery was interrupted on the fifth day by a rise of temperature to 101°F., pulse 98; delirious; refuses all nourishment. Can discover no disturbance in the perineal wound; abdomen slightly tympanitic; tongue pointed, dry, with brownish fus in center; pupils contracted and do not react to light. Bladder is irrigated, like the preceding days, with 2 per cent. salicylic solution; wound is nearly filled with iodoform and dressed with carbol gauze. Ordered quinine, grs. 6, every hour; enema every two hours, until bowels move freely. The following day there is marked amelioration of the symptoms. Improvement from this time forward is undisturbed. On the twenty-eighth the urine has become acid in reaction, almost free from albumen; contains very few pus corpuscles; no triple phosphates; a few epithelial cells in a state of disintegration; the urinometer indicates a specific gravity of 1,015. The drainage tube is removed. There was no incontinence after the removal of the tube. The urine passed partly per urethram and partly through the wound till the thirteenth day, and then all per vias naturales. The wound was completely cicatrized on the eighteenth day after removal of the drainage tube; recovery has been complete; no relapse in five years.

A very remarkable feature in this case was the extreme spasm of the urethral sphincter. After I had apparently thoroughly dilated the neck of the bladder, so as to admit the index finger readily, when attempting, a few moments later, to insert the drainage tube the spasm recurred with such severity as to make this procedure an impossibility. It became necessary to dilate a second time, which was accomplished with much more difficulty than before. One who has attempted, with his finger, to dilate the neck of the bladder, in a state of spasm, can readily understand why these patients suffer so acutely.

Another interesting point was the rise of temperature and the delirium of the sixth day following the operation. The cause for this disturbance was very obscure. Nothing unusual could be detected in or about the wound. There was no stagnation of urine; the usual quantity had passed by way of
the tube. The bowels had not moved for four or five days. After a free evacuation had taken place there was a tendency to diarrhoea. Whether the constitutional disturbances were due to an absorption of septic material from the bladder or the perineal wound, or whether the constipation exerted an influence on the temperature, I am unprepared to state.

**Case II.—M.L., aged 30; printer.** Has suffered for twelve years from stricture of the prostatic and pendulous portion of the urethra, of gonorrhoeal origin. Has undergone many “courses” of treatment with sounds and electrolysis, with temporary improvement, but has grown progressively worse, suffering from frequent retention.

**Status praesens—**I find in bed a well-nourished, muscular man of 30. Complains of pain referred to the region of the perineum and bladder; urine dribbles away; bladder enormously distended, reaching to the umbilicus; temperature 102° F; pulse, 120; tongue coated and dry. Various sized catheters and sounds fail to reach the bladder, the point of the instrument reaching to the membranous urethra, where it comes in contact with a firm resistance; filiform bougies are tried in vain. Two strictures in the pendulous portion immediately anterior to the scrotum admit a No. 19 Charriere sound.

The urine is cloudy and, on examination, is of strongly alkaline reaction, loaded with triple phosphates; bladder epithelium and a large quantity of pus.

External urethotomy is determined upon. The patient is narcotized and placed in lithotomy position. A sound is passed to the point of obstruction. An incision is made reaching down to the point of the sound, and now began the tedious process of following the urethra without a guide until we reach the bladder. This procedure was accomplished with great difficulty. An immense quantity of fetid urine escaped. The neck of the bladder is dilated with the finger and the entire bladder could easily be explored. Nothing abnormal except the thickening of the vesical walls could be made out. The wound was dressed with iodoform gauze; the bladder irrigated twice daily through the perineal wound, the glass nozzle of the fountain syringe passing into the viscus. On the ninth day the urine became acid in reaction and moderately clear; on the fourteenth day urinary secretion became clear to the unaided eye, under the microscope, however, pus corpuscles in abundance could still be discovered, but no triple phosphates. The bladder irrigation was discontinued. The patient made an uninterrupted recovery. He still has two strictures in the pendulous urethra admitting a 20 F. bulbous sound. These should have been severed at the time of the operation, but for some unaccountable reason I neglected to do so.

**Case III.—S. S., aged 30; grocer.** Has suffered since three years from frequent and painful micturition. Urine usually cloudy, showing greyish white sediment. Pain in glans penis, perineum and suprapubic region more or less constant; urine passes at times in full, strong stream, at others, small and irregular. Claims never to have suffered from venereal infection. Urine is strongly alkaline, contains an abundance of pus corpuscles and pavement epithelium; also an occasional admixture of blood.

His general appearance is good—well-nourished and in apparent good health. A No. 30 French sound passes into the bladder without obstruction. After a careful sounding under an anaesthetic, the suspicion as to the existence of stone must be abandoned.
He is put on a variety of remedies, chief of which were bladder irrigations with solutions of permanganate of potash, salicyl acid, boracic, etc., together with such internal remedies as couch grass, corn-silk, cannabis indica, bals, copaiba, naphtholin, Bethesda water, rectal suppositories, all with only temporary benefit so far as the subjective symptoms were concerned, and no change in the objective signs. I then advised an operation, to which he refused to submit. I then lost sight of him for nearly a year, when he returned asking for an operation, telling me he had been under constant treatment, in the hands of various practitioners. His condition had become very much aggravated. His urine appeared to contain 25 percent of pus; had constant desire to urinate, voiding his water as often as every 15 minutes. Pain in the glans penis, perineum and supra-pubic region almost constant. He had also become reduced in flesh.

On January 30, 1890, he was placed in lithotomy position, a staff was introduced, an incision one inch in length was made in the urethra anterior to the pars prostotica. The neck of the bladder was carefully dilated with the index finger. The entire interior of the viscus could now be explored with assistance of pressure with the left hand over the pubis. The vesical walls were found to be greatly thickened. No neoplasm could be detected. The bladder was thoroughly washed with 1 percent carbolized solution. A rubber tube, $\frac{1}{2}$ ctm. in diameter, was introduced, extending slightly into the bladder. The wound was sutured with silk, one suture passing through the wall of the rubber tube so as to retain it in place. The tube extended over the side of the bed into a vessel containing carbolized water, instituting a continuous drain-

age. Daily irrigations, with creolin 1 per cent. sol's., followed by an injection of Mosetig-Moorehof's mixture. There was gradual but tedious improvement for three weeks, when the irrigations were repeated three or four times daily, followed by rapid improvement. On February 10, 1890, the tube was removed for the first time and left out. He retained his urine for from four to five hours the same day, declaring that there was an entire absence of pain and tenesmus, and has continued so to this date. The recovery was uneventful except for a slight erysipelas, which appeared about the third week. I had visited a patient with facial erysipelas about one half hour previous to dressing the perineal wound in question, and I am convinced that I did not take sufficient precaution in disinfecting my hands, for on the following morning the unwelcome flush about the wound suggested the source of the mischief. Happily, however, these symptoms subsided within 48 hours.

Case IV.—Miss M., age 27. Her illness dates back eight years. She says, "while taking a trip East," she sat all day in the railway car without going to the closet on account of bashfulness, her bladder becoming so distended before night that the pain became almost unbearable. From that time she has had occasional tenesmus, sometimes frequent, micturition, with pain in region of bladder; urine sometimes cloudy. Three years ago her symptoms became aggravated and she sought medical advice. Since that time she has undergone all forms of treatment with numerous practitioners, together with dilatation of the urethra and a curetting of the bladder by a great Homeopathic gynecologist and surgeon from Chicago, some three months previous to the time she came under my care. She had grown
constantly worse, until she was obliged to lie constantly on a bed-pan night and day, micturating as often as every five minutes, and always with extreme pain, scarcely ever being free from tenesmus, particularly since the operation referred to. She was pale, anæmic and greatly emaciated, eating little and sleeping at times scarcely at all. The urine contained a whitish, creamy sediment amounting to nearly one-half the bulk of the excretion; an occasional admixture of bright red blood. Under the microscope, the sediment was found to be composed of pus principally, with parement epithelium and triple phosphates.

She was anaesthetized with the view of exploring the bladder and making a cystotomy to institute drainage. Placing her in Sims’ position, a very exuberant growth of granulation was observed in the external meatus and extending along the floor of the urethra. These granulations occupied the site of a probable laceration of the urethral floor, brought about by the dilation before referred to. On introducing the finger into the vagina, and pressing forward against the vesico-vaginal wall, a hard mass could be felt in the interior of the bladder. After the introduction of Erich’s speculum a sound was passed into the vesical cavity to be used as a guide. An incision two inches long was made through the vesico-vaginal wall. It was now ascertained with the index finger that we had to deal with a neoplasm, covered with mucous membrane, nearly filling the entire bladder. An opening was made through the mucous membrane and with the finger succeeded in enucleating a mass which could be easily broken up and which proved to be a myxoma, in the center of which was found a calculus. The resulting cavity was curretted and irrigated with hot water till all bleeding had ceased. The vesical mucous membrane, at the line of incision, was stitched to the vaginal margin of the wound so as to insure the patency of the fistula which was designed for the permanent drainage. A Bozeman vesico-vaginal drainage support was introduced for the purpose of collecting the urine in a urinal to avoid the usual annoyance following cystotomy, caused by the irritating effect of the urine. Her improvement has been gradual and without rise of temperature. She regained her appetite, complete freedom from pain, and is delighted over a gain of twenty-five or thirty pounds in weight. The drainage apparatus has done excellent service and there has been no return of the neoplasm after three and one-half months. The fistula will not be closed until the urine has become perfectly normal, which may in five or six or more months.

As we cast a retrospective glance over the cases just described, the first question that comes to mind is: In what particular class of cases is this operation indicated?

You will have seen from the foregoing, that I would not recommend an indiscriminate application of the above described operation, but only employ it in that class of cases where all other means have been employed without benefit. Be the cystitis catarrhal, purulent, gonorrheal, diphtheritic, of a villous nature, or due to some other form of neoplasm, or dependent upon some obscure cause. If the affection does not yield to the means that are ordinarily recommended, we are justified in performing cystotomy not only for the purpose of establishing a drainage of the bladder, but for exploratory or diagnostic purposes, as has been so largely practiced by Sir Henry Thompson.
We might suggest the following indications for the performance of the median section or foutonniere:

1. In cases where there is found a calculus, whether free, encysted or adherent.

2. When there has existed a chronic cystitis lasting for an unusual period without improvement.

3. In those individuals who suffer from porstatic hypertrophy accompanied or resulting in otony of the bladder, which have lead to the frequent use of the catheter, and where the act of catheterization causes irritation and the patient becomes exhausted by suffering.

4. Where there is observed frequent admixture of blood with the urine, and painful micturation.

5. Chronic, deep seated tortuous urethral strictures accompanied by vesical catarrh.

Great importance must be attached to the kind of operation that is made. Perhaps no operation, outside of abdominal surgery, excited more comment than the proposition of Sir Henry Thompson, some six or seven years ago, to resort to digital exploration of the bladder, through a perineal section, where neoplasms were suspected. The entire bladder is palpable (under an anaesthetic which renders complete relaxation of the abdominal walls,) by introducing one finger through a perineal wound, while the other hand presses from above the pubic arch. One is really surprised at the ease with which this can be done.

Thompson first put the method into practice in a case where he thought he had to deal with an impacted calculus, which proved to be a pedunculated tumor, with phosphatic deposit covering it. He twisted it off with a forceps; the patient making a good recovery. His early impression was that it would be necessary to incise the neck of the bladder, but he soon became convinced that the median incision would suffice.

The advantages of the median incision over the lateral, for the removal of stone or neoplasms, is so great that it is surprising that the latter finds any advocates (except in extreme cases) at all. In the former we incise integument, superficial and deep, fascia, (cavum ischio-rectale is not opened) membranous portion of the urethra and a few muscular fibers. In the latter, skin, superficial and deep fascia, muscles, blood vessels, (superficial perineal and internal pudic) pars membranatia, urethra, prostate gland and neck of the bladder.

Hemorrhage with the median section can hardly occur, while with the lateral incision, hemorrhage can hardly be avoided, which is sometimes so severe that the ingenuity of the surgeon is taxed to the utmost, while not a few deaths occur from this cause.

When we consider that the larger number of this class of patients have become greatly emaciated, the blood supply reduced to a minimum, that an ounce or two of blood is often of the highest importance, our aim should be to make our operation as bloodless as possible. Further, we should not lose sight of the great danger from septic infection in the lateral incision. A large wound, extending, as it does, through a region of loose connective tissue so favorable to the infiltration of noxious material, is something that should, if possible, be avoided. No dressing or packing that can be devised, can effectually prevent an escape of urine beside the tube. In the median incision the danger from infection is almost entirely avoided. The neck of the bladder is not incised; the splincter remains intact; it closes firmly around the drainage tube, insuring an escape of the
NEBRASKA STATE MEDICAL SOCIETY.

entire urinary secretions by way of the new channel. The bladder soon regains its retentive power after removal of the tube; at the same time the organ receives that physiological rest that is so important in the treatment of inflammations. In the lateral incision there is dribbling for days, and in some cases for weeks, not only being a source of infection and great uncleanliness, but complete wound repair is long protracted.

The pars-prostatica and neck of the bladder are, in chloroform narcosis, exceedingly dilatable.

The median section has such defendants as Allaston, Watter, Boussou, Teale, Holt, R. Volkman, Koenig and others. Volkman removed a stone 2.9 ctm. in its smallest diameter, and 3.4 ctm. in its largest without producing a laceration in any part of the urethra. Koenig removed a stone through this incision which filled the entire bladder (uric acid nucleus with phosphatic shell) in a 17 year old young merchant, whose difficulty dated back to his third year.

In tumors of the bladder, Sir Henry Thompson says, "that in very many cases, the median incision, the least serious operation, is sufficient; that it has the advantage of permitting a thorough exploration of the bladder; that in fully one-half the cases a successful removal of the growth is impossible; that it offers very little risk to life."

The object of the median incision in purulent cystitis is to institute such a condition that the bladder may become and remain empty during the continuance of the drainage, thereby removing all secretions and excretions as rapidly as they enter the organ; to insure that physiological rest so necessary to the restoration of diseased organs or parts; to keep the sphincter in a constant state of dilatation. A temporary dilatation, in some unexplained way, seems to relieve not only tenesmus, so often due to spasm of the sphincters of the urethra, but we frequently observe cases where the urine has not become entirely clear, yet upon removal of the drainage tube the tenesmus has entirely disappeared. When we inquire as to the length of time the tube should remain in place, we will see from a study of the cases detailed that no rule as to the exact number of days can be laid down. We must be guided entirely by the severity of the case and the rapidity with which the disorder improves. You will observe in our first case the tube was removed in fourteen days and the third remained in place thirty-two days, and in our last case we expect to continue the drainage for five or six months.

The best rule by which we may be guided in the majority of cases is to remove the drainage tube as soon as the urine becomes acid in reaction, and an absence, or nearly so, of pus corpuscles and triple phosphates is observed.

The prognosis depends entirely upon the absence or presence of complications. If the catarrhal disturbances have not extended beyond the interior of the bladder itself, if there be no extensive thickening of the costic wall, with great reduction of capacity, no morbid growth or affections due to some serious constitutional taint, the prognosis may be considered favorable. But if we encounter organic change, or if the inflammation has extended to the ureter and kidney, the prognosis becomes correspondingly grave, depending upon the nature and degree of the complication.

I believe we have in the operation described a method which, if employed with intelligence, will relieve, and in many cases afford permanent recovery from a disorder that is so intractable to ordinary means. I believe it to be an operation almost entirely devoid of
danger, which gives sufficient promise to warrant its performance, whenever indicated. We should not permit our patients to live on in their misery to an untimely end without giving cystotomy, with subsequent drainage, a trial.

REPORT ON OBSTETRICS.
By Charlotte M. Norton, M.D., Lincoln.

Within the realm of obstetrics, the subject which has been discussed with most absorbing interest this year is, by all odds, ectopic gestation and its treatment.

While all obstetricians feel the influence of advances made in this field, and rejoice that, at last, relief may be obtained from a situation which in times past seemed most hopeless, not all are ready to accept in to-to the recommendations of the most radical leaders in the new departure.

Perhaps the quickest and clearest way to set the whole subject before this society at its present status, is to rapidly review an article by Mr. Lawson Tait on Ectopic Pregnancy and Pelvic Hema-tocele.

Starting with the accepted maxim that the uterus is the normal seat of conception, that the function of the ciliated epithelial lining of the Fallopian tubes is to prevent spermatozoa entering them, as well as to facilitate the passage of the ovum into the uterus, he calls attention to the papers of Arthur Talmston and Bland Sutton, wherein is shown that desquamative salpingitis renders the mucous membrane of the tubes exactly similar to that of the uterus. The cilia being destroyed, the ovum is retarded in its passage through the tubes, there is no obstacle in the progress of the spermatozoa, and the conditions are as favorable to adhesion of the impregnated ovum to the tube wall as they would be in the uterus itself. He has trusted to a history of sterility and menstrual suffering for a longer or shorter time before the extra uterine gestation, as proof of a prior salpingitis, in his diagnosis.

He claims a tubal origin for all ectopic gestations. They may be interstitial, or in the proximal end of the tube, embedded in the uterine wall, or in the free end of the tube. If interstitial, the rupture always takes place into the peritoneal cavity, the period of its rupture being from the third to the twentieth week. The point of rupture in the tube is determined by the site of the placenta, the wall at that point being weakened by the placental villi which permeate and penetrate it, the blood vessels, especially the veins, increasing enormously.

In the free part of the tube the rupture occurs about the twelfth week, though he has seen it as early as the fourth. It may take two directions—into the peritoneum or intra-peritoneal, which is the fatal form, or into the cavity of the broad ligament, or extra-peritoneal. All cases which reach viability are of this latter form; also all the lithopedae and suppurating cysts, which discharge through bladder, rectum, etc., and those cases which, by a second rupture of the ovum cyst enter the abdominal cavity, and are called "abdominal pregnancy." He repudiates the theory that a fertilized ovum may drop into the cavity of the peritoneum and become developed there, for the reason that the digestive powers of the peritoneum are so great that the ovum, even though fertilized, would be absorbed before development could take place. Out of forty cases he found the ovum in only twelve, though the placenta was present in every one.

Unruptured tubal pregnancy, he thinks, has never been diagnosed. He claims that the patients have made no complaints until the symptoms of rupture
have occurred. Menstruation is irregular, profuse, or scant, the symptoms merely those of tubal occlusion and distension.

Should he be able to make a diagnosis before rupture, he would advise its immediate removal by abdominal section. The "fancy method," by which term he characterizes puncturing the cyst, injecting poisonous fluids, and galvanism, he says, commend themselves only to such as by lack of courage and skill to obtain good results, have only bad records to show in abdominal section. His method is to separate adhesions rapidly, regardless of bleeding, and search at once for the source of the hemorrhage, the broad ligament, tie it at its base, and then remove the ovum, debris and clots at leisure. When the rupture takes place into the broad ligament, it is accompanied by homorrhage into the cellular tissue, resulting in hematocoele, and rarely followed by peritonitis, though that result may be occasioned by a second rupture into the peritoneal cavity. Here, also, the ovum frequently dies and is absorbed, as is also the blood, and the patient recovers. He thinks many cases of ectopic gestation have a fortunate termination in this manner.

On the other hand, after the liquor amnii and the soft parts are absorbed, a small cyst is left containing fetal bones and debris, which may suppurate, causing much trouble or eventually be found on the post mortem table as lethopedia.

When supputation occurs the exit is either through the rectum, (most common) the posterior cul-de-sac, the bladder or the abdominal wall, at the umbilicus. Should supputation not occur, there may be some difficulty in diagnosis, and the clinical history will be the only method of establishing it.

Special stress should be laid upon the following points: The patient will have a firm conviction that the abdominal tumor was caused by pregnancy, and that she still carries her child. She will give a history of labor at or near time, accompanied with hemorrhage from the uterus, and followed by the secretion of milk. She will say that she no longer felt motion, and her abdomen steadily decreased in size. After this, parts of the child may be felt, the prominences of the hands and feet resembling the small cysts of ovarian tumors, and the irregularities of dermoid cysts, and complicating the diagnosis. The mass becomes closely related to the uterus or other pelvic viscera by placental adhesions and the physical signs become less clear. Fibro-cystic tumor of the uterus might be diagnosed.

He considers the introduction of an aspirator as of no practical help and as full of risk as an abdominal section.

Up to this point we have followed Mr. Tait with great pleasure. He is clear and concise and at home in discussing his subject, but he now wanders off into a field with which he evidently is not at all familiar; in fact he enters it with the pertinent observation that he is no theologian. He says that to kill the ovum for the protection of the mother is an immoral act, which places legitimate practitioners of medicine on a level with abortion mongers and reckless craniotomists. His strictures are leveled at a class of obstetricians, who, especially in this country, have, with some success, made use of galvanism to kill the ovum and promote its absorption.

We can admire Mr. Tait, and smile at his savage attack, but more convincing is the gentle courtesy of Apostoli, who patiently lives his convictions, and when he is reviled, reviles not again.

Mr. Tait claims that "if a child sur-
vives the first rupture, it has a legal and moral right to its life, and ought not to be deliberately killed." He has previously warned us that a secondary rupture is likely to take place which will doubtless prove fatal. He has also told us, when speaking of the difficulty of diagnosis before rupture, that should he ever make a diagnosis of tubal pregnancy before rupture, he would advise its immediate removal by abdominal section. So that the ultimate object arrived at by Mr. Tait and those who use galvanism before the rupture of the cyst, would appear to be the same, viz.: the safety of the mother.

As Mr. Tait acknowledges that he has had no experience with electricity we will leave this phase of the subject, on which he spends a good deal of time, until we can give the views of those who have given special attention to this method of treatment, and follow Mr. Tait in those procedures where he is indeed master and leader.

If the primary rupture be survived, the mother should be carefully watched until the advent of false labor, when laparotomy should be done. Vaginal section gives a mortality of 60 per cent., which is not the least of its disadvantages, as it is invariably accompanied with great laceration of the tissues, and concealed hemorrhage. The abdominal incision should be made two or three inches away from the median line, for we must remember that a full term ectopic pregnancy is not intra peritoneal, but is developed in the broad ligament, pushing the peritoneum before it as it rises, but leaving the utero vesical pouch extending like a long process to the base of the bladder. The history of the case and the physical signs will denote the side on which pregnancy has developed. The sac being opened, the foetus carefully removed, the umbilical cord should be separated close to its placental origin, and the placenta emptied as far as possible of blood. All loose membrane and debris should be removed from the interior of the sac and it should be washed thoroughly with clean water, the stitches carefully placed in the wound so that when they are drawn tight the sac shall be hermetically sealed. Tait uses a siphon trocar, by which, after the stitches are drawn tight, by reversing the action the cyst is emptied, and then the trocar withdrawn and the wound closed. The placenta he leaves for absorption, having tried removing it, and also bringing the umbelical cord and a drainage tube through an aperture. Should blood poisoning result, a secondary operation should be done.

A large and increasing portion of the physicians of our own country embrace Mr. Tait's views and are inclined to discard the very respectable record of electricity, as this is a method of treatment which is eminently American, is easily applied, and when properly used gives fair results; it would seem that it should not be wholly cast aside until skilled laparotomists are scattered about our fair land plentiful enough to be within the reach of everyone.

For many years Thomas has used electricity and reports only good results. So also Emmet and Rockwell have used it with great satisfaction.

It is applicable only during the first three months, before rupture and hemorrhage make laparotomy a necessity. In our country electro-puncture is not approved. Brothers has tabulated fifty cases, half of which were watched for a period of from one to eight years. Only three ended fatally—two after electro-puncture, the other had morphine injections followed by laparotomy.

Probably abdominal section and electricity each has its proper place, and the
time may come when the eager laparotomist will be willing that the first stage shall be treated by the electrician.

As to the method of applying electricity, the negative pole is placed in the posterior cul-de-sac, against the tumor or the uterus; the positive over the abdomen.

Both currents can be used. The faradic interferes with the placental circulation and prevents its growth; the galvanic acts on the fetus itself, so that alternate treatment is to be advised. Faradism, as strong as can be borne; galvanism, up to 150 m. a., at first. After the tumor diminishes in size, a mild current, from 30 to 40 m. a., should be used to promote absorption.

I shall make no apology for spending so much time on this part of my theme, for the reason that it has received fully that proportion of attention in the discussions of this year.

Now we must hurriedly pass on to other topics.

Cesarian section will be discussed further in the programme. So will antiseptic midwifery, though one word in passing to call attention to the frequency of deaths reported from sublimare irrigation.

It is with satisfaction that I have noted the increasing practice of local examinations and treatment during pregnancy. The glycerine tampon will frequently do more to relieve the nausea and vomiting of pregnancy than the whole pharmacopoeia.

A movement is also in progress to reinstate venesection in its old place in the treatment of puerperal eclampsia, the cases being selected.

Spiegelberg gives as a reason for the application of a firm binder during and after labor, that it prevents determination of blood to the abdomen, which frequently causes syncope.

The association of sepsis with puerperal insanity has been commented upon by some obstetricians. Clark McLeod and Wigglesworth having collected eighteen hundred cases.

Dr. A. F. A. King contributes a series of interesting articles upon the normal posture for a parturient woman. One practical suggestion is the utility of a semi-erect and sitting posture in dystocia, due to a short or coiled funis.

Several new forceps have been presented to the profession, not differing materially from Tarnier's axis traction, except in the case of Langstaff, where the attachment consists of an oval brass plate with a chain attached to one end. After the forceps are introduced the chain is slipped over the handles, the plate, which is the fulcrum, is placed beneath the sacrum, and as the handles are raised the blades are brought down and back, pressing the forehead into the hollow of sacrum, while the occiput is pushed forward by uterine contraction. Of course great power is obtained by applying this principle of mechanics.

An improved and very simple form of la conveuse is described by Dr. v. Mansfelde, which I hope he will personally present to you to-day.

ANTISEPTIC MIDWIFERY.

By A. B. Somers, M. D., Omaha, Neb.

Death is a hydra-headed foe, attacking and conquering persons of all ages and all conditions of life, but perhaps no form of death causes so much sorrow and dismay as that which enters the household and robs the home of a new made mother.

At the very time when the household joys and gladness are increased by the addition of a new life, disease comes in and robs us of that other life which is at once the center, the joy and the admiration of the home, and as we bury our
dead and go about our daily duties we endeavor to comfort ourselves with the thought that an overruling Providence, in whose hands our life is, doeth all things well.

It is but little more than a decade of years since the germ theory of disease was propounded by scientific men, and with the knowledge thus obtained the art of medicine is rapidly being put upon a solid basis, and the direction of scientific thought in the future is distinctly outlined. In the past we have been endeavoring to cure the sick, and far be it from my intention to speak disparagingly of the results achieved, but in the line of prevention we have discovered the ounce, which, if properly applied to the management of disease, is better than many pounds of cure.

Listerism has revolutionized modern surgery, and to-day we are doing successfully many operations that the most radical of surgeons would not dare to undertake fifteen years ago, and what is true of surgery is true of all communicable disease. It has been clearly demonstrated that from 80 to 90 per cent of diphtheria, scarlet fever, typhoid fever, etc., is preventible, and even consumption, that scourge which causes one-seventh of all the deaths in civilized lands, is both communicable and preventible. Farther than this it has been shown that the preventive treatment of all communicable disease is the best known curative treatment, the number of deaths being lessened by a greater per cent. than the number of cases of sickness.

There are many surgeons who practice antisepsis in so slipshod and careless a manner that it is of but very little benefit to their patients; so also a large proportion of persons sick with communicable diseases do not get any practical benefit from preventive medicine, either through culpable ignorance or neglect, but the facts in regard to what may be done are not changed, though often thrown into disrepute by the inefficient application of the principles.

We now know that the whole list of puerperal diseases are septic in their nature and are caused by some germ or germs which have found their way to the mother from without and not from catching cold, impure blood, or some vague premonition on the part of the mother that she is going to die. In brief puerperal diseases are communicable in their nature, and being communicable are preventible.

The principal sources of communication are three in number, namely: The physician or midwife, the nurse, and unsanitary surroundings. Of all these methods of communication doubtless the greatest number of cases are through contact with the physician or midwife. It has long been known that puerperal fever occurring in the practice of a physician or midwife is likely to repeat itself in the next woman attended in confinement. So true is this that judicious physicians would refuse to attend other women until several weeks or a month had elapsed and safety as a rule thereby secured. These being facts, what wonder is it that unscrupulous physicians have so many cases of malaria following confinement, but rarely or never see a case of septicaemia? What a scape-goat has been made of this term malaria, to bear the sins of physicians in puerperal cases. The cause of puerperal diseases being known the cure suggests itself, namely, perfect asepsis of everything that may come in contact with the person of the lying in woman, more especially everything that may come in contact with the organs of reproduction. There has been much difference of opinion in regard to detail in the way of treatment among
eminent men, but none in regard to the necessity of practical asepsis. It required no less of a man than Sir Lawson Tait to teach us that the essential element in listerism is *absolute* or what is better known as *surgical cleanliness*; that the use of antiseptics is an aid in procuring surgical cleanliness. I think no one will deny but we must ever bear in mind that drugs powerful enough to destroy germ life often prove a source of danger to the patient, and we often hear of cases of death from the injudicious use of bichloride, carbolic acid, creoline, and other antiseptic solutions.

The use of antiseptics was introduced into the practice of midwifery about the year 1883, and many of our leading minds of that day were radical to the extreme.

About this time Prof. T. G. Thomas, of New York, laid down a code of ten rules to be observed in every case of confinement, from which I will make extracts:

**First**—The room was to be devoid of all upholstery, the floor, walls, ceiling and every article of furniture to be sprinkled with a ten per cent solution of carbolic acid or bichloride of mercury, 1 to 1,000.

**Second**—The nurse and obstetrician should be scrupulously clean about their persons and use upon their hands and clothing some antiseptic solution, especially if within the past fortnight they had been exposed to the contagion of scarletina or other septic influence.

**Third**—As soon as labor begins, the nurse, after thoroughly cleansing her hands, should make a warm antiseptic vaginal injection and repeat it every four hours, in the meanwhile keeping a cloth over the vulva.

**Sixth**—If after labor, any slight abrasions are to be found about the genitals, the parts are to be cleansed and carbolic acid applied, the parts dried and painted with collodion.

**Seventh**—A suppository of iodoform should be placed under the os uteri and repeated every two or three hours for ten days.

**Eighth**—In ordinary cases vaginal injections of a solution of bichloride or other disinfectant should be made every eight hours.

Dr. Thomas recorded in strongest terms his protest against the use of intra-uterine injections as a prophylactic, except after very severe operations within the uterus. He says: "It is a dangerous method, only to be justified as a means of treatment in the presence of a still greater danger. But in case septic poisoning does occur, the first thing to be done after quieting pain and nervous excitability with opium, is to give an antiseptic intra-uterine injection. That these measures are extreme, the experience of the past few years amply proves; that they were dangerous, the numerous deaths from bichloride, carbolic acid and other germicides fully demonstrates. They belonged to a day when all antiseptic measures were extreme; they served their purpose and have become obsolete. We must ever bear in mind that child-bearing is a physiological process, and that it is not necessary to treat her who is about to bring forth as though she was about to go through the perils of a capital operation. That antiseptic injections, both vaginal and intra-uterine, are of great service when the indications for their use are clearly shown by local signs or general symptoms, I think no one will deny, but they cannot be recommended with safety as a routine practice."

For the purpose of preventing puerperal fever and other infectious diseases of child-bed, a code of rules was added to the manual for Prussian Midwifery in
November, 1888, by the minister of education. These rules inculcate the strictest attention to cleanliness of the person and clothing of the midwife, especially attention being given to the hands and finger nails. For this purpose they are instructed to carry their own soap and nail brush; also clean towels; also three ounces of pure carbolic acid. They must also have an apron that has not been used since last washed large enough to cover the entire front of the dress.

Vaginal examinations are not allowed only after the strictest cleansing of the hands and forearms, also disinfection of the same with a carbolic solution 5:1 to water. The scissors and all instruments used shall be immersed and remain for a time in this carbolic solution.

After labor the midwife shall wash the external genitals with clean luke-warm water, which has been boiled, and dry the same with a clean towel or absorbent cotton. She shall not wash out the vagina or give the mother any injections without a physician's advice, except in such cases as are mentioned in the manual, when she is to use the carbolic solution instead of water.

She must avoid all unnecessary contact with the genitals of the lying-in woman, and must avoid as much as possible, all intercourse with persons suffering from contagious diseases.

If a midwife has come in contact with puerperal fever, she must not examine a pregnant woman only when another midwife is not to be had, and under such circumstances only after having bathed her entire body, and then disinfected and dressed herself in clean clothes. Like precautions in regard to cleanliness are to be observed after coming in contact with communicable diseases or a dead body.

To sum the matter up, the instructions given may be stated in three simple propositions: 1. Strict personal cleanliness. 2. Strict aseptic cleanliness for the patient and all touching her. 3. Non-interference without positive indications; vaginal injections never to be given without a doctor's order or the existence of unmistakable indications, which are clearly defined.

Dr. Paul F. Munde, in his appendix to Cazeaux and Tarnier on Obstetrics, devotes a chapter to the consideration of antiseptic obstetrics. He gives statistics showing that before the introduction of antiseptic measures the mortality in the maternity of Europe was often from 15 to 20 per cent., now the death rate is reduced to less than 1 per cent.

In the Maternity Hospital, in Vienna, in 1889, the mortality was only ½ per cent. In the Prague Maternity the mortality, in 1865, was 9.28 per cent.; in 1869, 11.28 per cent.; in 1871, 3.07 per cent.; in 1875, 2.75 per cent.; in 1882, 5.56 per cent.; in 1883, in over 1,100 confinements not a single death occurred.

In the Paris Maternity, prior to 1870, the mortality fluctuated from 3.5 per cent. to 20.3 per cent.; it 1871 it fell to 2.8 per cent.; in 1883, to 1.1 per cent.

In Tarnier's pavilions there was one death in eighty-eight confinements in 1877-8; two deaths in 438 confinements in 1879; one in 219 cases, and in the next 785 confinements no deaths.

In September, 1883, during the prevalence of an epidemic of puerperal fever, with an enormous mortality, in the New York Maternity Hospital Dr. Garrigues introduced the antiseptic system, and in the first 162 confinements there were no deaths, and in 409 cases only three deaths from septic causes.

With the introduction of antiseptic measures, epidemics of puerperal fever have become a thing of the past and isolated cases occur only through inefficiency in carrying out principles in detail.
Munde gives four ways for accomplishing antisepsis. 1.—Removal of the germs as products of decomposition; this refers to the cleanliness of the room. 2.—Destroying them by burning, boiling, etc. 3.—Preventing their access by means of lint dipped in antiseptic solution during labor, and an impermeable aseptic dressing during the puerperal state. 4.—By rendering them sterile or destroying them when present. Here he refers to a few of the long list of antiseptics.

On the application of antiseptic methods he says; "The essential elements of successful antiseptics is embodied in the word—cleanliness—and the rule for its application in two words—be clean. It matters little how we proceed, boiled water showing as favorable a record in one man's hands (Tait & Bantock) as strong mercury solutions in another's."

Before going to a patient doctors and nurses should observe the most scrupulous rules of cleanliness, both as regards their person and clothing, giving especial attention to hands, hair and beard. If either physician or nurse have been in contact with any case of infectious disease, a full bath and complete change of clothing being essential.

Patients, if possible, should receive a full bath and fresh clothing, the external genitals being thoroughly cleansed before the beginning of the second stage. He says: "Prophylactic injections are not necessary or advisable unless there is a suspicious purulent discharge, as their use by constringing the parts and removing the natural mucus increases the liability to perineal laceration."

"Examinations should not be made too frequently, the hands being cleansed before each exploration by dipping them in an antiseptic solution." After delivery in normal cases vaginal or intra-uterine injections are not necessary and should only be used when the finger or hand has been introduced into the vagina or uterus to remove fragments of placenta or membrane or where the foetus has been dead or macerated. Immediately after delivery the vulva should be covered with lint wet with whatever disinfectant is used and kept in place until the patient is washed and dressed. The occlusion bandage devised by Garrigues or something equivalent is to be recommended, which is to be put on with the same care that we use in dressing a wound after a capital operation. Dr. Munde sounds a note of warning in regard to the use of mercuric salts and reports several deaths from single injections of a 1 to 1,000 solution of bichloride.

Garrigues, in his manual on Antiseptic Midwifery, gives practically the same rules in regard to cleanliness as those heretofore mentioned. He further recommends that no lubricant be used except when the whole hand has to be introduced, then use carbolized glycerine—3 per cent—and use no vaginal injections in normal cases.

The history of the Boston lying in hospital, under the direction of Dr. Wm. L. Richardson, is a good illustration of the value of antiseptics in midwifery. This hospital had had so large a mortality from puerperal diseases that it had been shut for lack of public support, but was reopened in January, 1873. During the first year 160 women were confined, with one death from septicemia. From that time on septic infection was more or less prevalent. On three occasions, November, 1879, September, 1880, and May, 1883, the hospital had to be closed and fumigated and new beds provided.

After fumigating the hospital there would be comparative immunity from
septic poisoning for a period of short duration.

During the ten years previous to January 1, 1885, there was 2,661 confinements, with a death rate of 3.4 per cent., which was considered very low, considering the almost constant presence of septicaemia.

This low rate is accounted for by the unusual precautions taken in the way of isolation, change of nurses, cleanliness, etc.

About this time came the announcement of Robert Koch's investigations of bacteria, and the whole system of treatment was changed.

Dr. Richardson says: "We had been dreading and fighting attacks from within, as well as from without. We now determined no longer to fight a foe within, which existed only in false theory, but to accept the theory of the bacteriologists and prevent the entrance of the foe from the front." Previous to this time vaginal injections of bichloride had been used, of this he says: "The vaginal injections during convalescence, from which we had hoped so much, now seemed to us to be a source of as much harm as good, and were therefore discontinued."

At the beginning of labor the generative tract was disinfected, lest the dreaded bacteria had already found a resting place there. During the progress of labor the physician or nurse were never allowed to touch the patient without disinfected the hands, and during convalescence a disinfected pad was always applied.

The result of this plan of treatment is, that during 1885 the death rate from sepsis was reduced to .64 per cent., or 2 in 308 cases. In 1886, with 373 cases there were no deaths; and since 1886 to 1888, with over 900 confinements, there have been no deaths from sepsis. Since 1885 Dr. Richardson has abandoned the post partem douche as absolutely dangerous, and allows no digital examinations after delivery, only as they are positively indicated. He also directs that all bichloride injections be followed by carbolic or boiled water injections. He has also adopted in his private practice essentially the same treatment with results as striking as those in the hospital, having wholly escaped having any cases of septicaemia in his private practice. The vaginal douche at the beginning of the labor and the bath are omitted as non-essential, and the convalescence is wholly free from offensive lochia.

The pad used by Dr. Richardson is practically like the one recommended by Dr. Garrigue, and is described as follows: A strip of cotton flannel, 19x4½ inches, is placed upon the table. On the center of this lay a piece of carbolized cotton 11x4½ inches; over the center of this a piece of oiled muslin 9x4 inches; on this place the pad made of absorbent scrap, done up in cheese-cloth large enough to cover the oiled silk and about half an inch in thickness; this pad to be dipped in a 1 to 3000 sublimate solution and dried. Each pad to be burned when soiled and a new one substituted.

Very recent reports from German Lying-in Hospitals, where large numbers of patients are treated, go to show that "best results are obtained in those cases where examinations per vaginan had been avoided as much as possible, and where no active internal antiseptic measures, such as vaginal injection had been practiced, but where, on the contrary, these had been restricted to subjective antiseptics, and to external disinfection of the parturient woman."

The Preston Retreat, Philadelphia, reports a series of 500 confinements, with no deaths and no Septicaemia, abso-
lute, cleanliness of person and surroundings, abundance of water, soap and pure air being the means which had yielded such gratifying results.

Dr. Simon Baruch, of New York, in a recent article on the value of "Water in Modern Therapeutics," says: "Another contra-indication to the use of water, which I have been instrumental in enforcing, is the vaginal injection after normal labor. As I have already spoken so frequently on this subject, and as these injections have now to a great extent been abandoned by the profession, I will be content with this simple reference to a modern recognition of the abuse of water."

The writer of a recent editorial in the Medical News, says: "There is no field of practice in which meddlesome ignorance can do such great harm as in obstetric practice, and no work in which the faithful observance of the simple axioms of science can obtain such excellent results."

There seems to be no reason for refusing to attend parturient women at the same time that one is attending septic diseases, provided that a full bath has been taken, the clothing changed, and the hands, beard and hair thoroughly cleansed. The only advantage there is in waiting one, two or three weeks, is, there is opportunity for repeated cleansings during that period.

Before the introduction of antiseptics into the practice of surgery and midwifery, puerperal mortality from septic causes was much greater in lying-in hospitals than in private practice. But under present management all this is changed and the mortality from septic causes is larger in private practice than in hospitals. This fact reflects discredit upon the physicians doing general obstetric practice.

Life insurance statistics show that of 2,182 insured women, 9.03 per cent. died from puerperal causes, 6.79 per cent. being due to septicemia. These figures represent as nearly as anything at our disposal, the mortality of private obstetric practice, and stand in marked contrast with the fractional part of 1 per cent. mortality in the lying-in hospitals of the world.

PENDULOUS ABDOMEN AS A FACTOR IN THE CAUSATION OF DIFFICULT LABOR.

By J. W. Bullard, M. D., Pawnee City, Neb.

In the chapter on labor reference, Hand Book, page 331, under the head of Uterine Inertia, Dr. C. F. Withington, of Boston, has this to say: "The atonic condition is contributed to by exhaustion, constitutional weakness, frequent childbirth, excessive youth or age of the patient, uterine mal-position, pendulous abdomen, intestinal accumulations, distension of the bladder, excess of liquor-amnii and mental trouble." Farther along in the same article, under the head of treatment, the author says: "The raising of a pendulous abdomen, so as to bring the axis of the uterus into nearer accord with that of the pelvic brim, is an important measure in such cases; a firm binder is to be applied to maintain the correction." This is all I can find in any work on obstetrics, at my command, concerning pendulous abdomen as a cause of dystocia.

In the third addition of Lusk's "Science and Art of Midwifery," page 476, under the heading: "Influence of the contracted Pelvis upon the Uterus during Pregnancy," I found the following: "In close connection with these two events, viz.: the elevation of the uterus and its mobility, it is not uncommon to observe the higher degrees of the so-called pendulous abdomen, caused by the ante-flexion of the gravid-uterus."
In no other available work on obstetrics have I been able to find pendulous abdomen mentioned in any way in connection with the pregnant state; for this reason have I concluded to discuss, briefly, this subject, thinking that it might be the means either of bringing out discussion on some thought herein contained or otherwise of causing some of the younger members at least to philosophize on this theme, and thereby be ready to materially shorten and mitigate what would otherwise be a very tedious and painful labor.

A pendulous abdomen may be defined in short as one in which the anterior inferior border of whose cavity, when the body is erect, falls anterior to and below the superior portion of the symphysis pubis. This pendulous condition may be brought about by general impairment of the muscular tone, in corpulent women by accumulation of fat in the mesentery, by frequent childbirth, by excessive amount of liquor-amnii, etc. In those who are illy nourished the abdominal muscles are enfeebled; the uterus during the latter months of pregnancy becomes much ante-flexed while the patient is in the erect posture, the weak abdominal muscles yield to the pressure, become overstretched and lose their tone.

In the corpulent with a great accumulation of fat in the abdominal cavity there is a constant additional pressure on the abdominal walls whose muscular structure from want of proper quality of nourishment, that obtains in obesity, are not equal to the test of properly supporting the extra weight, and then, too, become overstretched.

Frequent childbirth causes frequent distention of the abdomen, and may serve to bring about the pendulous abdomen. Again excessive amount of liquor amnii may act in the same way, and is indeed quite a prolific source of mischief in this direction alone, barring its other sequela.

The diagnosis of dystocia from pendulous abdomen ought not to be difficult. The general appearance of the abdomen when the woman is on her feet, during the latter months of pregnancy, would be sufficient to put one on his guard, if he were given a chance to make an observation at this time; but unfortunately for the patient the physician is not usually called until labor has begun. If now she be able to stand, the dependent condition is apparent; but if she be in bed when the physician arrives, as is usually the case, he will notice that with each contraction the fundus is elevated to a plane perpendicular to or even beyond the pubes, while the patient is resting on her back. He will also observe that there is less tone and force in the abdominal muscles than is normal, though the patient may be having very severe pains, as I have observed in several cases. If now an examination be made per vaginum, the physician will, if experienced in such cases, be surprised to find that it is with great difficulty that he can reach the os.

The presenting part is not engaging, and during the contractions which seem severe, no progress is made. This high position may also be brought about by other causes, prominent among which might be mentioned transverse positions of the foetus and monstrosities; but these might also occur in connection with a pendulous abdomen, which would make the case more complicated. In these cases we will have to make use of auscultation and palpation to determine the position and shape of the child. A contracted pelvis would also produce a high position, but this would be easily recognized.

By palpation, however, it is very dif-
difficult to outline a foetus in the womb of a corpulent woman.

Let us now look for a moment at the action of the abdominal muscles: During the first stage there is no involuntary contraction of the abdominal muscles; but when the second stage of labor begins, with each contraction of the uterus the patient fixes the pelvis and thorax, takes a deep inspiration, the muscles of the abdomen and thorax and all the muscles of expulsion become contracted and rigid, from that uncontrollable impulse to "bear down" and are no longer muscles of volition. The diaphragm contracts violently, is depressed and encroaches on the already crowded abdominal cavity, forces the contents of the cavity down behind the enlarged uterus and presses it against the abdominal walls. A certain degree of anteflexion of the gravid uterus is necessary to bring the axis of the uterine cavity into proper relation with that of the superior strait. This varies according to the inclination of the pelvis in different women. If, however, this forward flexion or version of the uterus is increased beyond what is necessary, the force exerted by the uterine contractions will be in the direction of the uterine axis; consequently against the promontory of the sacrum, which becomes a serious impediment to the engagement of the presenting parts in the superior strait. This condition is prevented principally by the resistance offered by the abdominal walls. The posterior peritoneal attachments also contribute to the same purpose. It is very apparent that, in the pendulous abdomen, in which there is an over relaxation of the abdominal muscles, the conditions are favorable for this to obtain, viz: An abnormal relation between the axis of the uterine cavity and that of the pelvic brim.

"There is a stage of labor at which the voluntary muscles are brought into play as an auxiliary force, * * * and the woman instinctively avails herself of their aid. The diaphragm and abdominal muscles are the chief agents of this new power."—Leishman. "The contraction of the abdominal walls is a powerful auxiliary to the expulsive force of the uterus. * * * The mechanism by which these auxiliary forces are called into play is as follows: As, toward the acme of the pain, the fundus uteri is elevated and lifts up the abdominal walls, the woman takes a deep inspiration, the glottis is closed, and the diaphragm contracts. The latter pushes the intestines downward and thus aids in raising the uterus to a position nearly perpendicular to the pelvic brim. All the expiratory muscles then enter into active contraction. Meanwhile the woman secures fixation of the trunk by finding points of support for the lower and upper extremities. By these means the capacity of the abdominal cavity is greatly diminished, and the uterus is compressed, not only by the adjacent muscular coverings, but by the entire mass of the enclosed viscera."—Lusk.

If the abdominal muscles have become stretched out and weakened, until they fail to perform their function, and as a consequence of this failure, the uterus is permitted to fall so far forward that its axis is not in accord with that of the pelvic brim, the indications for treatment are plain.

We must prevent the uterus from assuming this abnormal position, either by artificial means or by lengthening the distance from attachment to insertion of the abdominal muscles. The early authors, especially the German and Italians, did it in the latter way, though they did not appear to recognize the pendulous abdomen as the hindering factor in their cases, nor to have a clear
idea of the philosophical principle involved, as the following extract from the chapter on "Posture" in Prof. Engleman's treatise on "Labor among Primitive People," will show: "How a pregnant who is very fat and corpulent is to be placed during labor." "Difficult labor caused by excessive corpulence may facilitated, not only by the ordinary remedies prescribed before, but also by the posture and couch of the parturient woman, as Avicena has described this posture and which is indeed so well, convenient and useful to promote difficult cases of labor, that it ought to be studied by all midwives and be adopted by them in cases of necessity. Although an illustration has been given (fig. 20), it appears necessary to explain this one. The midwife takes two cushions or bolsters, arranging them in such manner that the back only of the patient is supported, when placed on it, so that the abdomen is protruding and the head hanging downwards to the floor. The patient being placed upon the bolster firmly, she will bend her feet inward towards the pelvis, a posture which tends to widen the vagina and rendering it possible, that the woman, however fat, may be delivered with ease, because the corpulence of the abdomen is in this position expanded and pressed sidewise and therefore does not interfere with the child being born in the usual way."

The difficulty with their fat woman was, no doubt, the same as it is with fat women now, viz: a pendulous condition of the abdomen brought about by the corpulence.

But this condition can be overcome in a more comfortable way, and without losing any of the expulsive force, as is sure to be the case in that abnormal position—by properly bandaging the patient.

The following cases will serve to illust-
spared. In March last I was called to attend Mrs. D., a lady who weighed over 250 pounds. I found her having expulsive pains which were very strong. An examination revealed the os so high that I could not reach it. During the expulsive effort I could, by making strong pressure, just reach the presenting part at promontory of the sacrum. Patient said this had always been the complaint—"child so high." Auscultation revealed probable vertex presentation. With each expulsive effort the fundus was carried over the pubes. I used a sheet folded four times, in same manner as in previous case with towel, and as soon as I could make an examination, I did so and found head presenting in first position, well down in the pelvis; but the pins in the sheet broke loose, and further progress was arrested until bandage was adjusted, when labor again progressed nicely, and a large, well developed female child was soon born. Patient said it was the easiest time she had ever had, though she had borne twelve children.

Patients complain that this system of tight lacing is rather hard to bear, but greatly shortens the duration of their labor. Prophylactic measures in the way of a properly fitting abdominal supporter worn during the period of gestation in these cases, would be very beneficial, not only in the way of comfort to the patient, but in facilitating labor by preventing the excessive pendulous condition.

If I have brought out anything in this paper that will either directly or indirectly benefit any member of this society and thereby be the means of making labor more easy in these cases, I have been well repaid for my trouble in preparing it.

AN UNSUCCESSFUL CASE OF CAESAREAN SECTION.

By G. L. HUMPHREYS, M.D., Kearney, Neb.

On the second day of January, 1890, I was sent for in consultation by two physicians, at the hour of 11 p.m., to go ten miles into the country, the thermometer being below zero at the time. Arriving at a farm house, after great discomfort, I found the following conditions:

The patient, a young primipara of nineteen, was lying on a mattress of straw, whose sheets and coverings had been guiltless of the laundry for, probably some weeks; they certainly were not in an aseptic condition. The room was used for a kitchen, living room and bed room combined; and was heated and cooled alternately by a kitchen stove fed with cobs for fuel. The floor was decidedly dirty and stood in need of both sweeping and scrubbing. Pots and pans were to be seen in various parts of the room, also in a filthy condition.

The young woman had been in labor from midnight until 4:30 in the afternoon, sixteen and one-half hours, in charge of an ignorant midwife. When the physician who had charge of the case was called, he reported membranes rupture with face and feet presenting, and that he failed to either turn or deliver with forceps. At 7:30 p.m. another physician who had been sent for arrived, but their efforts were of no avail. I was sent for and arrived about 2 a.m., without knowing the precise nature of the case. I found complete absence of pain, patient quite weak, uterus firmly contracted on the body, with head impacted against the pelvic bones, and feet at the fundus of the uterus. I first applied the forceps and labored patiently and perseveringly, but with no advance. I then attempted turning, but owing to the firm contrac-
tion and the impossibility of reaching but one foot, my effort did not succeed. Having delivered upwards of one thousand women and having turned many times, often with no difficulty, sometimes after moderate or considerable trouble.

I began estimating the size of the pelvic outlet, and concluded the transverse diameter to be about $2\frac{3}{4}$ inches. We thereupon desisted from any further efforts, gave a hypodermatic of morphia, and as soon as it was light enough to travel, hastened back to our office for more instruments, returning about 10 o'clock in the forenoon. The patient had slept and was refreshed. Chloroform was again administered, the head perforated, but delivery could not be effected. Upon two other occasions have I seen failure to effect delivery after perforation. In one I assisted an intelligent and skillful friend, and every bone of the skull was removed without avail. We finally succeeded in effecting delivery by slipping a noose of strong twine about the stump of the neck, and while my friend made traction I succeeded in keeping the noose from slipping off. This occurred in a rather roomy multipara. The other was one in which I was assisted by a physician of large experience. After failure of the forceps we perforated the head and completed labor by turning; but not without much labor and force.

Lusk says traction upon the part seized is not always followed by its descent, while Barnes recommends complete anesthesia, support of the fundus and so forth, but does not conceal the difficulties of operation nor the address requisite for its employment, and many accouchers less fortunate have recorded their failures. Again Lusk says many writers insist upon manual extraction to the exclusion of all other methods, but in primparous women they are liable to fail at the critical moment.

After failing to complete the delivery by any other method, we concluded to perform Cesarean section, the patient being then in bad condition, worn out with long, fruitless effort and having no pains. With many misgivings and an unfavorable prognosis we began the operation. I was ably assisted by Drs. Porter and Cameron, while Dr. Packard administered the anesthetic, labor having been in progress thirty-six hours. My choice of operation was the Poro, but owing to the presence of the husband, who stood by and witnessed the operation from beginning to end, it proved impossible to make him understand the importance of hysterectomy, and I was compelled against my better judgment to do the classical Cesarean section. The operation was carried out as planned without accident or complication and without a very great amount of hemorrhage. The child was extracted by the feet, the placenta removed, the uterus cleaned out and sutured with silk, the hemorrhage completely stopped, but the contraction was not as complete as could be wished. Ergotin was given hypodermically; the toilet of the peritoneum rapidly and carefully attended to, abdominal wound sutured, a large pad applied over the fundus and the patient placed in bed with hot water bottles between the thighs and at the sides. Everything went well for about three hours when collapse rapidly set in and death occurred in a short time. Permission was not given to reopen the abdomen, but death probably occurred from shock.

It is much pleasanter to report ones successes than failures, but the wish to have proper statistical records, and also to enable others to draw their own conclusions, induced me to report this case.
The conclusions that I have arrived at for myself are:

1. To make an early, thorough diagnosis and come to your conclusions to operate before hours have been wasted in fruitless labor.

2. To refuse to operate in the presence of near relatives unless they are sufficiently intelligent to accept your conclusions.

3. To relegate to the past the old classical operation and operate according to the Poro or Mueller modification.

Many of the old operations were done without suturing the uterus, uterine contractions being thought sufficient to close the incision and prevent hemorrhage. If the contractions were of a tonic character, this might indeed suffice, but where the uterus contracts and relaxes alternately, I doubt whether even sutures would always be a sufficient preventive; while with hysterectomy such hemorrhage would be far from probable.

QUININE VS. ERGOT, AS AN OXYTOCIC.

By I. N. Pickett, M. D., Odell, Neb.

The word oxytocic is derived from two Greek words: Oxys, meaning "quick" and tiechto, "I bring forth," and is applied in medicine to any agent which will promote delivery. Therefore the above title would imply that quinine has the power to stimulate uterine contractions and expedite labor; and of this, the writer is not only satisfied that this alkaloid has such an influence, but that it is of more real value than its over-estimated rival, ergot. When we consider that quinine is the staple of remedial agents the world over; that it is daily and almost hourly administered by even the humblest of the profession, is it not strange that so little is said by our obstetricians of its virtue as an oxytocic? It is no less surprising that the professional man should use it, when he feels a lack of energy, is fatigued and exhausted from prolonged or over-exertion. He uses it as a species of dram for its invigorating effect on the nervous system. Yet when called to the lying-in chamber, and finding a condition in every respect similar to his own—the patient has grown weary of her work; there is a lack of energy; there is fatigue and exhaustion; the same condition calling for the dram, but forgetting the sense of fitness for exertion produced by quinine in his own case, administers Fl. Ext. ergot in from twenty to sixty minimum doses and expects a speedy delivery. If such result follows, well and good. But it is very possible that "That very state of persistent uterine contraction is produced which is one of the chief dangers of protracted labor." (Playfair.) Instead of the rhythmic contractions, with a distinct pause for rest, which characterizes normal labor, he induces a strong persistent and constant pain; and if from any cause labor should be retarded, the tonic muscular contractions obstruct the utero-placental circulation, and the probabilities are that the child will be born asphyxiated and beyond resuscitation. Why should the doctor not be as good to the patient as he was to himself? In other words, why did he not give an agent to arouse the functional energy, and re-establish normal uterine contractions? That quinine has such a virtue, Playfair admits by saying: "Its use as an oxytocic deserves more attention than it has generally received. I frequently employ it in lingering labor with marked benefit, and it does not seem to have any of the bad effects of ergot." Doctor Albert H. Smith considers it a promoter of vital energy and functional activity, and says: "In normal labor at full
term, its administration in doses of fifteen grains, is usually followed, in as many minutes, by a decided increase of the force and frequency of the uterine contractions, changing in some instances a tedious, exhausting labor into one of rapid energy, and advancing to an early completion.” He also characterizes it as “promoting permanent tonic uterine contractions, after the expulsion of the placenta; in women that have flooded in former labors, escaping entirely, there not having been an instance of post partum hemorrhage in the whole forty-two cases,” he had under observation. Parvin recommends among other measures to be employed for weak pains, medicines for increasing uterine contractions. “The chief of these are quinine and ergot.” Cazeaux, in his classical work on midwifery, is silent on the use of this agent. But the preceding is enough to show that the progressive modern accoucheur is looking for a more satisfactory oxytocic than ergot. In order to obtain a clearer conception of the basis of treatment of uterine inertia, permit me to recall to your minds a few of the physiological conditions upon which muscular contractions depend. And here let me say that through the mechanism of invertial commas I acknowledge indebtedness to Foster, from whose work on physiology I shall copy liberally. And without entering into the histological structure of contractile tissue, it will suffice to remind you that the function of both nerve and muscle depend upon their irritability, and the irritability on the quality of the stimulus, whether it be weak, moderate or strong.

We find that contractile tissue is divided into two classes: First, “those made up of long transversely striated fibers, deriving their nervous supply from the cerebro-spinal system, and are called voluntary muscles.” Second, “those made up of smooth, unstriated fusiform elementary cells, which are more intimately connected with and controlled by the sympathetic system, called involuntary.” This class is also, sometimes, designated as muscles of organic life, from the fact of their being generally uninfluenced by the will, and of their principal distribution to organs of nutrition and growth. Yet they do not, like the skeletal muscles, exist in isolated masses, but occur as constituents of the intestine ureter, uterus, etc. “They are, moreover, different from voluntary muscles in that their action is rhythmical and largely automatic.”

“Muscular tissue, when subject to certain influences (for instance if laid bare and pinched or touched with a hot wire, or subjected to the action of a galvanic current) shortens, brings its two ends nearer together—contracts. The response a muscle makes to any influence involves its irritability. Though it remains quiescent when untouched, its powers are dormant, not absent. These require to be roused, stimulated by some influence or agent in order that they may manifest themselves.”

“The influence or agents which evoke the activity of a contractile tissue are spoken of as stimuli. The nerve, like the muscle, is irritable; it is thrown into a state of activity by a stimulus, but instead of contracting, it manifests its irritability by transmitting along itself certain molecular changes, set up by the stimulus. The changes thus transmitted along a nerve are spoken of as nervous impulses.”

The function of nerves is therefore simply to transmit impulses. These impulses are transmitted along both motor and sensory nerves, in the same manner, except that the motor impulses are generated in the central sensory organs and
gray cells, while the sensory impulses are generally peripheral and pass to the center. Natural impulses are identical in character, with impulses induced by artificial stimuli.

Our physiologists tell us, that, "if a nerve-muscle preparation be subjected to a single induction shock, a single momentary contraction takes place. But if a second shock is sent in at a time, as will correspond with the maximum contraction, a second contraction results similar in all respects to the first, except that instead of the muscle curve beginning at the base line (as was the case of the first) the second contraction begins at the maximum curve of the first. The two contractions are added together and the curve is nearly double that of the first. The same results follow the third, fourth and so on, until after a certain number of shocks, the succeeding impulses do not cause any further rise in the curve, but merely keep up the contraction already existing. The muscle thus reaches a maximum contraction, which it maintains, subject to the depressing effects of exhaustion. This condition of muscle brought about by repeated impulses, at short intervals and producing a strong, persistent contraction, is known as tetanus, or tetanic contraction.

After a while (the exact period depending on a variety of circumstances), the same stimulus produces smaller contractions; that is to say, the irritability of the muscle, has diminished. And again the physiologists tell us that this diminished irritability, "this exhaustion is more rapid in the nerves than in the muscles." The circumstances on which the irritability depends may next claim our attention; and for the sake of brevity let us consider only the influence of functional activity, as it bears directly on our subject. Prolonged muscular exertion is followed by fatigue; that is to say, the irritability is diminished by prolonged functional activity, and a stronger stimulus is required to produce the same contraction.

"The fatigue of which we are conscious after prolonged or unusual exertion, arises partly from an exhaustion of muscles, partly from an exhaustion of the motor nerves, but chiefly from an exhaustion of the central nervous system, concerned in the production of voluntary impulses." The less the interval between any two contractions, the more rapid the exhaustion. Hence tetanus is a ready means of producing this condition. Temporary exhaustion of the muscle, so that the strongest stimuli produce no contractions, may be produced by artificial stimulation; recovery taking place on rest. Foster informs us that "the restorative influence of rest may be explained by supposing that during the repose either the internal changes of the tissue manufacture new explosive material out of the comparatively raw material already present in the fiber, or the directly hurtful products of the act of contraction undergo changes by which they are converted into comparatively inert bodies." Also, "that a fresh stream of blood may exert its restorative influence not only by quickening the above two events, but also by carrying off the immediate waste products, while at the same time it brings new raw material, the most important element of which is oxygen. And while it is not necessary for the carrying out of the actual contraction, it is essential to the maintenance of the irritability." Thus by touching on a few of the fundamental properties of nerve and contractile tissue we find, first, that the muscles, both skeletal and unstriated are supplied with and controlled by the cerebro-spinal and sympathetic nervous system, respectively; and which, like the muscles, de-
pend on their irritability for the performance of function. Second, that all muscular contraction, whether normal or abnormal, is the result of a stimulant, and the more powerful the contraction the more rapid the exhaustion. Third, of the two structures, the irritability is the first to be diminished. *Hence exhaustion is primarily due to loss of tone in the central nervous system.* Fourth, that the nervous system after generating an impulse, and the muscular tissue after contracting, require a period of repose in order to regain their normal energy, and maintain their functional activity.

We can now better understand the basis of treatment of that condition most frequently met with in the lying-in chamber.

Inefficient uterine contraction. Do not understand me as advocating the use of an oxytocic, where tedious labor is caused by a full bladder, a loaded rectum, or excessive uterine distention, as from multiple pregnancy (hydramnious). Neither when weak pains are associated with unusual suffering. But it is where we find a normal birth canal, and a deficient uterine innervation, a want of a vis atergo, that quinine has, under my limited observation, given such satisfaction as a parturient. Bartholow does not consider it "a special uterine stimulant," but says it may exert such an action indirectly, "when uterine inertia is due to depression of the vital forces, quinine in moderate doses then becomes a valuable stimulant." Wood, after reviewing the literature, disposes of the subject in three ways, as follows: First, is there any evidence of quinine producing abortion in healthy women, or females of other animals? Second, how strong is the evidence of its producing abortion in women suffering from ague? Third, what is the evidence in regard to the action of quinine during labor? And after summing up the evidence, answers the two former questions in the negative; while to the third he adds additional testimony from his own practice of its virtue by stating that, "in two cases of very great uterine inertia very powerful contractions came on shortly after the administration of ten grains of the sulphate of quinine," and disposes of the question by saying that "quinine has no power to originate uterine contraction in the pregnant woman; that, although there is some reason for believing that in labor, full doses of it (ten to fifteen grains) do act as a stimulant to the pains, yet the question must be considered still subjudice." In the Atlanta Medical and Surgical Journal for March, 1886, attention is drawn to the use of quinine as an oxytocic, by Drs. Coe and Allen, who assert that this agent has no action on the pregnant or non-pregnant uterus in initiating contractions, but when given in doses of ten grains and upwards during labor, it is capable of exerting a stimulant action on the uterus; that this action is probably the result of its lessening the abnormal sensibility of the inhibitory centers of the cord, and permitting the normal reflexes to go on, thereby indirectly increasing the action of the uterus." Whatever be its *modus operandi* the empirical testimony is sufficient to establish the fact that quinine has an influence of no insignificant value as a promoter of uterine contraction.

Fothergill in his Hand Book of Treatment, speaks thus of quinine: "It is well known that this agent possesses the power of giving a sense of fitness for exertion of energy, to persons lacking these feelings, which it probably effects by some invigorating effect upon the nervous system. Thus it is most useful in nervous debility. It is also resorted
well and strong until the summer of 1886, when pregnant the first time. At the fifth or sixth month she contracted a severe non-inflammatory diarrhoea, which was uncontrolled until she gave birth to a still-born child at a little less than eight months. Since then her health has not been good. A mild bronchitis is constant, made worse on the slightest exposure.

In the spring of 1888 she became again pregnant. All went well until the fifth or sixth month, when the diarrhéal discharge again began, was uncontrolled, and at about the same stage another still-born child was expelled. The condition of the bowels again improved, but for several months her cough was very severe. I examined her lungs at this time, but could discover no dullness, and considered her trouble confined to the bronchi. By January, 1889, her cough had almost disappeared, and her general health was better than it had been for two years.

Patient stated that she menstruated about March 1st, 1889, and missed the next period. At the date of her visit to my office, May 24th, she was suffering from vomiting of pregnancy, which was easily controlled.

But she was very despondent at this time, and said she would be willing to do anything if she could bear a living child. She frankly stated to me that she "would rather die than to have another dead child." I questioned her and her husband separately, and feel that there could be no suspicion of syphilis. It was agreed that at any time after the child became viable, if alarming symptoms, such as cessation of motion or chilliness supervened, artificial labor should immediately be induced. I watched her closely during the summer, which was a miserable one for her, as she was in constant dread of another still-birth. This told upon her general health and the outlook was gloomy in the extreme. As usual, in August, at about six months, diarrhoea appeared, intractable as before.

October 5th called to see patient and found her greatly alarmed because she "had felt no motions since yesterday." By manipulation I was not able to detect the slightest motion, but auscultation proved the foetus to be alive. The foetal heart, though weak, was still beating. As her general condition at this time was alarming, from a sharp exacerbation of her dysentery. I prescribed for that, not deeming induction of labor advisable until her condition was improved.

October 6th, the next day, slight motion was again apparent, and she felt better. This continued until the night of October 18th, when I was called again and found my patient wild from anxiety. Motion had again ceased. The stethoscope again proved that the foetus was living. The careful induction of premature labor was decided upon. Directed the use of very hot copious vaginal douches repeated several times per day.

October 20th. Fœtal heart sounds are still heard, but as there was no indication of beginning labor a vaginal tampon was introduced.

Oct. 21st. Some slight pains in the night, but they have ceased. Removed the tampon and after a hot vaginal douche, introduced a fresh one. At 7 p. m. patient began to have slight labor pains. At 9 p. m. I saw her, removed the tampon, and directed a hot douche to be given every hour during the night.

Oct. 22d. At 6 a.m. was summoned and found patient having regular labor pains every five minutes. Cervix somewhat rigid but dilating. Labor pains were frequent and very severe, until, at
9 a.m., to the relief of all of us, a living child, a boy was delivered. He was weak and weighed four and one-half pounds. He was wrapped in cotton batting, and kept in a warm corner, where he thrived beautifully, and is now a healthy boy of almost seven months.

The causes for the induction of premature labor are usually comprised under three general headings: 1. Diseases of the mother which will be aggravated to a dangerous degree if the pregnancy is allowed to persist. 2. Considerations involving the interests of the child. 3d. Considerations involving the interests of both mother and child, the chief of which are rachitic pelvis and tumors.

Eliminating from the present discussion, the cases falling into the first and third classes, I wish to confine the subject to the questions: Is induction of premature labor ever justifiable in cases of repeated death of the foetus, after the end of the sixth month? If so, under what circumstances should the operation be performed, when, and how?

In looking up authorities for these notes I was surprised at the meagerness of the literature bearing upon the subject. In the interest of the mother much has been written. The child has not always been treated fairly. The improved Cæsarean section is a step in the right direction, and if it becomes fashionable to induce premature labor in the class of cases I am speaking of, the weaker party will receive much fairer treatment than has been bestowed upon it in the past. Where the child's interest only is in question our literature, except very recently, is almost silent.

From Lusk's "Science and Art of Midwifery," I quote: "It has been proposed that, when in successive pregnancies the foetus perishes in utero, during the latter weeks of gestation, labor should be induced after the period of viability has been reached, but before the time at which, according to previous experience, the fatal ending was to be expected." He then goes on to eliminate cases of syphilis and organic disease of the foetus, and concludes the subject as follows:

"With the difficulty, however, of making the diagnosis and fixing the time when labor should be induced, there have been but few cases in which the procedure has furnished favorable results." Not a word of encouragement for the operation. In fact he encourages the profession to let nature take her course. Charpentier opens the subject and dismisses it with these words: "The induction of labor has been recommended in certain anomalies of pregnancy, such as the habitual death of the foetus without known cause. In such a case, if the antecedents or the constitution of the woman do not call for special treatment, such as syphilis, we are justified in inducing labor." When a text book dismisses a subject so perfunctory, the rational inference is that the author did not consider it worth any attention, and his readers are very likely to take it for granted that he is right.

In favor of the justifiability of the operation, I think no one can deny that, if properly done, under antiseptic precautions there is no more danger to the mother than to permit the pregnancy to terminate by the natural method, especially since the natural method in this class of cases is premature death of the foetus, in utero. The mother can be omitted from special consideration, and all the attention given to the child.

After two or more successive deaths of the foetus occurring at about the same period in the latter months of gestation, is there a greater probability of the child living to term without interference, or in saving a premature infant, after
inducing labor? If death has been caused by syphilis, constitutional treatment methodically carried out will usually suffice to prevent a repetition of the trouble. There are however, many cases of foetal mortality due to obscure causes, which we are unable to discover. Some are due to causes (Kuirog) but such as cannot be removed; while still others are due to conditions of the mother brought about by pregnancy itself. An example of the last named cause is the case just reported. Diarrhoea, which I was unable to control, always existed after about the fifth month. Her attacks of diarrhoea at other times were mild and amenable to treatment. The most probable cause of foetal death in my case was the anaemia produced by the enteric disturbance.

If we are able to discover a plausible explanation of the previous deaths of the foetus it will usually be possible to determine whether the present pregnancy is subject to the same influences, and our method of procedure is to be based upon the conditions present. If no cause has been discovered and two successive premature deaths have occurred the chances are largely in favor of a third.

The period of viability has been arbitrarily laid down at seven months. A “dead line” has been drawn by the authorities, and if an unlucky culprit is found on this side of that artificial line a small box is prepared. One recent author, more humane, has stated that even under seven months a little time must be given for the infant to die. It has been the custom to make no effort to save these little-victims, most obstetricians feeling that it is a kindness to them to let them expire as soon as possible. But have we, as scientific physicians a right to accept a line arbitrarily laid down centuries ago? With, the rapid advance made in other departments of medicine, is no progress to be made here? This “dead line” has been the stumbling block of those who would have formulated better practice in cases of early foetal death. There has been such fear of getting on the wrong side of the line that action has been too long delayed. Even after seven months the mortality among premature children has always been astounding. This is not to be wondered at when we consider that the air the premature infant is compelled to breathe is usually at least thirty degrees colder than the intra-uterine nest. This abrupt change of temperature, togethed with the wonderful physiological changes which occur at birth, is sufficient to prove fatal to many fully developed children.

It has become a general practice in all departments in life that when the natural fails us, the artificial can be substituted. When a man loses a limb he is made to walk almost as well with an artificial one. When the teeth fail us, our dentist is prepared to furnish with more beautiful, if not more useful ones in their stead. And now when intra-uterine nourishment is denied the foetus art steps in and offers a substitute. It was more than half a century ago that the “baby incubator” was first thought of, but even now it is not in general use. A very good one has been ably described by Dr. Mansfelde, in the October, 1889, number of the Omaha Clinic. With such a contrivance, much greater assurance of success would be had of saving the immature foetus, when both experience and common sense tell us that disaster will surely follow a longer continuance in utero.

When to do the operation is often a hard point to decide. But with a properly constructed “warming chest” like
that of Fuerst, as modified by Mansfeld, it will be safe to venture upon induction of labor at an earlier period than would be possible with no such contrivance at hand. Experience alone will determine more definitely how young a continuance of life extra utero is possible.

The mode of inducing labor, after the operation is determined upon, is largely a matter of taste. Probably as good a method as any is the use of hot vaginal douches, frequently repeated, until the cervix is softened, followed by the introduction of a pure rubber bougie.

Whatever method is chosen, the strictest antiseptic precautions should be maintained throughout. Every detail which is likely to insure a successful issue should be carried out as faithfully as in any major operation.

A FEW OF MY MORE PROMINENT CASES OF DIFFICULT OBSTETRICS.

By Aurelius Bowen, M.D., Nebraska City.

Gentlemen: You request that I detail to you a few of the more prominent cases in obstetrics happening in my practice, in forty years of professional life.

On the 20th of March, 1852, I was called to Mrs. B., seven miles from my residence and on the top of the Catskill mountains, in New York. Neighbors were remote, and the assistance of one old “aunty” was all I could command. One child made its appearance, and in trying to learn the remoteness of the placenta I detected the presenting shoulder of another child. I had always been taught that a shoulder presentation was the worst of all, but a few moments consideration of the surroundings of the case gave me some comfort in my trepidation. I reasoned rightly that there was more relative room where one child had just vacated the premises, and acting on a half hint that I had heard from some quarter, I placed a finger against the presenting shoulder, and when I saw the evidence of a good pain, I applied considerable power in elevation of the shoulder and had the satisfaction of finding the feet in my hands in a few moments.

On the 10th of September, 1869, at Nebraska City, I was called in consultation to Mrs. C., in labor with her first child. Examination revealed a shoulder presentation. I told the husband I should be obliged to turn the child. He said he wished to go four blocks to get chloroform. I replied that he might go, but I should not wait for anything, as, if there existed a necessity for turning a child, there should not be one moment’s unnecessary delay after the waters were evacuated. When he returned I had the child in the world, by the same means as the former case.

In dealing with eight or ten cases of shoulder presentation, in forty years, the above two were the only cases in which I succeeded in turning the child by the simple pushing up of the shoulder; but it should always be tried.

There is a German woman living 18 miles from me, whom I have attended in four labors, in which five children were born; every one of whom presented abnormally. I will narrate only my last experience with her.

The transverse diameter of the uterus is relatively too great, and the most difficult position for the child to settle into is what is ordinarily called the natural one. I think all old physicians must have noticed that we seldom find an abnormal presentation in a trim built, smallish woman, certainly not one where we find three in big, slab-sided women. On the 12th of July, 1878, I was called to
this woman again (and I hope for the last time). I found so many hands and feet that I was reminded of the railroad conductor whose wife being confined in his absence, played off on him, by the assistance of the neighboring women, and brought into the house all the very young babies that could be found in a large village. He got even with the grinning crowd by asking: "My dear, did any get away?" I soon made out twins and that a hand which was in the world belonged to the upper child. I replaced this as far as I could and laid hold of a foot of the lower child and brought it into the world. Upon getting the head, which was rather difficult to bring down, I found a hollow in the temple, which had probably caused its death and hindered its advance. The women present were very clamorous that I should hurry the progress of the last child, alleging that she would fail in endurance, as it was a terrible hot day, but remembering how much additional room we have after the birth of the first of twins, I refused to do anything but keeping one hand upon the head of the last child, direct it to engage normally in the pelvic straits, and then leave the labor to be concluded by nature. I feel rewarded every time I meet the father, who pulls up his team and exclaims what a fine tall boy I saved him.

On the 6th of November, 1866, was called to Mrs. S. in labor. From the size of the foetal head, and the distance of the cranial bones from each other, with the feel of fluid when the finger pressed between them, I diagnosed "Hydrocephalus." A puncture through the scalp brought a flood of water, and the head collapsing soon followed. The child, as usual, had been dead some time.

On the 17th of September, 1871, was called in the middle of a very dark and very windy night, the white caps rolling on the Missouri river, to cross it into Iowa. The two men who brought the message said they had tried every physician after crossing the river till they reached my house. All refused, numbering four. My wife shed tears, saying my life was worth as much to her as the woman's was to her family. I found a child in the world all but the head. A physician had been with her all day, but left before I reached there, saying he could do no more for her. Well he had succeeded in breaking the neck of the child. She had bidden her family farewell and made up her mind she must die. I was certain the child had been dead quite a time from the condition of the cuticle over the large articulations. What had killed it? Among the contingencies to be thought of as a factor in the case, was "hydrocephalus." I reasoned, the scalp must be as tender as the cuticle over the articulations and made up my mind to try one good pull on that head, but do it with the small end of my blunt hook attached as near the center of the head as I could get it, and in the direction of the straits of the pelvis. I passed the hook into the throat of the child and sought for attachment in the bones of the jaw which I found, and was able to use forcible traction. The head did not receive very much of this before the scalp burst at one of the fontanelles and the head came into the world, followed by a great burst of water. It was altogether the largest and longest head I ever saw upon a foetus, and resembled an exaggerated beef's bladder, with here and there a clam shell glued to the internal surface.

On the 1st day of December, 1869, I was called to Mrs. G. In this labor was exhibited two abnormal features. It was a breech presentation and a case of placenta praevia. The child was small,
and soon after I reached the house the breech came, bringing the placenta between the limbs.

On the 16th of August, 1882, was called to Mrs. R., in consultation with another physician. Diagnosed placenta praevia, and the placenta attached very near centrally over the os uteri. Very much inferior ergot had been used, but to little purpose, and the flooding was not excessive. As soon as the mouth of the womb began to open it proved very dilatable and I was soon enabled to introduce my hand and separating the placenta from one side, folded it over onto the other side. These proceedings increased the frequency and the force of the pains very much indeed, and induced me to change my intention of turning the child; in fact almost forced the labor into a natural one from this point on. I am satisfied this hemorrhage was much less than it would have been if I had turned the child.

On the 29th of January, 1885, was called to Mrs. R.; Footling presentation. Condition of cuticle over large articulations proved the child had been dead quite a time. Found almost insurmountable difficulty at a comparatively early stage in the labor. In bringing the child toward the world I pulled one limb into three pieces, and the most thorough examination I could make per vaginam and by palpation on the surface of the abdomen left me somewhat in the dark as to what was delaying the birth. I finally discovered that it was an enormous hydrothorax, the first I ever saw in a foetus. Gentlemen, I have exhausted your patience and not gone through one-half of the difficult cases an old physician is called to, which wear out our patience and harrow our sensibilities, and many times make life a burthen. One solid comfort remains to me. I never lost a woman in child-bed, and I never failed to relieve one, in however great straits I found her.

HYPEREMESIS OF PREGNANCY—WITH TWO CASES.

By Fred D. Haldeman, M. D., Ord.

In calling the attention of this society for a short time to hyperemesis, I am fully aware that the subject has been thoroughly written upon by able and scholarly minds, and that recently, in a manner so fully that it would be hard indeed to add even a few threads of purely original thought. My apology, if one be necessary, must be found in this, that it is not the rare and infrequent diseases that most often perplex the daily practitioner, but the more common maladies of every day life, and those which are often considered to be of little special interest, yet it is often in these very cases that our patients expect and look for speedy relief.

Morning sickness is frequently the first trouble for which the pregnant female seeks medical advice. This is usually looked upon as a trifling affair, and at first receives but little attention. Instructions are given to restrict the diet, one or more so-called specifics are prescribed, with a view of relieving the gastric disorder. The constipation, which is generally present, is relieved by a mild cathartic. In a large number of cases relief is obtained as a result of this line of treatment. Unfortunately, many others are not benefitted. The vomiting is not limited to morning, but continues at irregular intervals throughout the day. The patient becomes weak, nervous and emaciated. Nourishment is no longer retained by the stomach, and it is found necessary to stop all medication by the mouth, and resort to rectal feeding in order to sustain life.

Dr. J. G. Engelmann has written an article on this subject, in the "American
Dr. Engelmann concludes that the morning sickness, and often the violent vomiting of pregnancy, like all reflex neuroses, yields readily and positively to local treatment. Relief, he declares, of the most violent vomiting, may be obtained by a single application of carbolic acid to the cervical canal, or a tenanted tampon to the eroded cervix. It may not yield at once, a prolonged treatment of the local lesion may be necessary, but the symptoms are mitigated as local improvement is obtained. Heroic medication of the stomach is not only useless, but injurious. Nervines and sedatives may afford relief, not only by medication of the gastric mucosa, but by allaying the reflex irritability of the nervous system. It is by action on the uterine terminals that a rebellious stomach must be quieted, and not through the gastric nerves.

In support of the supposition that hyperemesis is due to uterine congestion and inflammation, I desire to place on record the following cases, which occurred in my practice during the year 1887. Both possess features of interest.

Case I.—December 27th, 1886. Mrs. C., American, 26 years old, medium stature; weight 120 pounds; married one year; two months since last menstruation. Present trouble, nausea and vomiting. The vomiting would commence in the morning and continue at irregular intervals throughout the day. Diagnosis, morning sickness, due to pregnancy. Treatment, I directed her to select a diet which would be least likely to disagree with the stomach, and suggested milk and lime water to commence with, and thus prepare the way for taking other food. Cerium oxalate was prescribed in one grain doses, to be taken every four hours.

December 30. There being no improvement, bis. subnitrite and tincture nux vomica were substituted.

January 12. The morning sickness increased as pregnancy advanced and pernicious vomiting now rapidly developed. I tried various remedies for her without benefit, until about the end of the fourth month, when her condition became so alarming that the artificial interruption of pregnancy was seriously considered.

The remedies employed during this time were: Carbolic acid, cerum oxalate, tincture nux vomica, bismuth, Fowler’s solution of arsenic, wine of ipecac, chloral hydrate, potassium bromide, opium and belladonna. Suppositories containing the last two drugs used per rectum, would produce sleep and rest. A fly blister was applied over the fourth and fifth dorsal vertebrae (hypoaesthetic spot), as recommended by Dr. Alexander Harkin. These remedies failed to relieve the hyperemesis. The patient, who was amiable and gentle by nature, became peevish and hysterical.

February 1. As all food exhibited by the mouth was immediately rejected, I ordered absolute stomach rest, and resorted to nutrient enemata. From four to six ounces of warm milk, one egg, two drachms of whiskey, and occasionally twenty drops of laudanum, were injected by means of a soft rubber bagsyringe, twice daily. The absence of valves in the syringe, gave it a great advantage over others, as the valves are liable to be gummed over and choke the instrument. I fed the patient by the rectum alone, for two months. During
this time, the thirst was relieved by
allowing the patient to hold in the
mouth particles of ice, and by frequent
bathing of the body. There was no
fever at any time; and the pulse varied
from 120 to 140 beats per minute. At
times there was a slight irritation of the
lower bowel, which caused a diarrhea,
which fortunately subsided, and did not
seriously interfere with the daily
enemata. The vomiting did not cease.
There was no blood, but large quantities
of bile was thrown up daily. Her skin
assumed a most unhealthy sallow ap­
pearance; she lost flesh rapidly; and at
the end of the third month, she was un­
able to leave her bed. About this time
she complained of a cold sensation in her
lower extremities, followed by inability
to use them. There was at first no
decided pain, but simply severe coldness,
which could not be relieved by warm
applications. The coldness was fol­
lowed in a few days by severe cramping
pains and numbness in both legs, also a
burning and prickling sensation in the
palms of both hands and up the arms.
The patellar reflex was not present.
March 25. The patient very much
emaciated and shows signs of exhaus­
tion, fainting upon the slightest exertion;
temperature, sub-normal; pulse 140,
and very weak. Dimness of vision, and
symptoms of mental derangement are
noticed; a deep melancholia, varied at
times with hysterical attacks. Urine is
highly colored, scanty and contains
some albumen. I decided to try local
treatment to the cervix, as I had read
an article in one of my journals, which
claimed that this would relieve the
vomiting.
A speculum examination revealed a
generally congested and lived appear­
ance of the whole uterine neck with ex­
tensive erosion of the cervix. There
had been noticed for months past, but
to which my attention was not called.
After thoroughly cleansing the vagina
and cervix uteri, I applied a mixture of
tinct. iodine, carbolic acid and glycerine,
equal parts, to the cervix, and left a
tampon of glycerine cotton followed by
dry one in contact with the os uteri.
March 26. There was decided relief
manifested. The tampons were re­
moved, vaginal injection of warm car­
bolized water given, and the same ap­
plication made as before. This line of
treatment was followed out until
March 31, by which time her condition
was so much improved, that it was
discontinued. A small amount of nour­
ishment, per os, was now able to be
retained. There was still some vomit­
ing, but not so severe. The erosion
healed and as the stomach retained
most of the food, the enemata became
unnecessary. The vision and mental
faculties returned as the hyperemesis
was relieved, and the patient became
cheerful in mind.
The vomiting never ceased entirely,
until after her confinement, which took
place August 10. The labor was quite
natural, lasting eight hours from the
first pains noticed. She gave birth to a
well developed female child, at full term.
The vomiting immediately ceased, and
all nourishment taken was retained.
She had no rise of temperature, the
lochia were normal, and it was thought
she was doing well. However, on the
seventh day there was a severe chill of
one hours duration, followed by a tem­
perature of 105. There was a severe
headache, pain in the back and limbs,
with a very frequent, full, and hard
pulse. The lochia suddenly stopped;
left breast swollen and painful, very hot
and tender on pressure.
A lint compress, saturated with a
mixture of chloral hydrate, spirits tur-
pentine and boiled linseed oil, was smoothly applied and held in place by a broad muslin bandage, which gave perfect support to the inflamed breast. Quinine was given in six-grain doses, every four hours; carbolized vaginal injections, administered twice daily. The attack of mastitis lasted eight days. There being no suppuration, the nursing was only temporarily interrupted.

Months elapsed before sensation was restored to the lower extremities. The improvement was slow but continuous, and in December, 1887, she was able to walk by the aid of crutches; and three months later she had so far recovered the use of her limbs as to be able to walk without artificial support.

Case II.—May 26th, 1887, I was called to see Mrs. T., an American lady, twenty-three years old, medium stature, and weighing about 125 pounds. Four months pregnant with her first child. Morning sickness began during second month. Previous history—has always enjoyed good health; menstruation, previous to pregnancy, was always normal, with no tendency to hysteria or gastric disorder. Present trouble, nausea and vomiting. She had been under the care of her family physician, since the commencement of the sick stomach, which was two months before I saw the case. The treatment had been directed to the stomach; the ordinary remedies were tried, but the vomiting grew steadily worse. As the medical attendant was called away, and the vomiting became extreme and incessant, I was requested to take charge of the case. At this time there was no fever, and the pulse was 120 per minute. I was positively informed by both the patient and her husband that the total amount of all the food and drinks taken during the month previous were returned very soon after they were swallowed. Although she felt much weakened, I could not perceive that under this process she had lost much flesh. A vaginal examination disclosed an ulcerated cervix, bathed in profuse discharge. The uterus occupied a normal position. All discharge was carefully removed and the application of tinct. iodine, glycerine and carbolic acid made to the cervix uteri. A glycerine cotton tampon was left in the vagina to be removed next day. Small quantities of milk and lime water were allowed to be given at frequent intervals, but no other food. I directed warm vaginal injections to be used once daily. The applications were repeated every other day for a week, when all evidence of inflammation and ulceration had subsided, and the vomiting was entirely relieved. From this date patient steadily improved and returned to her regular diet, and had no further trouble. November 15th the gave birth to a healthy female child at full term.

I cite the last case as only one out of a number that have occurred in my practice since that time, and were likewise promptly relieved of their troublesome sick stomach, by a few applications to the congested cervix of the iodine, glycerine and carbolic acid mixture. No pain followed these applications.

In the first case reported I desire to call your attention to the paralysis of the lower extremities with sensory disturbance of the forearms and hands, also the dimness of vision, coming on during pregnancy, and evidently due to the pernicious vomiting. This is a condition which is rarely seen, if I may judge by the literature on this subject. In this case the early symptoms were extreme coldness of the legs from the hips downwards, with almost total loss of power, followed by pain and numbness. The patient was unable to walk from the end of the third month of
pregnancy until five months after labor, a period of eleven months. The question would arise, should the symptoms of multiple neuritis show themselves during an excessive sick pregnancy, would it be sufficient reason for inducing premature labor?

In each of these cases it was possible to alleviate the disorder without recourse to the evacuation of the uterine contents.

If the local applications had been employed at the commencement of the attack, I do not doubt but that the slight endocervitis with erosion would have soon subsided and the vomiting been relieved.

The disease affords a good field for, and at times imperatively demands, judicious rectal alimentation—the value of which cannot be exaggerated. In very bad cases life may be thus sustained for long periods, as shown in the case I have reported, until happily the vomiting is relieved, and permits the resumption of feeding by the mouth.

That the disease in question is often serious, all must admit. Gueniot, as quoted by Playfair, "collected 218 cases of the graver form of the disease, out of which 46 died; and out of 72 that recovered, in 42 the symptoms ceased only when abortion, either spontaneous or induced, had occurred. Of the 46 who died, 28 did not abort, and 18 had abortion or premature labor induced, or miscarriage was spontaneous." Jomlin gives the mortality at 44 per cent.

Dr. Grailey Hewitt, in discussing this question, states that the prognosis depends much upon the period of pregnancy in which the trouble commenced. The nearer to the beginning, the worse the prognosis, especially in the case of primiparae.

From the results obtained in these cases, with others not reported, I have been led to feel that in the early employment of treatment directed to the inflamed and congested cervix uteri, (and I think in no case will an examination fail to disclose the presence of local disease of this character,) with a proper regulation of the diet, we will be successful in relieving this distressing and troublesome disorder of the stomach.

A CASE OF LABOR WITH OCCIPUT IN HOLLOW OF SACRUM, WITH REMARKS.

By E. S. SMITH, M. D., Burchard, Neb.

The third and sixth positions of Baudeloque are so rare that their occurrence is denied by most authorities. But is it not the rare cases that perplex us in obstetric practice, as well as in other lines of our calling, especially if it be something so rare that our teachers and authors have either passed it by in silence, or barely mentioned it to state that it would be rejected for the reason of its extreme rarity?

The case which I now report to you was one of those extremely rare cases, being one of the sixth position of baudeloque, in which the occiput looks directly to the promontory of the sacrum, and the forehead rests on the interpubic pad as in figure 1. Patient a primipara aet. 24, a woman of fine physique, and above the average size. I had made out the presentation easily, but noticed nothing peculiar about the position until after the rupture of the membranes, when the occiput was found to be in the hollow of the sacrum, and eventually was impacted as shown in figure 2. Having never heard or read of the difficulties that attended this position, I apprehended no trouble. After waiting some time, and making ineffectual efforts to dislodge the head with my fingers, no progress being made and my patient growing weary, I
applied the forceps, (Miller’s) expecting to so assist nature as to soon terminate labor. The forceps were easily applied and locked, but when I made traction upon them they slipped down against the perineum. I loosened them, and re-applied them as high up as possible, with the same result as before. I now realized that I was able to apply the forceps only to the sloping part of the occiput, and that I had an uncommon and difficult case, and thought I had better have assistance, so a messenger was sent to Pawnee City for aid. Dr. Anderson came. After hearing of my failure, and making an examination, he thought that he could apply his forceps, (Sawyer’s short forceps I think they were) so that they would hold, but when he tried them they slipped down, just as mine had. We now concluded that if we could dislodge the forehead from the pubic arch, that we could deliver our patient. So with this end in view we applied the forceps close to the pubic arch, and while making firm pressure, lowered the handles, without traction. By this means we succeeded in lowering the forehead so that we could bring the face out under the pubic arch, delivering our patient of a still-born child, and rupturing her perineum. So much for this case and its management.

The question now is: How should those cases be managed, and can they be detected early, before the membranes rupture, and prevented? As to the prevention, there is apparently some difference of opinion. Dr. T. G. Comstock, of St. Louis, in Medical Brief, December, 1888, pages 496–98, says: “In posterior occipital positions, if the accoucheur has made the diagnosis correctly, early in the labor, he can then correct the position before or at the time the membranes are ruptured; by introducing the whole hand thus early the occiput may be grasped and, with some difficulty, rotated forward, and nature will accomplish the rest.” Prof. Temple, of Toronto, as quoted by Dr. Comstock, mentions having recognized a case of posterior occipital position before the membranes were ruptured. He placed the woman under ether and had no difficulty in introducing his hand and rectifying the position, and since then he says he has succeeded in two or three cases. “To be successful, however, in early making rotation,” he says, “it is quite necessary for all things to be favorable. Once the head has descended low enough to allow the shoulders to enter the brim the operation is not possible, nor do I think it advisable to do it then, for fear of injury to the child’s neck.”

Prof. Penrose, in “Hirst’s American System of Obstetrics,” Vol. I, page 580, says: “In a sixth position the occiput looks directly to the promontory of the sacrum. Early in the labor the smooth back of the head playing on the smooth and round promontory of the sacrum, causes the head to assume an oblique position at the superior strait. In other words, causes an apparent fourth or fifth position. The medical attendant, conducting his examination, diagnosis a fourth or fifth position, and does not realize that the position is apparent and not real, and that the back of the child is still looking directly to the back of the mother, and that there is a twist in the neck. As soon as the head has passed the brim the neck untwists, and the occiput is thrown into the hollow of the sacrum.” You will notice from what I have quoted from Prof. Penrose that he does not believe that the sixth position can be discriminated from a fourth or fifth position until the occiput comes into the hollow of the sacrum;
and, again (page 587), in speaking of posterior position, he says: "I believe in all cases where a normal head fails to rotate on a normal perineum, the trouble is a sixth position. The occiput then goes, in spite of every effort to prevent it, into the hollow of the sacrum, and the result is, if the head be large or the soft parts rigid, often one of the most difficult cases in obstetrical surgery.

To rectify the position, he recommends the immediate use of a pair of short, straight forceps, and that a firm but prudent attempt be made to force a rotation of the occiput to the pubis, even at the risk of dislocating the cervical vertebrae. Should the attempt at forced rotation fail—and probably it will fail—then the delivery may be secured, possibly, by traction with the forceps though the occiput remain in the sacrum. Should a prudent application of the forceps fail—and it constantly will fail—the next procedure is embryotomy.

Prof. Comstock—The perineum being ruptured, if head is delivered, advises to make deep lateral incisions into the perineum, and to bring the occiput out through the incised perineum, and after delivery to immediately repair the perineum. He advises craniotomy as a last resort.

In conclusion, I wish to ask if it would not be possible, by giving an anaesthetic before the child becomes impacted, to turn and deliver by the feet?

MALFORMATION OF FŒTUS.

By M. A. Perkins, M. D., Trumbull.

On the 15th of April, 1890, I was called to attend Mrs. C. On the evening of the day preceding Mr. C. had called on me, informing me that his wife was suffering from pains indicating miscarriage, and that she was just entering the sixth month of pregnancy. I prescribed viburim comp. The pains continued to grow more severe, and at 1 p. m. on the following day I was called. Found patient suffering from labor pains, which occurred at short intervals. By digital examination found feet presentation. I exerted a little traction on lower extremities to aid nature in expelling fetus. All other conditions of labor normal. Placenta delivered few minutes after birth of child; child was born dead, and to my surprise I found upon examination, not the well-formed foetus of five months, but the ill-shaped specimen I am about to present.

The case is one of malformation caused by maternal impression. Age of mother 24 years; nationality, French; general health good. Impression was made as follows: In February Mr. C. shot and killed a rabbit, the shot taking effect in the back of the head, thereby producing a mass of mangled flesh. Tossing the rabbit down on the porch where Mrs. C. was standing, asked her to dress it. She did so; while dressing it she grew nervous and sick, thereby causing malformation as referred to. I now present specimen and leave discussion with you.

THE TREATMENT OF ABORTION.

By J. P. Lord, M. D., Omaha.

Most every person who writes an article for a journal, or a paper for a society, gives some reason or excuse for so doing. My reason for presenting this subject for consideration of this eminently representative body of Nebraska's most progressive and successful physicians is, not that I have anything absolutely new to offer on this subject, but that too great a proportion of the profession at large are wont to treat this emergency on the so called expectant plan; and it is a subject on which considerable stress should be laid; and a little agitation will, I think, be of service even in this circle of medical ladies and gentlemen.
A member of the New England Divorce Reform League, S. R. Dyke, states that over 6,000 women die yearly in the United States from attempts to destroy unborn children. It is to be assumed that physicians are responsible for the loss of a few thousand of these 6,000 lives, by improper, half-way, dilatory, or even do nothing treatment. My observation has shown me that a great deal of ignorance and inefficiency is displayed in the treatment of these cases. Many men of ripe years in the practice of general medicine, seem to prefer to be harassed with the cares of these cases improperly treated, than to adopt means somewhat energetic and efficient. When they might leave their patient, feeling that they had done their duty, both to themselves and the one who has intrusted her life to their care. A person using proper treatment can go his way—to his slumbers without fear of being disturbed, to his tardy meal without bolting it, for fear if he did not swallow it in a hurry he might not have time to eat it at all, or to go his rounds without interruption, and without finding upon his return doctor B., who lives near by, installed, because the condition of the patient would not warrant waiting the arrival of the regular attendant, who could not be found. Many of our younger practitioners follow the same course in these cases, because they have been taught that way; and pursue it, I suppose, for the reason that the rear of the great profession should be represented.

The temptation to give ergot and wait has come to every doctor, I suppose—if I can judge others by myself; but trouble is in store for him who pursues that practice. The tamponnade also is too frequently a blind, and, unless used properly, is dangerous, both from being improperly introduced and from the delay in the expulsion of the placenta incident to waiting. Where is he who has any standing at all, who would think for a moment of leaving a patient delivered at term, with an undelivered placenta; and yet those who leave their patients with a retained decidua, or a placenta from abortion, are, I will venture the assertion, quite numerous. Now I cannot say, for I have not tried the experiment, but I presume that the danger would be little greater in the former than in the latter. In the former cases there would be a strong probability that the placenta would be expelled intact, in due time with perhaps no more flooding, or, possibly no more danger from sepsis that obtains in the latter condition named in our comparison. However that may be, I think it goes without being gainsaid, that the same rational treatment is not followed in many cases of abortion, that is seldom neglected in labor at term. I refer to the emptying of the uterus before we leave our patient. This is my unvarying practice, and I feel justified in testifying to its merits in strong terms. Before adopting this practice these cases were dreaded by me, with good reason, too, as they may well be by any man who is awake to his responsibilities, without being master of the situation, which contingency is almost certain to arise if delay is made. The combined use of ergot and the tamponnade is successful in the hands of many, in the great majority of cases; but how many can use the tampon successfully? Unless introduced through Sims' speculum, it is practically a failure, and few of the majority use that instrument for that purpose. It is liable to fail even when introduced through a Sims'. This very desirable instrument does not insure success unless there is an operator behind
it who knows how to tampon. Simply wadding the vagina full of absorbent cotton, or a cotton bandage, is not what will pass for a properly applied tampon. The tampon is too frequently a delusion and a snare, and even at its best I prefer other treatment. It is that adopted and championed by Munde and others for nearly ten years and has met with a great deal of strong opposition from most all quarters, both in the United States and in Europe. But the disciples of these leaders just mentioned who favor the immediate removal of the secundines by the curette, if necessary, are multiplying rapidly, and those who have adopted other measures as being all that is ever required, relying, when need be, upon the use of the index finger, have found that there are easier methods than this apparently simple maneuver.

To empty the uterus properly with the finger, particularly when the attachments are quite strong, is always difficult and sometimes impossible; especially is this true in young women. And in such it is always a painful, tedious procedure. And when done it is not as thoroughly freed from shreds and the decidua occupying the cornui as if a more distinctly operative procedure had been resorted to. And, while the use of Sims' speculum and a curette may be entitled to the term operative procedure, yet I can say, that to me it is easier and simpler. And I think all will testify to this when they have tried both. I will observe here that I think doctors, generally, use the Sims' speculum too little, thinking that an instrument that will not retain itself is not so desirable as bivalve and trivalve specula. These objections are more than counterbalanced, I think, by the superior facility with which one can operate with the patient in left lateral, position and through the Sims'. To me all gynecological procedures were difficult until I adopted the almost universal use of the Sims'. I have never been so at a disadvantage, as when in olden times, in country practice, I have been compelled to do some sort of gynecological work through a valve speculum, with patient on her back, of course, with hips sunken a foot deep into an old fashioned cord feather bed. My personal observation has been, that the country doctor especially, makes too much use of speculae other than Sims'. But I am rambling, I think it justifiable, however, in this connection.

When called to a case of abortion where the foetus has been expelled, or where hemorrhage is so profuse as to indicate that expulsion is inevitable, at the earliest practicable moment I place her in the left lateral position and introduce the Sims' speculum, and then, by the use of forceps and cotton, I mop out the vagina to determine the situation. If the uterus is sufficiently low in the pelvis and the cervix dilated and containing a part of the membranes, they are at once grasped by the forceps and removed, then the dull curette is brought into requisition, it (as well as all other instruments) having been made clean and asceptic. To make assurance doubly sure the curette is dipped into pure carbolic acid before introducing into the uterine cavity. This done, there can surely be no objection to the instrument as being less preferable to the finger from an antiseptic point of view. The curettae is introduced and the uterus is gently and thoroughly scraped and freed from all its contents. This is readily and quickly accomplished with the hand above the pubis pressing down the uterus. If the abdominal walls are thick and resisting, and the uterus cannot be readily grasped in the left hand,
the double vulsellum forceps are used to grasp the servix by the anterior lip and then drag down the womb sufficiently to bring it within suitable operating distance, and if the os is not sufficiently dilated I use a dilator and gradually, though speedily, render the os quite patulous enough for entrance of the curette. The curetting will cause a free, but transient, hemorrhage, and when patients have fainted previously, they are very apt to do so again at this juncture; but this does not concern me greatly, unless it be a badly neglected and very critical case; when camphor, ammonia, the fan and an open window are brought into good use, and alcoholic stimulants in the worst cases. Quinine and opium are always given early. Nothing, in my experience, will bring up a pulse so quickly and maintain its effects so well as these remedies. I have never found it necessary to use the tampon after curetting, but sometimes do, as a precautionary measure, when I have reason for being guarded, as for instance, when the uterus is large and flabby, or the patient is a "bleeder." But under ordinary circumstances, when there has been no decomposition, all that is done is to irrigate the vagina with an antiseptic solution, usually sublimate one to three thousand, and conclude the operation. When the patient receives the usual treatment in these cases, a common prescription of mine is ergotine gr. i, ext. nux vomica gr. ¼, quinine iii, S. Four times a day. After two days, three times daily. I am a great advocate of plenty of good substantial nourishment, together with an abundance of fresh air and sunlight. And invariably insist upon at least ten days in bed, and am as careful that involution is favored in these cases as in labor at term.

While the treatment of abortion by curetment is at once a sure and certain relief for the hemorrhage and a satisfaction to the operator, its advantages in cases where decomposition and absorption have taken place is even more satisfactory. Called to a neglected or improperly treated abortion, with temperature at 105, more or less, pain and distention of the abdomen, with history of repeated hemorrhages and several chills, perhaps, the patient is ordered the following medicine: antipyrin, 10 grains; quinine, 10 grains; opium, ¼ to 1 grain, repeated hourly for three doses. The patient is immediately cleansed externally; the vagina is thoroughly irrigated with a hot antiseptic injection; the uterus is treated as before to remove membranes and in addition to destroy all germs of infection within the uterus, that organ is first wiped out dry with absorbent cotton wound tightly upon a uterine probe; this done, fresh cotton is applied to the probe and being first dipped into pure carbolic acid, to the endometrium it is thoroughly applied with the applicator. This done, another irrigation is resorted to and the patient ordered bathed and clothing changed, placed upon a clean bed, and frequent antiseptic vaginal irrigations ordered; also turpentine stupes to abdomen to favor return of lochia and relieve inflammation if present. With such treatment, where inflammation or pyaemia is not well established, it is usually my satisfaction to find my patient with a normal temperature upon my visit next morning.

The radical treatment of abortion has been highly satisfactory to me, as I think it must be to all who practice it thoroughly. To all such I hope my testimony will strengthen them in their convictions, and if there are any who have not as yet followed this line of practice I hope to be able to persuade them to at least try the only safe and
certain treatment for all cases. I recall one case of death from septicemia from abortion, in my early practice, and I shall always hold myself culpable for my waiting until too late. Immediate proper treatment would have saved her life. And I recall many cases where recovery from abortion was very slow and tedious because the hemorrhage had been so exhausting as to require many months for the patient to regain her lost vitality, health and strength, because I had been hours and days, perhaps, in doing what should have been accomplished in fifteen minutes.

Ladies and gentlemen, I am sorry to refresh you on disagreeable memories, but do you not recall such cases from your practice. If you do, of course you will not continue to lay yourself liable to your own condemnation. I do not ask any who are in doubt to take my evidence alone; there is plenty of authority for adopting this practice; it is not new; but, believing that it is too little practiced is my object in presenting this paper, that it may be more generally adopted.

THE SEXUAL SYSTEM.

By W. O. Henry, M. D., Pawnee City.

As the science of medicine advances, we find the tendency growing to prevent disease rather than cure it. This we take to be a good omen. No profession or class of society has so much to do with the physical well being of humanity as the medical. Whatever, then, we can do to promote the health of the community, prevent suffering and sickness, or prolong life, comes within the scope of our calling, and is the highest phase of our noble work.

There has been little said in our colleges, in our medical works, periodicals and in our society meetings upon the sexual system as compared with other subjects of even less importance. It has therefore seemed to me that a suggestive article upon this subject would be timely, and I have written the present article more especially to call attention to the importance of the subject and trust we may each hereafter give it the consideration it demands, and by wise counsel in this direction do much to advance health and longevity.

T. M. Madden, speaking of the consequence of premature or excessive indulgence and abuse of the sexual appetites, on the general health, says: "At no former time was it so necessary as at present for medical practitioners to recognize the evidence of these abuses and excesses, to which are due a large and increasing proportion of the disorders, mental and physical, by which human life is embittered or its duration shortened. To these causes must be mainly ascribed the failure of physical stamina, the hyperesthetic nervous condition, and the want of mental power and degeneration, noticeable amongst too many of the youth of the present day. Thus the evil resulting from this widespread sensuality, the effects of which are now seen in our hospitals and lunatic asylums, have attained such proportions as to be subjects of national as well as of medical importance. Again he says: "The morbid influence of the premature indulgence of the newly-awakened sexual appetites at the stage of puberty, and the many forms of disease by which the vice of masturbation is avenged by outraged nature, are subjects the medical importance of which it would be difficult to exaggerate."

The same author says further: "In both sexes, although less obviously in men, reflex irritation from the sexual system has probably much to do with the causation of insanity. * * * Uterine and ovarian disorders must also be
reckoned amongst the predisposing causes of intemperance."

The Chicago Inter-Ocean says: "Out of thirty-two young men in New York city who were recently examined for West Point cadetship, only nine were accepted as physically sound. Such a note might well make the young men of our cities pause for a moment's thought. Beer, the cigarette, too much amusement, and hidden vices are making havoc with the physical manhood of all our towns and cities." A physician was asked: "To what extent do our young men violate the seventh commandment?" He said: "Ninety out of every hundred cohabit with women before marriage." Another physician of twenty-five years' experience in one community said: "I tell you not five young men out of a hundred are pure." Still another old in his profession said: "When I was a young man, not one woman in twenty was solicited for her ruin; now I sometimes think that not one in twenty escapes solicitation."

Mr. Dugdale says that the number of prostitutes in our cities is about eighteen out of every one thousand women. The testimony of others is that the "kept" women far outnumber the prostitutes of the bagnios.

It has been carefully estimated that one woman out of every twenty-five in in Omaha, between 16 and 40 years of age, is a fallen woman.

In 1880 Philadelphia confessed to having 517 houses of ill-fame.

Then when you consider the large number of illegitimate children in all parts of our land, you will have no difficulty in realizing something of the prevalence of licentiousness throughout the entire country.

A physician speaking of the evils of self-abuse, as witnessed in the Hamwell asylum, said, "Would I could take them (young men) with me in my daily rounds, and point out to them the awful consequences which they do but little suspect, to be the result of its indulgence. I could show them those gifted by nature with high talents, and fitted to be an ornament and benefit to society, sunk into such a state of physical and moral degredation as wrings the heart to witness." Dr. Gardner speaks of it as "the secret cause of much that is perverting the energies and demoralizing the minds of many of our fairest and best." The Boston Medical and Surgical Journal says: "A great number of the evils which come upon the youth at and after the age of puberty, arise from masturbation, persisted in so as to waste the vital energies and enervate the physical and mental powers of man."

A gentleman told me of a boy whom he knew to be one of the brightest in his class at 14 to 16 years of age; learning the habit of masturbation, he gradually fell behind his classmates and persisting in the practice, finally became idiotic, and was given a cell in the county poor house, where he eked out a miserably sad and hopeless existence. Call to mind, gentlemen, the great number of cases of specific disease you have seen among both men and women in private practice together with those seen in our hospitals, and then recount the physical and mental wrecks you have seen among both sexes from the abuse of the sexual system, and tell me does not this subject demand our thought and action from both scientific and humanitarian as well as moral grounds? Surely we can say without fear of successful contradiction that the sexual system of humanity to-day is diseased, disordered and outrageously abused. Thus great violence is done to the physical being of almost every
member of society. The multitudinous aches, pains and diseases to which human flesh is heir evidently come from violations of the natural laws of health; and constant transgression of the laws pertaining to man's sexual system, are working awful havoc with the physical man. No intelligent person will claim that self-abuse is natural or conducive to the best physical welfare of boy or girl, man or woman, when such direful results both moral and physical follow.

Nor do I see how any rational being can claim that illicit intercourse is a natural or desirable thing on prudential, scientific, humanitarian or moral grounds.

So that these practices being unnatural and unlawful, the question arises, how comes it that people so generally are violating the laws which were designed to govern the sexual system? I think that more than ninety-five per cent. of boys practice masturbation—not so many of the girls practice it. Not over ten per cent. of men are virtuous; but a much larger proportion of women are virtuous.

In this connection we may ask, first, What is the real object of the sexual system? No one will be probably found to deny that the object and function of this system is the multiplication of the race. Yet from the manner of its use and abuse to-day you would hardly be able to realize that this is its proper function.

Why so much specific disease among both men and women? Why so much infanticide—which is known to be appalling in its proportions?

Why so many illegitimate children? Why so much illicit intercourse, if the above be recognized as the proper and legitimate function of the sexual system? This being true then, to use this system other than in wedlock is unlawful and therefore detrimental to the whole physical nature.

It might be well just here to call attention to the fact that in many, many cases of married life actual disease of one kind or another results from the too frequent exercise of the sexual organs; so that because man and woman have been united in matrimony does not give them license to ruin their physical being by excessive indulgence, and yet this is the way in which many are abusing themselves and sowing seed that will bring forth disease in themselves or their offspring. A father who has been licentious and has allowed his sexual system to become his master, need not expect to bring children into being who are not thus inclined, unless he rises into a higher and nobler manhood before bringing those little ones into being.

We are usually ready to admit the heredity in consumption, syphilis and some other forms of physical taint or defect, but I am sure we have too often overlooked the influence of the intellectual and nervous systems upon offspring. That is to say, we have not sufficiently considered that the mental condition of father and mother and the condition of their nervous and sexual system has much to do with the health and vigor of the child.

Carpenter says: "It seems certain that the simple direction of the consciousness to a part, independently of emotional excitement, but with the expectation that some change will take place in its organic activity, is often sufficient to induce such alteration, and would probably always do so, if the concentration of the attention were sufficient."

Dr. Kellogg, in speaking of self abuse, says: "The use of stimulants of any kind is a fruitful cause of the vice. Tea and coffee have led thousands to perdition in this way. The influence of tobacco
from the fact that the real object and intent of the sexual system is ignored, and it is abused by excesses, high living, the use of stimulants and narcotics, we have to-day, in my opinion, almost a universally disordered and unnatural sexual system in the civilized human race. So that we are not only suffering from it morally as a race, but physically as well. Look at the early age at which boys begin self abuse! See the large number in our insane asylums! The large number of feeble minded and idiotic! The multitudes with other evidences of nervous deficiencies! As conservators of the public health it is high time for us to call a halt and endeavor to get the mind enlightened, the will power strengthened and the conscience quickened upon this subject.

Let me say, in conclusion, the sexual system was intended to be used as the means of propagating the race; it is very intimately connected with the nervous system. Stimulants of food and drink with narcotics and excesses in sexual indulgence positively injure the nervous system and also the sexual.

Parents who have by any means injured their nervous system, transmit to their offspring some physical defect.

If we teach and practice these things human life will be prolonged, much suffering prevented, and the race elevated intellectually, physically and morally, while the sum of human happiness will be greatly increased.

"ERRORS OF REFRACTION AND HEADACHES."
By D. C. BRYANT, M.D., Omaha.

Although the title of this paper smacks somewhat of age, still I believe the subject to be one of the most important connecting links which join the work of the general practitioner and that of the ophthalmologist, and that it cannot be too often called to mind or thoroughly discussed by all the members of our profession.

The fact that errors of refraction stand among the first of the causes producing headaches has long been recognized by ophthalmologists, but, to the profession at large, the importance of this fact had never been pointed out in the proper light, until in 1876, Dr. S. Wier Mitchell, of Philadelphia, called attention to it. Even to-day in our works on nervous diseases, in the chapters devoted to sick-headaches and their causes, we do not find much emphasis put upon errors of refraction as a cause. Ranney's work on "Nervous Diseases" is a notable exception to this rule, as he emphatically states that, in his experience, hypermetropia is one of the most frequent of causes in the production of sick headaches.

In this short paper only two errors of refraction will be spoken of; those being not only the most common errors, but also the most prolific in the production of headaches, and at the same time are the most easily overlooked, both by physician and patient.

First then comes hypermetropia or "far sight," as it is called by the laity. This is the most common of all the defects in the refractory power of the eye and consists in the antero-posterior diameter of the eye-ball being so short or the refracting power of the media so weak that parallel rays of light entering the eye are not brought to a focus until some imaginary point beyond the retina has been reached.

Hypermertropic astigmatism is the next error to be spoken of and, in my experience, it is also the next in frequency of occurrence. Of this there are two varieties that concern us—simple and compound. There is a third variety—"irregular"—but being irremediable need not be mentioned here.
In simple hypermetropic astigmatism we have the refractive power normal in one meridian of the eye while it is below par in all parts of the eye, but is so to a greater degree in one meridian than in the other.

The conditions mentioned above obtain when the eye is at rest; that is, not using the muscles of accommodation. The patient soon learns, however, that he can increase the acuteness of his vision and obtain more perfect retinal images by using his ciliary muscles. In the milder cases of hypermetropia by so doing the patient can bring his vision up to normal, and these subjects often boast of their extraordinary eye-sight. The same is true, to a certain extent, with the astigmatic. By using his muscles of accommodation he can make the retinal image of any object much more distinct, if not perfect.

Swan M. Barnett in his work on astigmatism says: "In the lighter causes of astigmatism clear retinal images may be obtained by a spasmodic contraction of the ciliary muscle. This sort of 'see saw' action of the muscle will focus the image first of one object and then the other, rendering the whole much more distinct." So long as it is possible to obtain distinct retinal images by the extra use of the muscles of accommodation, there is a constant and irresistible temptation to use them.

The nearer the patient can come to procuring perfect vision for himself, by the extra use of the muscles, the more persistent will be his efforts in that direction and patients suffering from these errors of refraction soon acquire the habit of constantly using these muscles, which, in the normal eye are at rest, except when looking at near objects. Constant over-use of any muscle will eventually tire it out, and so it is with the eye muscles. Sooner or later the patient commences to experience pain and trouble which, unfortunately, is not referred to the eyes themselves, but rather to the head, the patient at first complaining of frontal headaches which usually after a time become general. This tired out condition of the eye muscles is termed, by ophthalmologists, asthenopia, and from it may arise numerous reflex nervous troubles, the most common of these being headaches. This worn out condition of the eye muscles can be of all shades and degrees, from that causing only the slightest trouble, to that producing intense pain and headache, rendering it utterly impossible for the sufferer to do any continuous close work. In one case will be found a condition requiring only the wearing of a proper glass to correct the error and the patient is well, while at the other extreme will be found one requiring not only the constant use of correcting glasses, but months and years of rest, with tonics and out-door life and everything calculated to build up the general muscular system, and even when all this is done, the muscle may never regain its normal vigor.

There are three points which I wish to touch upon in this paper, each of which I will illustrate with a very brief history of a case.

The first is that in the worry and hurry of general practice the physician is liable to overlook the eye as being an organ very liable to be the seat of the trouble causing the headaches of some of his patients who suffer more or less constantly from this affliction. The following is one of a number that I might report which aptly illustrates this point.

Mrs.——, the wife of a well-known physician of our city, came to me to be fitted with "reading glasses." During the conversation I examined her eyes
with the ophthalmoscope and found that she had a hypermetropia of two dioptics in each eye. On being asked if she suffered much with headache, she replied that since early childhood there had been few days in her life that she was entirely free from it, and very many days that she had been confined to her bed on account of sick headaches. She did not think that her eyes had anything to do with it, as her vision had always been remarkably good and her eyes had never given her any trouble further than being a little weak. It took considerable urging on my part to induce her to try the experiment of wearing glasses constantly, for the purpose of curing her headaches. She finally, however, consented to give them a thorough trial. She reported to me a month later that she was entirely free from headaches, and that her head had not felt so clear since she was a child.

Now here was a physician not below the average in ability, and a lady of superior intellect, who had lived together for ten years, with headache her daily companion, and yet neither had suspected the true cause of her trouble. Of course this is an extreme case, but it nicely illustrates how both the patient and the physician can overlook the origin of this everyday trouble.

The second point is, that the milder and medium degrees of error are much more liable to produce asthenopia and headache than those of higher degree.

The following is an everyday example of this class: Miss——, age 15, has always experienced a great deal of trouble whenever she had attended school, so much so that it had seriously interfered with her obtaining an education. Whenever she attempts to attend school her headaches begin and become so severe as to oblige her to lose a good many days of each term. Under atropine, I found that this girl had one dioptic of hypermetropia and half that amount of hypermetropic astigmatism axis vertical. With a full correction of the astigmatism, and three-fourths correction of the hypermetropia, she has been enabled to attend school for the past year without any trouble.

This is one of the hundreds of cases of mild degree where the every day endeavor to produce perfect vision for distance uses up all the muscular strength nature has provided, and when near work is begun and the reserve force that should be there is called upon, it is found to be exhausted. If the tired out muscles are urged on to extra work, they, like a jaded steed, goaded on by whip and spur, rebel, and headache or other reflex nervous trouble is the result. The amount of study one does, the kind of business or occupation one follows, has very much to do in developing the requisite amount of asthenopia to produce a headache where errors of refraction exist.

One who has not enjoyed the privileges of a thorough early education, and who follows an out-door life, may go on for years without suffering any inconvenience from quite an error of refraction. After a protracted illness, or as the result of any depressing influence, a patient may suddenly become aware that he has an error of refraction, that before was not dreamed of. The trouble from this may disappear with returning health, but more often it does not, and in many cases, after the correction of the error with proper glasses, the most careful and judicious use of the eyes must be enforced.

The third point I would call your attention to is, that in the higher degrees of error of refraction, we do not find as much headache. The following is well suited to represent this class of cases:
Miss ——, aged twenty, has trouble with her eyes in close work and distant vision is not as good as she would like. She has never been troubled with headache. On testing her vision with Snellen test-type, it was found equal to one-tenth normal vision in either eye. Further examination revealed the fact that she had simple hypermetropic astigmatism of three and one-half dioptres, in either eye, the axis of the right 110 degrees and that of the left 70 degrees. Here we have a high degree of astigmatism with the axis oblique, and yet no headache, and why? Simply because the ciliary muscle, being utterly unable to improve the retinal images to any great extent, has not worn itself out in the vain attempt. The patient has been obliged to put up with poor vision, but as a recompense, has escaped having many a severe headache. In these cases the ciliary muscles are not used, except in looking at some near object, the same as in a normal eye, and consequently do not tire as quickly as in an eye whose error is so slight that it can be overcome and vision made perfect by constant muscular effort.

Beard, in his work on nervous diseases, enumerating the causes of headache, and among them eye strain, says that, in many cases of severe sick headache, the trouble entirely disappears between the ages of 40 and 50. He, however advances no reason or theory for this.

Ranny, in his work, also mentions this fact, especially in regard to dypermetropia and gives this as a reason: "That at that age the beginning of presbyopia compels the subject to commence wearing glasses for near work."

Now I believe both of these gentlemen overlook the most important reason for the cessation of the trouble at this particular time. At this period of life the lens has become somewhat hardened and the ciliary muscle so weakened that, being unable any longer to produce perfect vision, gives up the fight, and as, in the high degrees of error of refraction, is at rest except when the eye is used for close work, and then, with the glass the patient is compelled to wear for reading, there is no more strain than the muscle can bear. Thus the muscle, relieved of its extra burden, if it does not regain any of its lost strength, loses its irritability and the reflex irritation disappearing the headaches cease.

This, I believe is the true explanation of so many headaches disappearing at or about middle life.

And now the practical question may be asked, where the headache is due to an error of refraction will the correction of the error with proper glasses always cure the headache? The answer must be no, for there are cases where there is much spasm and irritability of the ciliary muscles that, even after the prolonged use of atropine, the habit of constantly using the muscle cannot be broken up, and the effect of the correcting lenses is nil, or the muscle may be so thoroughly worn out that it never can recover anything like its normal strength.

In the great majority of cases, however, the effect is wonderful and the result all that could be asked for. The higher the degree of error, the sooner will the patient experience benefit from the correction:

Should errors causing this trouble always be corrected with glasses? Most emphatically yes, and the glasses should be worn constantly until all asthenopia and headache have disappeared, when in a few exceptional cases they may be dispensed with except for near work. The rule is, however, that once the headaches are produced by eye strain the
PRINCIPAL HINTS ON DISEASES OF THE EYE FOR THE GENERAL PRACTITIONER.

By W. L. Dayton, M. D., Lincoln.

My aim in presenting this paper is to bring before the general practitioner many of the diseases of the eye which they are often called upon to diagnose and treat; I shall endeavor to make everything as plain and practical as possible. I shall attempt to present to you aids in the differentiation of diseases, so that there may be no mistakes in diagnosis that may lead to the permanent injury of the eye.

We will take up the external diseases of the eye, after giving a brief description of the anatomy of the conjunctiva, according to the best authorities on the subject. The conjunctiva is a mucous membrane and is an immediate continuation of the external integument from the edge of the lids. It is the lining membrane of the lid where it is known as the palpebral conjunctiva; close to the orbital border it is reflected to the globe of the eye when it is called the ocular conjunctiva; it covers the globe from near its equator to the border of the cornea and is closely united with the sclerotic; it even passes beyond the sclerotic into the border of the cornea and unites with the corneal tissue at the limbus conjunctivalis.

The conjunctiva is richly supplied with nerves, being derived from the first division of the trigeminal, their termination present an important peculiarity; they end in special small organs which have been called claviform terminal corpuscles.

The secretion of the conjunctiva is composed of the product of the acinus glands, which is very similar to that of the lachrymal glands, and in which there appear superficial epithelial cells; these cells being constantly shed and renewed.

The secretion acts as a continued lubricator of the eye-ball and preserves the clearness of the cornea. The usefulness of this secretion is shown in the fact that the tears are of secondary importance in the lubrication of the eye-ball; this is plainly shown in the case where the lachrymal gland has been extirpated without entailing any disturbance of the functions of the eye.

CONGESTION OF THE CONJUNCTIVA.—In congestion of the conjunctiva we find the ocular vessels injected, the palpebral conjunctiva slightly reddened, generally no increased secretion nor lachrymation. Patient does not complain of pain, their attention is attracted to their eye by the constant use of correcting lenses will be necessary afterward or the trouble will return.
injected blood vessels. Treatment in these cases consists of merely the mildest astringent solution, such as soda biboratis, grains 5 to 10, aq. dest. 1 oz.

Simple conjunctitis is characterized by marked hyperaemia of the conjunctiva of the globe. In its first stages the vessels will show either a bluish or red tint, an intense injection and patient may complain that he has a feeling as of foreign bodies in the eye; increased lachrymation; vision not disturbed; this disease may be confounded with inflammation of the iris (iritis) by those not accustomed to treating eye diseases.

Here permit me to charge you to always carefully examine the mobility of the pupil. Examine one eye at a time; cover the one eye with a folded towel, then place the hand over the eye to be examined in a position so as to exclude the light, then quickly remove the hand and notice carefully the movement of the pupil. After repeating several times you may suddenly remove the pad from the other eye, at the same time noticing carefully the contraction of the pupil of the eye being examined. You have then the result of both direct and indirect light stimulation. If the pupil of the eye is active, i.e., contract and dilate quickly, you have no iritis present.

Treatment in simple conjunctivitis may be summed up in a few words—cold applications, if seen in the earlier stages, otherwise, hot applications applied thirty to forty minutes every two hours until relaxation occurs. Use mild astringents, such as solution sodea biboratis, solution acidi borici, grs. 10 to 30 to oz. aq. dest.

Catarrhal conjunctivitis, or as the laity term it, common sore eyes, comes on suddenly with excessive lachrymation, considerable pain, as of sand or some foreign body in the eye, often photo-phobia, with spasms of the lids is present, the palpebral conjunctiva red and thickened and often dotted with small elevations at the tarsal fold, the caruncles red and swollen, ocular vessels much injected and frequently ecchymotic spots beneath the conjunctiva; in severe cases we find chemosis of the ocular conjunctiva often threatening the continuity of the cornea. A muco-purulent secretion appears early and is highly contagious. This causes a disturbance of vision owing to the secretion coming down from underneath the upper lids and falling over the cornea, producing a blurred image. Both eyes are liable to suffer, owing to the contagiousness of the secretion, and entire families often suffer from the careless handling of this disease. It is frequently a sequel to the exanthematous disease of children, in which case it may prove stubborn and often complicated with phlyctenular ulceration of the cornea. This disease runs its course and the eyes may become apparently well, yet its tendency is to merge into chronic conjunctivitis with its attending evils to the cornea.

The treatment—if seen early, before secretion is abundant—should be antiplogistic, cold applications, if patient is where he can be seen frequently, used constantly; if you have not the patient strictly under your observation it is better to use the cold applications at intervals, say from thirty to forty minutes at a time every two hours; keep the patient quiet and in a moderately darkened room. If one eye alone is affected endeavor to prevent the other from being implicated by means of a protective bandage, or what is better still, take a watch crystal and by means of adhesive straps fix it to the well eye, being careful to strap to the bridge of the nose so that the secretion cannot pass from one eye to the other. When the conjunctival
tissue assumes a relaxed condition and the swelling subsides you may use astringents as penciling the upper and lower lids once or twice daily with \( \frac{1}{2} \) to 1 per cent. solution nitrate of silver, washing the lids directly afterwards with luke-warm water, giving patient solution boracic acid grs. 20 to vaseline \( \frac{1}{2} \) oz. to apply to edge of the lids at night. In case of corneal ulceration occurring, the treatment should be modified to suit individual cases.

We will now consider the most dangerous of external diseases of the eye, namely, purulent conjunctivitis, synonym: blennorrhoea, ophthalmia neonatorum, gonorrhoeal ophthalmia.

Statistics show us that one-third of the blindness is caused from ophthalmia neonatorum. The conjunctiva, like other mucous membranes, may suffer from purulent inflammation. This disease is caused by septic germs coming in contact with the conjunctiva by being retained in the inferior cul de sac; most commonly ophthalmia neonatorum is due to the carelessness or negligence of the nurse, in not thoroughly cleansing the eyes of the newly born babe of the septic material which it encounters in its passage through the vagina. Some authors claim that the cause may be, too bright light, sudden changes of the temperature, impure air, smoke, dust, etc. In my opinion the latter cause may take on a blennorrhoeic form, but never genuine purulent ophthalmia, except by inoculation of septic matter.

Ophthalmia neonatorum begins within twelve or forty-eight hours after inoculation, usually about the third day in infants, discharge is noticed, there is first a redness of the conjunctiva, followed quickly by intense hyperæmia and chemosis, lids swollen, tense and very red. At first we find a serous discharge, soon becoming thicker and by the third or fourth day we have a yellow or greenish yellow pus, the upper lid hangs over the under and it is quite stiff and immovable owing to the swelling; the conjunctival surface is swollen and succulent, bleeds at the slightest manipulation, discharge soon becomes very profuse. Owing to the pressure on the cornea from the swollen lids and chemoic ocular conjunctiva, causing stranguulation of the vascular supply, together with the septic influence of the retained discharge, there is great danger of sloughing of the cornea or perforating ulcers, the eye may be irretrievably lost by corneal ulceration, if the proper cleanliness and treatment is not vigorously maintained, frequently, at the best, we have a perforating ulcer which may seriously impair the usefulness of the eye. When unaccompanied by any complication, and when not passing into a chronic condition purulent ophthalmia generally lasts from three to four weeks. In the greater number of cases the cornea is involved either by ulceration, which, if it extends deeply into the corneal tissue, results in an opacity which may or may not impair the vision, it depending upon the location of the cicatrix. We may have a perforating ulcer which in healing has united the iris with the cornea forming an anterior synechia, thus causing a constant source of irritation in the eye; again we may find the transparency of the cornea diminished by infiltration in which case the clear tissue of the cornea becomes studded with grayish points, which fusing together may cause an abscess and involve a large portion of the cornea, the infiltration may begin at the corneal margin and rapidly extended until there is a general necrosis of the corneal tissue, resulting in the loss of the eye or an anterior staphyloma. Many an eye might have been saved had the
attending physician been notified in time of the child's condition before serious damage had occurred, often the nurse or mother are aware that the little ones eyes are inflamed but attribute it to cold and use the mother's milk or such nostrums as the nurse may concoct; finally, when perhaps it is too late, finding the eyes becoming worse, call a physician to find out that they have waited too long and the little ones eyes are doomed to complete or partial loss of sight. Who, think you, is to blame for this state of affairs the physician who fails to warn the mother to call him should the eyes appear red, swollen or discharge, or the mother who is assured by the nurse "that it is nothing, nearly all babies have the same?"

It is the busy practitioner that incurs the greatest risks, for in the majority of their lying in cases, I am informed, they never make the second visit unless called. It is for them, then, to advise and insist that the proper prophylactic measures be carried out. In general it is safe to presume if the trouble does not begin until the third or fourth day, that we have a case of catarrhal opthalmia to deal with, yet through the carelessness of the nurse or mother, the child may be inoculated by means of soiled clothes or unclean fingers with septic matter, which will result in blenorrhoea at a later day.

Prophylaxis.—Prevention is much easier than curing the disease once started; the nurse should be warned never to wash the babe's eyes with the same cloth, nor in the same water that they have used in washing its body, as the conjunctival sac of the lower lid is the usual depository for the secretion; it is easy to thoroughly wash out the sac with an antiseptic solution, using solution of corrosive sublimate 1 to 3,000, or solution boracic acid, saturated, or 1 to 500 of carbolic or salicylic acid, or if you have none of these at hand, cleanse thoroughly with clean warm water. Warn the nurse or mother not to fail to call you promptly should the lids become swollen or discharge; the greatest prophylactic measure in opthalmia neonatorum is the thorough cleansing of the vagina with an antiseptic solution during the first stages of labor, using any of the above antiseptics or an abundance of hot water to insure thorough cleanliness.

Gonorrhoeal opthalmia is the most severe form of purulent inflammation of the conjunctiva; it comes on suddenly and is the most severe from the onset, accompanied with intense swelling, chemosis and profuse discharge; the entire cornea frequently becoming involved and breaking down in a few days; it usually occurs in the right eye first, and only by the greatest precaution can the other eye be kept free from disease.

It is more frequent in men than women. The treatment must be directed towards keeping the eye clean by antiseptic solutions, using them thoroughly every hour; if the cornea is threatened it may be necessary to relieve the pressure by slitting the outer canthus or even dividing the upper lid by a vertical incision and stitching back the flap; to reduce the inflammatory condition by means of constant applications of cold and by the use of the solid stick nitrate of silver upon the everted lids, carefully washing out afterwards with water, in order to remove the excess of silver. After the swelling, chemosis, and discharge is reduced, milder astringents may be used, the cold application discontinued. This disease cannot be successfully treated outside the hospital, with trained nurses, for until the severe inflamma-
tory stage is past a case requires the constant attendance of a nurse.

Follicular conjunctivitis, synonym, granular conjunctivitis and granular ophthalmia, is caused from direct contagion or the result of a chronic catarrhal ophthalmia.

I find follicular conjunctivitis more common in my practice than any other external eye disease, and I believe it to be more frequent in this state than in the east or in Europe; I was particularly impressed at the absence of this disease in the clinics at Berlin, Vienna and London.

Undoubtedly a frequent cause are our dust storms, with which by causing an acute catarrhal ophthalmia, and this not being properly cured, gradually assumes a chronic form and merges into true follicular granulation. The symptoms are varied, often there is a feeling as of foreign bodies in the eye, mucopurulent discharge, lids thickened and drooping; upon the everted lid we find small elevations, semi-transparent and resembling boiled sago grains, these are thicker in the cul de sac of both upper and lower lids and at the nasal side, frequently we find the semilunar fold and caruncle studded with these granulations. The cornea may be implicated from the friction of the lids over it and give rise to vascular keratitis or pannus. The majority of cases presenting themselves are those where the cornea is involved with either ulceration or pannus, accompanied with photophobia and impairment of vision. Treatment consists of ridding ourselves of the granulations by means of squeezing out their contents, using either your thumb nail or small forceps, the contents are easily forced from the ruptured, cyst-like elevations and appear to be a mucous or muco-catarrhal secretion. After squeezing, wash the conjunctival surface of the lids with solution of saturated boric acid or corrosive sublimate 1 to 3,000.

The after treatment consists of using a solution (weak) of nitrate of silver or sulphate of copper, using an ointment of boric acid to the edge of the lids at night.

Follicular granulation must not be confounded with trachoma or true granulated lids, in which we find the connective tissue elements increased and the papillae and submucous tissue enlarged; the granulations vary in size from a millet seed to a sago grain, treatment of which consists in remedies that will promote the absorption of the granular tissues and not cauterization.

Phlyctenular conjunctivitis (synonym, pustular, strumous and herpetic conjunctivitis) is usually found in children of strumous diathesis or those in bad hygienic surroundings and poorly nourished, or from hereditary syphilis. It appears first as a transparent vesicle or blister, with fluid contents, which finally becomes pus, and the vesicle ruptures. We may have the same vesicle change to a small solid mass, and there may be one or several in the same eye; the conjunctiva around the phlycten is congested and we find a transparent vesicle formed from it, the vesicle forming the apex, the base usually being toward the inner or outer canthus. The symptoms are varied; there may be only a pricking sensation with increased flow of tears. Should the corneal tissue be involved, we have what is known as phlyctenular keratitis. The seat of phlyctenular conjunctivitis in the majority of cases is at the sclero-corneal junction. In phlyctenular keratitis the symptoms are exaggerated, there is increased lachrymation, severe photophobia, and often in children spasms of the lids (blephro spasm) and we may have occurring a catarrhal in-
flammation at the same time. This disease is more common in children, yet it is frequently found in adults with this difference: in the latter the phlycten usually takes the solid form instead of rupturing and leaving artificial ulcers. Prognosis usually good, yet the disease is recurrent in its nature. Treatment must be directed toward improving the general health, changing the hygienic surroundings; give tonics as iron, calisaya syr., iod. of iron or calcium sulphide in \( \frac{1}{8} \) to \( \frac{1}{4} \) grain doses. Externally we may use mild stimulation, such as yellow oxide of mercury, grs. 1 to drach. Vaseline or the levigated calomel, dusted on the phlycten with a camel's hair brush, care being taken not to use either of the above while administering the iodides in any form for fear of chemical changes which may occur, changing the mild chloride of mercury to the bichloride, which is highly irritating.

We will now pass to diseases of the iris. Inflammation of the iris (iritis) occurs frequently as a result of wounds of the eyeball and after operations; or in the secondary stage of syphilis and chronic stage of rheumatism. It may complicate diseases of the cornea, choroid and ciliary processes. Idiopathic iritis seldom occurs in the old, but often attacks young people. Foreign bodies in the cornea or conjunctival sac, by constant irritation, may induce iritis. We may have serous, plastic, suppurative, syphilitic and rheumatic iritis. The symptoms common to all forms of iritis are peri-corneal injection, a rose-colored ring of vessels surrounding the cornea at the sclero-corneal margin, immobility or sluggishness of the pupil—it either refusing to respond to light stimulation at all, else acting very feebly—impairment of vision due to the exudation in the anterior chamber and inactivity of the pupil and implication of the ciliary body in the inflammation, the color of the iris is altered, often having a muddy appearance—a blue iris assumes a greenish cast while a dark or brown iris becomes a brownish red or rusty color—pain, neuralgic in character, often very severe and worse at night. In serous iritis we have increased secretion of lymph from the posterior surface of the iris and ciliary body; swelling of the canal of Schlemm by the inflammation, thus obstructing the outflow of aqueous from the anterior chamber, often causing an increased tension of the globe. In plastic iritis we find an exudation of lymph thrown out from the posterior surface of the iris, which has a great tendency to become organized and form an attachment of the iris to the capsule of the lens (posterior synechia), or if the pupil is not kept widely dilated by mydriatics we may have an organized lymph membrane stretched across the pupil entire closing it, producing occlusion of the pupil. The syphilitic and rheumatic forms usually come under the head of plastic iritis—either may assume a serous form: In the former we may find a gummatous nodules on the anterior surface of the iris, pain, not as severe, and injection of the blood vessels usually not so marked.

Suppurative iritis usually occurs after injuries and is not confined to the iris, but is an extension of a suppurative inflammation of the choroid, ciliary body or cornea. It may occur in patients in a low state of health or in cases of chronic relapsing iritis. Treatment in all forms must be directed towards keeping the pupil widely dilated by means of atropine 1 per cent. solution, or duboisine \( \frac{1}{2} \) per cent. solution, using 1 to 3 drops every five minutes for half an hour every two or three hours, taking care that the solution does not reach the throat through the nasal duct; this may be
prevented by having the patient press upon the lachrymal sac with his index finger, at the same time inclining his head to the opposite side. Duboisine should be used very cautiously or we may have alarming symptoms occurring. In the earlier stages leeches or Hourteloup's artificial leech should be used. If the former, place them on the malar eminence or on the temple—never on the lids—using from 3 to 5; you may promote the bleeding by hot fomentations, after the leeches have dropped off, if you desire. Apply Hourteloup’s leech to the temple; after leeching, bandage the eyes. To relieve pain and assist the action of the mydriatic use cloths wrung from hot water from one half hour to one hour every two or three hours; keep the eyes bandaged. In case of increased tension the anterior chamber should be tapped (paracentesis cornea).

General treatment must not be neglected. If pain, use opiates by mouth or hypodermically; if syphilitic, use mercury, push to redness of the gums and keep the patient well under its influence. In rheumatic form give salicylate soda, salol, iodide of potash, in good round doses. Precaution: If the tension of the eye ball continues, drop the atropine, make paracentesis cornea or iridectomy. Atropine long continued may cause a severe inflammation of the conjunctiva, known as atropine irritation, in which case substitute a ½ per cent. solution of the duboisine or hyoscyamine 5 per cent. solution. An idiopathic iritis may resemble a case of conjunctivitis, and may be treated for the latter by the inexperienced, hence the necessity of closely examining the mobility of the pupil and vision in all cases.

I now direct your attention to a disease where the necessity of prompt and correct diagnosis is essential to the welfare of the patient. I shall simply recall to your minds the various symptoms and aids in diagnosing the dread disease glaucoma, not entering into the theoretical field as to its etiology, a subject which is far beyond the scope of this paper. Glaucoma seldom attacks young people, those beyond 45 being more subject to both primary or secondary glaucoma, the latter so called when glaucomatous conditions occur in the eyes with other diseases or following an injury. I shall deal mostly with the acute form, merely mentioning that the disease is divided into acute, chronic and hemorrhagic. Chronic glaucoma is usually severe, preceded by marked prodromata, as sudden diminution of sight, often but temporary, by the appearance to the patient of colored rings or halos around the lamp or candle flame, by the sight being more or less hazy as looking through a fog; there may be pain about the eye and in the bones of the orbit, of a neuralgic character. Any or all these symptoms may disappear and the eye apparently assume its normal condition only to return again at some future time.

These remissions may continue for weeks, months and even years. Glaucoma may attack the eye suddenly and proceed in a few hours to almost complete blindness; when the attack occurs severe from the onset we have acute pain in the eye, radiating through the head and upper portions of the face, often the pain assumes so many characteristics of migraine that it may be easily taken for such, if a careful examination is not made; there may be marked febrile symptoms, also vomiting; the vision is much disturbed, pupils widely dilated and sluggish and there may be injection of the blood vessels about the cornea and chemosis, hence care should be taken to differentiate between this disease and iritis. The pathognomonic symptom of glaucoma is the increased intraocular
pressure, varying from slight firmness to stony hardness of the eye, hence when called to see an elderly patient suffering with severe pains in or about the eye or head, never fail to test the hardness or tension of the eye-ball. The tension may be taken as follows; direct the patient to look down, keeping the head erect, place the tips of the index fingers of both hands upon the top of the eye-ball pressing them gently and firmly, then by palpation examine each eye, this procedure should be practiced in order to become familiar with the proper tension of the normal eye and to note at once any increase of tension, however slight it may be. If mistaken for iritis and treated with atropine disastrous results will surely follow. After an acute attack of glaucoma the anterior chamber remains shallow, the pupil dilated, sluggish or inactive and instead of the black reflection from the pupil we have a greenish cast, the tension is increased and sight impaired; the eye may remain in this condition for some time without exacerbation of the symptoms or may relapse into the chronic form, advancing without pain until vision is lost except for light perception. Treatment in glaucoma is operative, either by making an iridectomy or sclerotomy; in some cases good results have been obtained by the instillation of a 1 per cent. solution of eserine or 2 per cent. solution of pilocarpine, these remedies may at least palliate, by temporarily reducing the intra-ocular tension, often if the operation of iridectomy is promptly done in acute glaucoma, almost complete recovery of vision will result. If, however, the sight is much impaired by operation we can only hope to retain the vision present at the time of operation. In some chronic forms the vision continues to decrease even after iridectomy.

I have purposely omitted diseases of the cornea in this paper; my aim being to direct your attention to those cases in which serious trouble might arise if not properly diagnosed.

In corneal diseases the diagnosis is plain and few mistakes made except in treatment.

REPORT OF A CASE OF CONCUSSION OF THE LABYRINTH.

By W. L. Dayton, M.D., Lincoln.

In this paper I present to you a report of a case which was very interesting to me and the result surprisingly good.

I desire the opinion of the Society in order to decide, if possible, to what we are most indebted for the result obtained.

On the 13th of July, 1889, Miss K. age 22, presented herself to me for treatment of her ears—she being totally deaf.

Her history was given me as follows:

"I am living on a homestead claim in the western part of this state. On June 26, a very stormy day, a young boy sought shelter in my house. He remained until the storm had subsided and the sun was shining brightly; he started up to take his departure. I was sitting about three feet from the door. The boy was in the act of opening the door when a bolt of lightning struck the end of the house, partially demolishing it and killing the boy instantly. The shock threw the boy into the house and stunned me. When I recovered consciousness—which was, I think, some ten or fifteen minutes after the shock—I was lying, face downward, about ten feet from the house. I do not know how or when I got out of the house. The first thing I realized was a clanging noise in my head, and I thought the house was burning. I attempted to scream, but could not; I could not walk and could scarcely stand; I suffered terribly with violent contractions of the
entire left side of my body. I managed to crawl to a neighbors, a half mile away and gave them the alarm, and by gestures and inarticulate sounds led them to understand what had happened. I was confined until July 4th. At times I suffered excruciating pain from the violent muscular contractions which were only relieved by opiates.

When the patient presented herself to me she complained of a clanging noise, comparing it to the noise produced by pounding the inside of a large iron boiler; inability to hear any kind of external sound. She had been dizzy and nauseated frequently during her illness and complained of these symptoms still.

She could not hear a tuning fork of either high, medium or low pitch, by placing it near the auricle, could not hear a shrill whistle when blown near her, in fact there was no hearing by aural conduction; she was not certain she heard the tuning fork when placed upon the teeth or the mastoid of either side, yet for the instant thought she detected a tone when the C⁸ fork was used upon the mastoid. I doubt very much whether she heard it at all, as she would contradict herself frequently, often asserting she heard the sound when I did not vibrate the fork. Membranæ tympani were normal in color, but somewhat contracted. Eustachian tubes patulous. Movements of ossicles I did not consider free enough when suction was made with Siegle’s pneumatic speculum. I found her very unsteady in walking; did not have confidence in the left limb; more inclined to drag it than lift it up in stepping; with her eyes closed and attempting to walk will stagger and fall to the right, if not supported. She has had no difficulty with her bowels, kidneys or bladder during her illness.

After a most thorough examination I diagnosed “concussion of the labyrinth” and advised her to try the effect of treatment. I did not, however, give her a very encouraging prognosis.

I began treatment by using 2 per cent. sol. of muriate of pilocarpine from 5 to 8 m. hypodermically once daily, always endeavoring to give dose large enough to produce profuse diaphoresis without producing nausea and vomiting. I was led to use the eustachian catheter from a remark dropped by the patient. After using the catheter in making my examination she said, “My ears and head feel better.” I forced sulphuric ether vapor into middle ear with air bag and Buttles inhaler, also used gentle suction with Siegle’s speculum. Ist continued this treatment until July 27. My notes of the case read: Talks with less effort; more steady on her feet. No perception of sound by aural conduction; is now certain she hears the tuning-fork through the mastoid, but only the first strong vibration. Tinnitus or clanging noise rapidly becoming less; does not feel dizzy. Owing to the nausea produced by the pilocarpine I substituted 1/₈ gr. strychnine sulphate once daily hypodermically, and gave her internally potassi iodidi, gr. xv. t. i. d. Continued catherization, etc.

August 15—Patient has not received treatment for several days, owing to her being confined to her bed from menorrhagia; continued same treatment.

September 1—Does not complain of tinnitus; has been obliged to wear cotton plugs in both external meatis, as the external noises hurt her ears; can hear the first vibrations of the tuning fork when held near the meatus; can hear the music of a band at a distance, but cannot distinguish the air being played; upon approaching the music nearer can hear nothing. The iodide deranging her stomach, I discontinued its use and gave her internally strychnine sulphate gr. 1/₈ t. i. d., and used once daily the
galvanic current, first 8 then 10 cells, placing the cathode upon the tragus and the anode upon the mastoid, each sitting lasting 5 to 15 minutes.

The patient was a very bright and intelligent young lady. When she first came to me our conversation upon my part was carried on in writing but after three or four weeks she read my lips without apparent difficulty, and could carry on a conversation without often resorting to the pencil and paper. In the early part of September she began to distinguish voices when pitched in a certain key and not spoken loudly and very close to her. Owing to her ability to read the lips I was slow to believe that she could hear my voice and understand, and frequently I had her close her eyes when I spoke to her in order not to be deceived. I found it true that she was gradually improving. The latter part of September she having improved so far as to talk with any one, I sent her home, charging her to protect her ears from violent noises. A letter receive from her May 5th, 1890, in reply to one of inquiry from me, I quote you verbatim. “After leaving you in September, I took quite a cold on the train, and my face was terribly swollen on the right side, and I suffered terribly with ear-ache. My ears are very sensitive when out in the wind. The left ear is splendid and the hearing seems perfect but the right ear when the left is closed has a ringing sound and the hearing is deficient, it has a strained feeling as though something wanted to break out and rustles almost like a fine piece of silk was pasted on the inside.

The report of a gun or any similar noise has a painful effect on the right ear and I really think I can distinguish voices better by pressing my hand lightly over that ear.”

The result in this case was certainly beyond my most sanguine expectations. I had made a very doubtful prognosis and I certainly feel that I was justified in so doing.

In her communication she says she hears better with her left ear and it was the left side that was injured by the shock, she had no trouble with the right side excepting the deafness.

It is very possible that she took a severe cold in her head while en route home and developed a case of acute middle-ear inflammation and not having received treatment has resolved itself into a chronic tubal catarrh and tinnitus aurium.

As to the pathology of this case there is no doubt in my mind but that the detonation accompanying the lightning stroke caused a concussion of the labyrinth. Whether deafness was induced by the sudden movement of the labyrinthic fluid, thus causing a change in the position of the terminal ends of the auditory nerve and in consequence of which we had a partial paralysis or an abnormal irritation of the nerve; or whether by the condensation of the air in the meatus auditorius externus, the membrane tympan remaining intact, caused the footplate of the stapes to be drawn into the fenestra ovalis with such force as to cause a hemorrhage or hyperæmia of the labyrinth, I am not prepared to say.

There is, undoubtedly, an hyperæsthesia of the auditory nerve remaining, judging from what she has written to me regarding her personal condition at the present time.

The true pathological and anatomical changes that take place in cases of concussion of the labyrinth have never, to my knowledge, been satisfactorily explained.
REPORT ON PROGRESS IN PUBLIC
HYGIENE AND MEDICAL LEGISLA-
TION.

By W. F. Milroy, M.D., Omaha.

I have never forgotten a statement of
my old college president, the late Martin
B. Anderson, of Rochester University,
admittedly one of the greatest college
presidents that ever lived, setting forth
the idea that whoever by diligent study,
made himself familiar with any depart-
ment of information, would of necessity
become, to the same degree, a devoted
lover of the subject under consideration.
He said that frequently fathers who
had brought their sons to enter college,
in speaking to him of their future work,
courses of study, etc., had frequently
made the remark, “My boy never had
any taste for mathematics.” Dr. Ander-
sen said, “The difficulty with these boys
was that they never had a taste of
mathematics; for just as soon as they
have a taste of mathematics, they will
acquire a taste for mathematics.”

I have many times heard the admis-
sion from members of our profession,
that they never took any particular
interest in the subject of sanitary science,
that they looked upon it as a side issue
of little consequence. I want to say to
any such who may be here present that
the subject of preventive medicine offers
a field for original investigation and for
promise as to its results that is equaled,
at the present time by none other in the
whole range of medical and surgical
science. Furthermore there is no depart-
ment of our professional work from
which so great actual results may be
hoped for, in benefits conferred upon
the human race, as from this department.

At the meeting of the Sanitary Insti-
tute of Great Britian, held at Worcester,
England, last September, so eminent a
sanitarian as Dr. George Wilson used
the following words: “To speak plainly,
there is no disguising the fact that so
long as the family medical practitioner
continues to be paid to attend only on
people when they are ill and not to con-
serve the health of the household, there
will be a constant drag on public health
progress.”

It can not be doubted that under the
usual arrangement of employing a
physician at the present time, every
move favored by sanitarians who are
for the most part physicians has the
appearance, as suggested by Dr. Wilson,
of being directed against the welfare,
financially, of the profession. However
this may be, a study of sanitation from
the period when our forefathers lived in
huts of mud, surrounded by filth and
stenches indescribable, and the black
death, the sweating sickness and the
plague swept millions of our race from
the earth, even to the present day,
will demonstrate the truth that our
profession has wrought the wonderful
change. In spite of the fact therefore
that the tendency has been to diminish
sickness, this work has been carried on
to its present state. Thus while the
remark above quoted may be true, it is
only to a limited degree. The greater
ability to pay may wholly compensate
for the lessened demand for medical
services. Who knows but the time will
come when the doctor, too, may strike
for eight hours work, with the pay of
twelve or fourteen hours.

In the brief view which I will present I
will confine myself, for the most part, to
the twelve-month just past.

It may be remarked, at the outset,
that no “epoch-making event,” as the
Germans say, has transpired during the
time in question, so far as matters san-
tary are concerned, and the work done
has been chiefly along lines already
marked out.
Perhaps no decision has ever been rendered in the United States of more importance to the medical profession than the following which I mention, though it occurred a little more than a year ago. After stating the case of Dent vs. the State of West Virginia, which involves the validity of the statute of that State, requiring every practitioner in it to obtain a certificate from the State Board of Health, that he is a graduate of a reputable medical college in the school of medicine to which he belongs; or, that he has practised medicine in the State ten years; or, that he has been found, on examination by the board, to be qualified; and making the penalty for violation of this law a fine or imprisonment or both; Justice Field, of the Supreme Court of the United States, affirmed the decision of the Superior Court of West Virginia, holding that a State has the right to pass a law regulating the practice of medicine.

The claim of the defendant was that the law was unconstitutional on account of being in conflict with the fourteenth amendment of the constitution of the United States. The court held that though every person has the right to follow any lawful calling, "The power of the state to provide for the general welfare of its people authorizes it to prescribe all such regulations as in its judgment will secure or tend to secure them against the consequences of ignorance and of incapacity as well of deception and fraud." This decision must forever settle the question of the right of the state to decide who may practice medicine within her borders—a matter that has been in dispute.

Americans have to admit that with the exception of a few of the oldest states they are not in the lead in matters of state medicine, as compared to other countries of the world. An evil appreciated by all physicians and yet one that has not received proper attention anywhere is that of the advertisement of quack nostrums directed especially to real or imaginary diseases of the genital organs. In this connection a recent act of the English parliament is worthy of notice. This act provides a penalty consisting of a fine of not over five pounds sterling or imprisonment not to exceed three months, for exposing any printed or written matter of obscene nature to the view of the public. Also it specifies explicitly that any advertisement relating to syphilis, gonorrhea, nervous debility or other complaints or infirmity arising from or relating to sexual intercourse shall be deemed to be printed or written matter within the meaning of this act. A law of this kind would seriously cripple the income of most of our daily papers. You have doubtless frequently noticed how the papers of New York are moved to indignation over or hold up to ridicule the work of Anthony Comstock. It is probable that if indecent advertising were not so profitable he might receive more of their approval. The following, as an illustration, of the way newspaper opinion is moderated by the power of the advertiser, is taken from the Portland, Oregon, Journal. Oregon has a medical practice act and one of the first results of this was to drive from the city a certain advertising specialist. Commenting on this the Journal said:—"Upon what hypothesis the board rejected his diploma we can't divine. Dr. — is one of the oldest specialists on the American continent, and seventeen years ago he practiced in this city for a period of four years, and he has practiced in San Francisco, Philadelphia, Chicago, and many other cities of like importance, and is recognized as one of the greatest eye and ear physicians of the age. This unfortunate
circumstance will certainly be an unwelcome piece of news to the press of this coast as the doctor is one of the heaviest and most extensive advertising physicians in America, and had he located in Portland as he expected to do, he would have advertised in every paper on the coast, and probably spent $50,000 the first year with the newspapers."

Not long since, an Ohio editor who had been for several years a member of the Legislature, admitted that the newspapers had killed the bills which had been introduced at successive sessions of the legislature, in fruitless efforts to establish a medical practice law, which would drive the quacks from the state. In a personal letter to the writer, dated April 30, 1890, Dr. C. O. Probst, secretary of the State Board of Health, of Ohio, says: "We have no medical practice act in this state; for several years we tried to get an act of this kind included with a measure for a board of health, but it was only when these were divorced that we succeeded in getting a board of health."

In any efforts which this society may make to secure laws which shall properly regulate the practice of medicine in Nebraska, it must not be forgotten that we aim, indirectly, at the pockets of the newspapers, and we may safely count them among our enemies.

The office of coroner, as a rule conducted as a political machine, is a source from which reproach is cast upon our profession. Many efforts have been made to secure its removal, but forms of law which have become ancient and outlived their usefulness are even more difficult of removal than medical customs. In the state of Massachusetts this office was abolished in 1877. Since that time over 13,000 cases of violent and suspicious death have been investigated by the present method. As to the satisfaction rendered by the change, I quote the following words of Theodore H. Tyndale, of the Boston bar, expressed at a recent meeting in New York. "With the abolition of this composite functionary and of the jury we gained a highly trained class of medical examiners—an office gladly accepted by the best physicians in the state—and we have opened the door to a field of detailed investigation in pathology previously unknown. We have laid the foundation of a valuable collection of observed facts as shown by the publication of our medico-legal transactions, contributed entirely by the examiners. We have attained accuracy, and we have never since the passage of the act, failed in a single prosecution for want of insufficient clearness of medical testimony." In a communication received from Dr. Samuel W. Abbott, secretary of the Massachusetts State Board of Health, dated the 3d inst., Dr. Abbott says: "I commend to your notice our excellent inquest law, of which you will find a report in the 46th Registration Report, under the head of Medical Examiners Returns. It is a perfect success after thirteen years of effective operation. The ancient coroner with all his musty incumbrances of jury and other solemn processes was abolished in 1877, and we succeeded in examining all cases of violent and suspicious death much better and more economically without him. Our system is essentially that of continental Europe, engrafted upon a Republican basis."

The paramount importance in the conservation of the public health, of a thoroughly wholesome water supply, has come to be recognized universally. I call attention to a danger in this direction that has been overlooked until recently.
In the State of Rhode Island an outbreak of typhoid fever occurred in which, naturally, the water supply was suspected of having become contaminated. In the investigation that followed the biological examination gave negative results. During the epidemic it was observed that a large number of those who suffered used domestic filters. These were examined—care being exercised to select only those from which all sources of pollution were excluded save the water which passed through them. The examination was conducted by Dr. Swarts, the inspector; Dr. Prudden, of the College of Physicians and Surgeons, New York, and Dr. Ernst, of Harvard, all skilled bacteriologists.

In each of these filters there were found the typhoid bacilli in abundance, as well as several organisms which are characteristic of ordinary faecal matter. There appears to be no doubt that the ordinary domestic filter of gravel, sand, charcoal, etc., favors the development of bacteria. A series of experiments, conducted by Dr. Currier, of Philadelphia, show, that water having passed through a filter, for some time in use, teems with bacteria, though the unfiltered water has but few. Even porcelain and stone filters—by far the best—must be sterilized frequently. If the bacteria are harmless, no injury results, but if they are pathogenic, harm must follow.

The question of the disposal of garbage in the safest and most convenient manner is receiving careful study. That greatest purifier, fire, has had many advocates as the best means. In our utilitarian age, however, this seemed to be hardly the ultimatum. They tell us that in South Omaha every portion of the hog slaughtered there is utilized with the exception of the squeal. Such economy as this it may have been which suggested making use of the garbage. At any rate, a plan is of late securing many advocates to produce materials from it which shall be more or less salable. The garbage is dried, the oils pressed out of it and a brown powder which is useful as a fertilizer is the result. Milwaukee, for example, which was one of the first cities to adopt cremation of garbage, is substituting the drying method in its stead. The duty of the state to protect the rivers and lakes from the pollution of garbage and sewage is more and more being recognized, as from these sources the drinking water for our large cities must come. In many of the European countries laws have been enacted to this end, and also in some of our eastern states, but no move in that direction is apparent, so general as the importance of the case demands.

In all the range of sanitation perhaps the most uniformly distributed effort towards progress is in the direction of the control of contagious diseases. Two principal reasons may be offered for this, first, it is a matter in which the public interest may be most readily enlisted, because results are so apparent to everyone, and secondly, so immense a reduction in death rates from this cause has been and is being obtained by this means. The imperative necessity of prompt reports to health authorities of cases of contagious disease is evident. Yet it is not long since a physician in New York City was prosecuted by a patient whose case he had thus reported and though he had acted in accordance with the law, the case was decided against him. A special committee of the New York County Medical Society reported a short time ago, recommending that the duty of reporting cases of contagious diseases be placed upon the tenant of the infected house, instead of
the physician. This would relieve the
physician from the unfortunate position
between two fires—the health board and
the patient. A notable event is the ad-
dition to the list of contagious diseases
of tuberculosis. The board of health of
New York City has been seriously con-
templating the plan of requiring these
cases to be reported when found, just as
in the case of small pox and scarlet
fever. In many of the European cities
statements have been adopted by the
health boards, setting forth the nature
and mode of transportation of tubercu-
losis and suggesting rules for its sup-
pression. These have been published in
great numbers and freely distributed.
These measures have been undertaken
with a view to the education of public
opinion, as well as the immediate limi-
tation of the spread of this terrible
disease.

Great advances have taken place in
the methods of conducting quarantine
against the spread of epidemic diseases.
In a communication to the Journal
d'Hygeine from Dr. Gabuzzi, translated
in the Sanitarian of January last, the
writer expressed the opinion, from a
study of the spread of Asiatic cholera in
Mesopotamia during the past year, that
all quarantine was useless against that
disease—the only safeguard being a
great degree of civic cleanliness.

This is not in keeping with modern ex-
perience regarding other diseases, and
the fact that the westward march of the
epidemic of cholera four years ago was
stayed, as it had not been in previous
similar epidemics, would seem to dis-
prove the conclusions of this writer. A
law of very great consequence was
passed by Congress during its present
session, practically creating a national
quarantine. It places the management
of such measures in the hands of the
Marine Hospital service and makes it
the duty of local health officers to co-
operate, in any epidemic which threatens
to extend beyond the boundaries of the
state where it originated, with the United
States authorities. This will insure
more harmonious, and consequently a
more efficient action in these cases than
has thus far been obtained.

On June 17th last, a committee of the
New York County Medical Society re-
ported, recommending that the duty of
reporting births be placed upon the
parent or custodian of the child, also
that in illegitimate births mention of
the mother's name be not obligatory.
In the census to be taken this year the
United States government will give more
attention than ever before to the sub-
ject of vital statistics. The selection of
Dr. John S. Billings, U. S. A., to superin-
tend this portion of the work was
eminently fitting and insures to the
world and the profession results of
the greatest value.

At the meeting of the Sanitary Insti-
tute of Great Britain, held at Worcester,
England, September 24-27, ult., Dr. G.
W. Hastings, M. P., cited strong evidence
to show that scarlet fever is many times
conveyed from cows by way of the milk.
Other observers have brought forward
evidence to the same effect, and it has
been shown that while the disease may
be so slight in the cow as to escape
casual notice, the contagion may result
in an epidemic of a severe character.

That tuberculosis is often contracted by
eating the flesh of tuberculous animals
most authorities admit. More recently
attention has been called to the milk of
tuberculous cows and in some specimens
of this the bacillus has been found. The
evidence seems to show that while in the
majority of cases milk of this kind is
wholesome and is free from the tuber-
culous taint, yet there is always the
danger of its being present, and such
milk should only be used after thorough boiling.

In 1873, Professor Brunetti, of Padua, exhibited at the Vienna exposition the results of his experiments upon cremation as a method of disposing of the human body, in the form of 3 1/2 pounds of delicate white ashes in a glass box inscribed with the words: "Vermibus erepti, puro consuminsur igno."

"It is hardly possible," says a writer, "to describe in words too strong the favorable effects produced upon intelligent visitors by the sight." With the impetus here received the subject of the cremation of the dead has been constantly attracting more attention, and as its many advantages have become more appreciated this reform has constantly gained in popular favor. Most of the larger European cities are now supplied with crematories. In Paris the method has become so popular that during the last winter a second crematory has been constructed in order to meet the demand. In the City of Troy, New York, a crematory has just been opened which is the twelfth in this country.

This cursory review will bring to your notice some of the more important matters that have been engaging the attention of sanitarians during the past year. As illustrative of what may be accomplished in definite results along these lines, I will cite two cases. Dr. J. B. Lindsley's splendid article in his report to the Tennessee Board of Health, of which he is the secretary, is well worthy anyone's perusal. It is a history of the sanitary work in Nashville since 1874. In summing up, he says: "In 1877, Nashville occupied an area of scant three miles, with a population of 27,000, and a death rate of 34.55 in 1,000. Now it has an area of 6 1/2 square miles with a population of 68,531, and a death rate of 15.31."

In a carefully prepared paper, read before the sanitary convention at Vicksburg, Michigan, the proceedings of which are just published, Dr. Baker gave official statistics and evidence which he summarized as follows:

"The record of the great saving of human life and health in Michigan in recent years is one which, it seems to me, the state and local boards of health in Michigan can justly "point with pride." It is a record of the saving of over one hundred lives per year saved from death from small pox, four hundred lives per year saved from death by scarlet fever, and nearly six hundred lives per year saved from death by diphtheria—an aggregate of eleven hundred lives per year, or three lives per day saved from these three diseases! This is a record which we ask to have examined, and which we are willing to have compared with that of any man who 'made two blades of grass grow where only one grew before.'"

I am aware that this subject is one that is still in its infancy, and yet it is very rapidly coming to the front, and I bespeak for it your earnest attention.

The university of Kiel has inaugurated a professorship of hygiene, and Dr. Bernard Fischer, a pupil of Koch, has been appointed to the chair. There now remain but two Prussian universities, viz: Bonn and Konigsburg, without such chairs. The university of Pennsylvania has secured a fund amounting to $150,000 for the purpose of erecting a new building for the sole purpose of giving instruction in hygiene, and the sum of $200,000 has been secured as an endowment for the same. From these facts it is possible to form some idea of the great and increasing importance that is being attached to the subject of hygiene.

I wish, before closing to call attention
to our own want of sanitary laws. Since I began the preparation of this paper, I have corresponded with the secretary of the state board of health, in each of the states where such an officer exists—thirty-one in all. I have asked of them suggestions in regard to the best methods of procedure in efforts to secure sanitary legislation, based their experience. It is the uniform opinion of these gentlemen, the leaders in this good work, that it is unwise to attempt to secure a medical practice act until a state board of health is in successful operation, and many of them express the opinion that in any event a board of medical examiners should be a body wholly distinct from the board of health.

Several of the states after repeated failures to secure a state board, along with a medical practice act, have succeeded easily when the medical practice act was omitted. The proposition suggested to me by Dr. Henry B. Baker, the able secretary of the Michigan state board, summarize the opinions and recommendations of all of those from whom I have heard. He writes as follows:

"In accordance with your request I venture to make a number of suggestions as follows:

1. I think that progress will be made faster by postponing all effort to secure a law designed to regulate the medical profession until such time as a State Board of Health is in thorough operation.

2. My impression is that the State Board of Health should not be hampered by making it a board to regulate the practice of medicine. That should be entrusted to a separate board, charged with that duty only.

3. As a reason for the two foregoing propositions, more can be done for the saving of life and health by dealing with the dangerous communicable diseases than can be done by the regulation of the practice of medicine. That should be a sufficient reason for the course above outlined, but I believe that this method is presenting to the profession the 'small end of the wedge;' that progress in this direction is easier than by any other method."

It has been the experience of all of those gentlemen who referred to this point, that personal work of the profession upon the legislators before they leave their homes and afterward, is the only way of securing the required laws. Ours is not the only state that has met with failure, and I would urge this society to persevere in its efforts to secure a State Board of Health, and along the lines I have suggested.

REPORT ON PROGRESS IN PATHOLOGY AND HISTOLOGY.

By G. L. Humphreys, M. D., Kearney.

To make anything like an exhaustive report upon the subject of pathology that would be of any credit to this society, a reform must be made in a number of directions. First, the chairman of this section should be a physician who takes some interest in the abstruse subject for the sake of the subject alone, and not appointed haphazard and without consulting his tastes. He should be one who is conversant with the German and French languages, for I find most of the work in this branch is done by these two nationalities, and a very small part by the eminently practical Americans, who look more toward the rapid cure of disease than upon the philosophical study of morbid processes. True, there is no other class of medical men who make use of the practical results to be gained by the labors of our foreign confreres than ourselves; but we dislike to make it a life study. It is too slow work, and
the results seem too far ahead, consequently we are tempted to shirk this part of our medical reading.

The chairman of this section should be appointed and hold his office from year to year; he should be a permanent fixture in order to be enabled to select students and writers who could do justice to the committee and to our attenuated volume of transactions. He should be a man who lives in a large city in order that he may the more readily consult a number of medical libraries not to be found in sparsely settled communities and towns and villages, and lastly he should be furnished with a copy of the Index Medicus that he may discover and assort his material from month to month, and distribute it among the other members of his committee. I think if this or some similar plan were adopted, we could have a creditable showing in the pathological department of our society. Even if the chairman were not conversant with German, if it was made a work to last some years, it would be more thoroughly done.

I find twelve articles written upon the subject of Pathology during the last year, and ten articles upon Pathological Anatomy. When I give you a list of some of the writers, you will not be surprised that I am unable to review even the subjects. In the latter division of the subject they were Orth, Hebb, Joseph Wilks, Zeigler, Friedlander, Von Bergman and Dock. On Pathological Laboratories and Methods, I find eight articles. I find that manuals have appeared during the last twelve months; these are by Hamilton, Semple, De Renzi, Green, Beitrage, Coats, Cohnheim and Bordier. On the subject of Histology, which is also a part of my department, I find fourteen articles, not one of which was written in the United States, England or Nebraska. Of manuals on Histology, I find eight; their authors were Ranvier, Renant, Klein, Bizzozero, Kultschitzki, Koelliker, Ramon Y. Cajal and Remy. The trouble and expense of procuring these volumes ought to excuse your committee from attempting to look into them, let alone the impossibility of getting them in much less than sixty days. The treatise by Semple, published in Philadelphia, entitled "Essentials of Pathology and Morbid Anatomy," deserves but a passing notice. It is a question compendium for the use of students, and would not be very interesting reading to a practitioner who is not caring for his final examination. "The Pathology of Gout and Rheumatism" should be more thoroughly studied by the physicians of Nebraska. The middle and western parts of the state offer an abundance of rheumatic cases, and make this pre-eminently a disease of the locality. Altitude seems to be an important factor west of the Missouri. Why the dry pure air of the eastern slope of the Rocky mountains should cause rheumatism, is to me inexplicable; but the fact remains that I have seen more rheumatism in Nebraska in three years than I did in the valley tributary to the Ohio in twelve years.

Sir Dyce Duckworth considers uric acid the active cause of gout in a recent work on that subject. While the subject of uric acid in its relation to urea, to food, to drugs, and to diseases has been ably discussed by Dr. A. Haig, in a thesis for the degree of Doctor of Medicine in the University of Oxford. Haig especially puts forth a theory which he claims to have substantiated by a large series of experiments. That a formation of uric acid has a normal relation to that of urea, the relation being as 32.6 to 1; and that this normal relation is constant in health, in disease, under all diets and all medications. He believes
that a diet, a medicine, a mode of life or a morbid process which increases or decreases one of these principles, alike increases or decreases the other; but that certain dietetic substances, medicines, habits of life, diseases or diathetic conditions have the power of checking, not the formation, but the excretion of uric acid, and thereby causing the storing of uric acid in the system, which uric acid in turn becomes a source of irritation and disease; and further, that this uric acid when heaped up in the liver, spleen, or other organs or tissues, causes a local disease; but when swept out into the alkaline blood produces general lîthemic symptoms, such as headache, hypochondrasis, epilepsy, neuralgia, etc. If the theory of Dr. Haig be correct, exercise, alkalis, or other procedures which cause a liberation of uric acid that has been stored up in the tissue, and a solution of it in the blood must at first increase all symptoms which are due to the presence of uric acid in the system.

The theory has certainly the merit of novelty. Sometimes gouty people seem to get worse at first after the change of their habits of life—a result readily explainable by the theory of Haig. A thorough review of the entire thesis would be interesting and instructive but would exceed the limits of this report.

In an article written by J. G. Carpenter, of Himford, Ky., the pathology of chronic sciatica is elaborately discussed. Dr. Carpenter finds two factors in the pathology of chronic sciatica, one a neuralgia or neurosis, and the other a neuritis or perineuritis, or inflammation of the sheath and the surroundings of the nerve trunk. The disease may be located in the peripheral or central portion of the nerve. Chronic sciatica, he claims, may be the manifestations of a neurosis, a functional derangement of a nerve center found in neuropathic constitutions. There may be anemia or hyperämia of the nerve and sheath or nerve centers, pressure of tumors, or a reflex irritation of the nerve from genito-urinary or rectal diseases, as a urethral stricture, displaced uterus or ovary, fissure, haemorrhoids, pressure of the nerve by a contracting cicatrix, deposit of calculus on the nerve or some of its branches, the rheumatic or gouty diathesis, spinal concussion, syphilis, malaria, pregnancy, over-lactation, alcoholism, venerial excesses, lead and mercurial poisoning, excessive fatigue, diseases of the vertebra or pelvic bones, a damp or cold climate.

The writer goes on to say that neuralgia of the sciatic nerve on anti and post mortem inspection there have been no pathological lesions found in the nerve or its coverings and if the above were the only factors concerned in the pathology of chronic sciatica, a removal of them a priori would cure the disease, but such is not the case; for though the cause may be removed the disease may still exist in all its obstinacy and another factor must be considered, viz: a neuritis or perineuritis which makes chronic sciatica so rebellious to treatment. In chronic sciatica neuritis the pathological state is rather in the sheath of the nerve than in changes of the nerve fibres; the nerve fibres may undergo pathological change in their condition but what is at present known is that the neurillema or connective tissue sheath of the nerve including its minute prolongations between and around separate bundles of nerve fibrils, becomes much more hypraemic than natural, and that upon microscopic examination there is to be found in addition to the increased vascularity a multiplication of new tissue elements and the presence of migratory leucocytes.

These changes may cause considerable
swelling of the nerve sheath and of its prolongation and thus may produce irritation or more or less compression of the nerve tubules, according to the amount of new tissue elements which accumulate in, or are produced within the sheath. In neuritis the nerve often appears to the eye normal, and the characteristic changes are only revealed by the microscope.

The microscopic changes in neuritis may extend to all the constituents of the nerve and prevent the ordinary picture of acute inflammation, hyperæmia, exudation, accumulation of white corpuscles in the tissue, and even the formation of pus. The nerve fibres exhibiting in various degrees, the destruction of the white substance of Schwann and the axis cylinder, or, as in chronic neuritis, the alteration may consist of the more gradual proliferation of the peri and endoneurium, which contracting renders the nerve dense and hard and destroys the nerve fibres by compression.

When the perineurium has been the principal seat of the inflammation in chronic neuritis, the trunk of the nerve becomes hard and thickened from the proliferation of the connective tissue.

Sclerosis of the Nerve — In chronic neuritis, as in the acute, the perineurium may be exclusively affected, the fibres remaining normal according to Crushman and Eisinoehr. The nerve fibres themselves may be the primary and almost exclusive seat of neuritis, exhibiting more or less complete destruction of all their constituent parts excepting the sheath of Schwann without hyperæmia, with little or no alteration of the interstitial tissues. Sometimes the fibres are affected at intervals, the degeneration occupying a segment between two of Ranviers nodes, leaving the fibres above and below normal. All of these lesions of the nerve fibres may be recovered from a process of regeneration, the fibres showing a remarkable tendency to recover their normal structure and function. The nerve does not always present the appearance of continuous inflammation but the evidence of neuritis may be seen at points along its course which are separated by sound tissue. These points of predilection are usually exposed positions of the nerve or near joints.

In chronic neuritis the morbid anatomy consists of an increased vascularity of the affected nerve, sometimes of a varicose state of the blood vessels, of a thickening and induration of the neurilema, in consequence of coagulate exudations. In variable degrees the nerve assumes somewhat of a slate color, loses its characteristic opacity, and when examined under the microscope the nerve fibres are found to have fallen to a greater or less extent, into a state of disintegration. The inflammation may attack the sheath of the nerve chiefly and contract adhesions to the neighboring tissues, the nerve itself remaining movable although compressed. In other cases the nerve, as well as the sheath, is the seat of inflammation. In the growth of new connective tissue, the proper nerve elements are compressed, and consequently atrophy and disappear, nothing remaining but a fibrous cord.

On microscopic examination there is but little hyperæmia. The interstices are crowded with leucocytes and granular cells, but the most important change is overgrowth of interstitial connective tissue and the consequent fatty and atrophic degeneration of the nerve fibres with their axis cylinders with injury to the nerves, ocular secondary trophic changes.

Secondary Trophic Changes in Chronic Neuritis.—The trophic changes dependent on neuritis are frequently very
prominent and important. Most commonly there is paresis, which may deepen into paralysis with atrophy of the muscles and degenerative reaction. The skin sometimes becomes rough and scaly, sometimes atrophied, smooth and shining. Ödema of the subcutaneous cellular tissue is often seen. The hair of the affected part shows sometimes increased growth; sometimes it falls off. The nails may become thickened, rigid and distorted. Deformity of joints with enlargement of the ends of the bones is not infrequently met with as a result of chronic neuritis. In short, we may meet with all of these trophic changes which have been described as arising from neural irritation and which occur in chronic neuritis as the result of compression of nerve fibres by contraction of the proliferative connective tissue in the nerve trunk.

In looking over the field of pathology, one is struck with the large amount of work done, the laborious study and research which has been devoted to this branch, but at the same time with regret that the practical results have not been commensurate with the time thus devoted. I doubt whether the discovery of the bacillus tuberculosis of Koch has lessened the mortality of phthisis or added anything of value to the treatment of this fatal disease. It may, it is true, have called attention to the dangers of desiccated spumum, and while it has not demonstrated the actuality of contagion, the probabilities seem to point that way. The researches of Pasteur are not universally conceded to have established complete immunity from rables in the subjects of his inoculations. The rampant Gonococcus has not been throttled in his lair by the germicidal warfare that has been waged against him. While in the animal kingdom, where the pathological processes and methods of treatment offer the widest field for investigation, where the unwary farmer allows whole herds to be experimented on, and confidently grasps at any and every straw of treatment, the results have, as far as my observation goes, been almost nil. The germ theory of disease has been reasonably well proven, but the traps in which to catch the primordial germs have yet to be discovered.

In offering you this incomplete review of the progress of pathology during the past year, I need scarcely remind you that it has not been in the line of my reading except for the making of this report; that the experiences of practice where two-thirds of one's time is spent in getting to and from one's patients, are not conducive to abstruse studies like pathology and histology, and if this report seems to you meagre and incomplete, you will pardon the writer, who has written it under many inconveniences.

REPORT ON LARYNGOLOGY.

By E. A. Benton, M.D., Central City.

I was very much pleased when the Nebraska State Medical Society created a section on laryngology, although, I assure you, I did not expect to take any part in the proceedings except as a listener, to gain what information I could from those who had made this branch of the profession a specialty. I suppose my name was put on the committee for this section to represent the general practitioner's ideas on this subject, and certainly you will not expect any learned thesis on the pathology of the inflammatory hyperplasia of hypertrophic nasal catarrh, or some other kindred subject, which you might expect from the pen of a specialist on the subject.

When I graduated, in 1866, the laryngoscope had not been brought into use,
except perhaps, by a few who were still investigating and perfecting the methods for its more successful use. I think Professor Turck, in the year 1857, was the first who endeavored to employ the laryngeal mirror for diagnostic purposes in the wards of the General Hospital of Vienna. These attempts of Prof. Turck were not successful to any great extent, until in the same year Professor Czermak, of Pesth, commenced experimenting with Dr. Turck's laryngeal mirror and used artificial instead of sunlight, and the head reflector or concave mirror to concentrate and throw strong light into the small laryngeal mirror; which experiments of Professor Czermak really gave to the medical profession the laryngoscope of to-day, only as it may have been improved by better instruments and lights. At the date of my graduation little or nothing was taught in the colleges of laryngology or the laryngoscope. Many of the diseased conditions of the larynx, pharynx and nasal cavities, by the aid of the laryngoscope have become amenable to treatment which at that time were a standing reproach to the medical profession.

For several years I floated on with the mass of general practitioners in regard to these troubles, sanctioning the popular belief that there could but little be done for their relief, calling it a catarrhal condition, and telling the afflicted ones that catarrh was more troublesome than dangerous, giving a solution of chlorate of potassa and carbolic acid, or something of that nature, as a snuff, and a gargle for the throat, without knowing anything of the true condition of the parts, and consequently, in a majority of cases the treatment was not very beneficial to a majority of my patients or my reputation as a physician.

Several years since I was aroused from this routine way of treating these diseases by meeting with some of the younger members of the profession, fresh from college, with their laryngoscopes, nasal speculums, palate retractors, atomizers, etc., and found them much more correct and successful in the treatment of these diseases. I at once determined to not "get left" in that way. My ambition was aroused and I immediately surrounded myself with the necessary instruments and appliances, together with the best authors on the subject, and after repeated efforts I found I could treat my patients with much more satisfaction to myself and benefit to them. I was really surprised when I found so many diseased conditions in this locality that could be relieved or cured by surgical or medical treatment, after I had the proper appliances for accurate diagnosis and treatment and I had gained by practice a fair degree of skill in the manipulation of instruments and judgment in the use of medical treatment.

If there are any members of our Society who have never used the laryngoscope, and wish to commence its use, I would advise them to secure the works of Carl Seilers and Morrell Mackenzie, on Diseases of the Throat, Nose and Naso-Pharnyx, together with the instruments and appliances necessary, then get some very, very good-natured friend, or perhaps some charity patient, to practice on. By following the directions of these authors closely, in the course of one week's practice you will undoubtedly have gained sufficient skill and will have been rewarded for your labors by a glimpse of the vocal chords and the pharyngeal openings of the eustachian tubes, if your patient has not left you in disgust and refused further to submit to martyrdom for science's sake.
This section being added to the programme of our valued Society it should call out something of interest from those who are especially interested in this subject. This brings me to the point I wished to bring before this Society, upon which I will express my opinion in brief, and I hope it may open discussion and create more interest in the subject of laryngology. When I came to Nebraska, four years ago, and located in Central City, I am quite sure that my laryngoscope was the first ever in the county, except in transit. In my opinion the general practitioner in this, the last, decade of the nineteenth century, is not justifiable in neglecting to inform himself on this subject, nor in neglecting to procure the necessary apparatus, so as to become as skilled and successful in this as in other branches of our profession. The expense of procuring instruments and fitting his office for this kind of work is not so much, nor are the difficulties in practical and successful laryngoscopy so great that they cannot be used by every regular physician in the state of Nebraska, with satisfaction and profit to himself, and increased benefit to the public. It is as true in laryngology as in all other branches of medical science, that nearly all the advancement made has been through the researches and scientific experiments of specialists; still the practical knowledge thus gained should at once be made a part of the general practitioner's store of knowledge and by him be applied for the relief of the afflicted. In fact the physician of these days who fails to familiarize himself with all the applied laws of the latest medical learning will find that the theory of the survival of the fittest has been applied by the public to the members of the medical profession, and that, what is worse for him, he has not been adjudged one of the fittest by said public.

I have not been able to learn, from what literature I have at my command, that there has been any important discoveries or any material improvement made, in the past year, in this branch of our profession. Still I believe that the present knowledge of laryngology is becoming more and more, every year, the practical and applied knowledge of the general practitioner. In conclusion I would say that this paper, which I fear has been a trespass on your valuable time, was instigated by the present method our worthy secretary has of sending postal cards urging contributions.

MEDICAL JURISPRUDENCE, MEDICAL CHEMISTRY AND TOXICOLOGY—REPORT ON PROGRESS.

By W. O. Henry, M. D., Pawnee City.

I find it quite difficult to prepare a report upon the above topics from the scarcity of material at hand; but I thought a brief paper giving such facts as I could secure might be a starting point around which to gather other facts and items in the future.

Creolin, which was introduced as a substitute for carbolic acid, and was thought to be harmless, is reported to have caused death in less than five hours after being used as a uterine douche in a 2 per cent. solution. Patient became pale, cold and vomited. She died in a collapse. The matter vomited and also the urine had a strong odor of creolin.

Antipyrin has produced dangerous and even fatal results in an increasing number of cases. Dr. Drasche has reported the results of his own experience in more than three hundred cases, and has collected the reports of its effects from current literature. It has been found to excite fever repeatedly in a case of rheumatism in a woman of 52. It often excites nausea and vomiting even when
given per rectum. In two cases in moderate doses to children it produced hematemesis, convulsions and death. Antipyrin given either in large or small doses will produce, in about 10 per cent. of cases, an eruption of an erythematous character, or it may resemble measles, scarlet fever or urticaria. These eruptions disappear upon cessation of the use of the drug, or may do so even while it is continued.

Pyrodin, a derivative of coal tar, is a new antipyretic, and is quite a powerful one, but the profession is warned by the Lancet to be careful in its use as it will produce serious toxic effects.

Sulphonal, the new hypnotic, has been found to produce toxic effects, but I see no cases of death resulting therefrom.

Chloralamid is another hypnotic of esom value, though it is followed by unpleasant symptoms at times.

Strophanthus, the new cardiac tonic, is found to produce both acute and chronic toxic effects.

I have seen no account of any one having used or discovered an antidote to any of these, so that in case of poisoning we should be governed in our treatment by the symptoms and the near relationship of these drugs to other remedies whose antidotes we have.

Professor Wolfer points out that the cases in which unfavorable results have followed the injection of cocaine, are chiefly those in which the drug has been employed about the head. On the other hand Lepine has collected many cases which are reported to be cases of cocaine poisoning, when the drug was used subcutaneously, by injection into the rectum and urethra and also where it was used in spray form to mucous membranes. By way of treatment he suggests nitrite of amyl; and where there are convulsions, chloroform, chloral or opium. Professor Bokai believes that the best antidote for morphine is picrotoxin. Dr. J. R. Compte, of Genoa, after having studied the subject very carefully writes a recent article entitled "Ether and Chloroform," in which he maintains that ether is safer than chloroform and says "supposing for a moment that deaths were equally common from the use of both drugs, ether should still be preferred, for the author's analysis of fatal cases shows that the serious nature of the operation, or the diseased condition of the victim at autopsy, was usually sufficient to account for the mishaps and relieve the surgeon more or less of his responsibility. His statistics show the opposite to be the rule in the fatalities attributed to chloroform.

Let us now turn to the other part of our subject, and we find that there has been nothing specially new developed in medical jurisprudence during the past year.

In the district court in Scott county, Iowa, there came up the following case: In an action for malpractice in the treatment of a broken leg, it appears that in setting the leg and in the treatment by the symptoms and the near relationship of these drugs to other remedies whose antidotes we have.

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"When the defendants undertook the treatment of this case, the duty rested upon them to give it such care and skill as the ordinarily educated and skilled members of their profession, at the time, would have given it, and to give to the patient proper instructions for the care and use of the wounded limb;" laying special stress upon, "and to give to the patient proper instructions for the care and use of the wounded limb."

A second case occurred before the circuit court of Jackson county, Ill., as follows:

The defendant was indicted for manslaughter in causing the death of one Jane Stevenson. The case is one where a physician was attending a female with bilious fever, five months pregnant, in which labor came on, but proved ineffectual till the fœtus was removed by force, and the woman afterwards died from puerperal fever, caused, as held by plaintiff, from strong medicines and improper use of force in removing fœtus. In the circuit court defendant was found guilty, and sentenced to four years' imprisonment in the penitentiary. The case was appealed to the supreme court and the decision was reversed. Among other things the court said: "The medical testimony is to the effect that the use of traction or force in such cases, is recognized as proper practice under some circumstances. The miscarriage was an inevitable result when the accused was called. He had not in any way contributed, so far as the evidence shows, to its causation. He says the fœtus was dead then, and there is nothing to contradict him. What he did, therefore, in aid of the miscarriage was not unlawful. He may not have acted either with the best of judgment or even ordinary skill, but no unprejudiced person can read the evidence without being convinced that he acted with good motives, and the evidence wholly fails to show that the puerperal fever, of which the patient died, was caused by anything done or omitted to be done by the accused. ** There is wanting in this case every element of the crime of manslaughter, but that of the death of a human being."

**LIST OF MEMBERS N. S. M. S.**

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<tr>
<th>Name</th>
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<tr>
<td>Abbott, L. J.</td>
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**TWO-SECOND ANNUAL SESSION**

Dodge, S. W. ..............................................Fairbury
Donaldson, N. F. .........................................North Platte
Duckworth, F. E. .........................................Kearney
Duff, J. B. ....................................................Cedar Creek
Dunbar, J. E. .............................................De Witt
Don, Ira .......................................................North Bend
East, J. H. .....................................................Rising City
Easton, C. M. ............................................Hebron
Englehardt, E. ..........................................Summit
Evans, C. D. ............................................Columbus
Everett, M. H. .............................................Lincoln
Farley, B. F. ....................................................York
Farleigh, T. J. ...........................................Johnstown
Farnham, G. O. W. .......................................Beatrice
Fletcher, E. R. ...........................................St. Paul
France, J. M. ..............................................Blue Hill
Fall, C. I. .....................................................Beatrice
Gapen, Clark ................................................Omaha
Gatford, C. C. .............................................Wymore
Gahan, M. J. .............................................Grand Island
Galbraith, W. J. ...........................................Omaha
Gibbs, W. S. ..............................................Omaha
Gifford, H. ................................................Lincoln
Ginn, A. F. ................................................Omaha
Gready, L. E. ................................................Omaha
Grabe, C. ....................................................Beatrice
Gillette, L. C. ............................................Lincoln
Gumaer, J. I. ..............................................Blue Springs
Harrington, H. E. .........................................Bertrand
Haggard, J. R. .............................................Lincoln
Hall, J. H. ..................................................Plattsburg
Hall, J. E. ................................................Weeping Water
Hall, J. L. .....................................................Mead
Halderman, F. D. .........................................Ord
Hart, C. S. ..................................................Lincoln
Harris, W. J. ..............................................Beatrice
Harrigan, C. P. ...........................................Lincoln
Hasson, D. W. .............................................Norfolk
Haseimiller, J. H. .......................................Louisville
Hay, J. T. .....................................................Lincoln
Hayden, E. M. .............................................Osceola
Headrick, C. M. .........................................Tecumseh
Henry, W. G. ..............................................Omaha
Hewitt, H. M. .............................................Friend
Hildreth, M. L. .............................................Lyons
Hobbs, W. R. ..............................................Elmwood
Hostetter, P. ..............................................Omaha
Hoover, A. L. ..............................................Lincoln
Hoover, M. A. .............................................Kearney
Huff, A. F. .................................................Lincoln
Hull, G. H. ..................................................Kearney
Hull, J. W. ..................................................Brainard
Humphreys, G. L. .......................................Kearney
Inches, Chauncey .........................................Scribner
James, H. M. ..............................................Nelson
Janis, J. .....................................................North Loup
Jenks, J. A. ................................................Shelby
Johnston, G. W. ..........................................Fairmont
Jonas, A. F. ..............................................Omaha
Jones, J. C. ..............................................Central City
Kay, Z. L. ....................................................McCook
Keller, A. ..................................................Falls City
Keller, A. H. ..............................................Hastings
Kelly, E. A. ................................................Norfolk
Kirkpatrick, C. T. .......................................Ashland
Knapp, W. M. .............................................Asylum
Kirkpatrick, M. .........................................South Omaha
Lanc, S. M. ..............................................Lincoln
Larimer, J. F ..............................................Omaha
Last, J. S. ................................................Chadron
Lee, E. W. ................................................Omaha
Leisinger, P. S. .........................................Omaha
Leisinger, H. G. .........................................Wayne
Line, T. H. .................................................Marquette
Line, L. M. .................................................Ogalala
Link, H. .....................................................Millard
Livingston, T. P. .......................................Plattsburg
Long, F. A. ................................................Madison
Lord, J. F. ................................................Omaha
Lowery, H. B. .............................................Lincoln
Lloyd, G. F. .................................................Hastings
Lynn, W. H. .................................................Hastings
McCab, N. .................................................Plattsburg
McCaug, T. C. ..........................................Exeter
McKeshy, G. E. ............................................Red Cloud
McKenna, L. F. ..........................................Omaha
McLean, J. ................................................Lincoln
Malick, W. H. .............................................Bloomington
Manesse, A. S. ..........................................Ashland
Manning, C. B. ..........................................Lincoln
Marty, D. F. ..............................................Schuyler
Meredith, G. W. .........................................Lincoln
Meirimin, L. A. .............................................Omaha
Milnes, G. S. .............................................Litchfield
Milroy, W. F. ..............................................Omaha
Mills, E. H. .................................................Kearney
Mills, G. M. .................................................Kearney
Miles, J. S. .................................................Kearney
Mosshart, J. C. ..........................................Chester
McConaughy, R. ...........................................York
McDonald, R. C. .........................................Fremont
Miller, J. H. ..............................................David City
Miller, J. T. ..............................................Holderege
Mitchell, T. E. .............................................Columbus
Mitchell, A. E. ..........................................Lincoln
Moore, R. C. ..............................................Omaha
Moore, J. C. ..............................................Omaha
Muir, D. H. ................................................Lincoln
Martin, E. W. .............................................Fremont
Nauless, A. A. F. .......................................Hastings
Nauless, F. .................................................Hastings
Norton, C. M. .............................................Greenwood
Norris, U. H. ..............................................Crawford
O'Connell, J. M. .........................................Porca
Owen, F. S. ..............................................Stromsburg
Paddle, J. A. .............................................Wilber
Parker A. ..................................................Omaha
Panter, S. G. .............................................Dorchester
Peabody, J. H. ..........................................Omaha
Peabody, J. D. ..........................................Omaha
Peabody, G. H. .............................................Lincoln
Person, S. ..................................................Stanton
Perrins, K. .................................................Tremblay
Pickett, L. N. ..............................................Odel
Pritchett, G. L. .............................................Fairbury
Proulx, W. ................................................Lincoln
Porter, J. A. ..............................................Kearney
Patterson, H. L. .........................................Omaha
Reese, W. F. ..............................................Kearney
Ralph, J. B. ..............................................Lincoln
Rebert, M. A. .............................................Omaha
Robinson, A. V. .........................................Ashland
Robinson, E. L. ........................................Central City
Root, E. T. .................................................Exeter
Rydells, W. F. .............................................York
Rosewater, C. .............................................Omaha
Sanders, J. W. ............................................Broken Bow
Schug, F. J. ................................................Columbus
Sears, A. ..................................................Decatur
Strader, H. W. ..........................................Oklahoma
Stuhler, O. W. .............................................York
Shipman, A. Jr. ...........................................Plattsburg
Smith, E. ..................................................Burchard
Smith, E. H. ..............................................Fullerton
Smith, E. L. ...............................................Shelton
Smith, L. B. ..............................................Fremont
Snowden, C. A. .........................................Davenport
Somers, A. B. .............................................Omaha
Spaulding, S. .............................................Omaha
Stanhope, R. ..............................................Lincoln
Stapleford, J. D. .........................................Campbell
Stewart, A. E. ..............................................Cushing
Stone, M. W. ..............................................Hastings
Stone, R. M. ..............................................Omaha
Summers, J. E. ..........................................Bloomington
Summers, J. E. ..........................................Lincoln
Svenson, E. O. .............................................Omaha
Swetnam, J. M. .............................................Omaha
Tanner, E. .................................................Battle Creek
Taylor, S. B. ..............................................Blair
Tilden, George ..............................................Omaha
Thompson, T. D. .........................................West Point
Underbury, E. C. .........................................Stanton
Wilkinson, G. P. ............................................Omaha
Walton, M. W. .............................................Beatrice
Warmschock, T. M. .......................................Liberty
Wade, J. T. ................................................Arlington
Walden, D. A. .............................................Beatrice
Watson, C. .................................................Nebraska City
West, B. F. ...............................................Nelson
White, W. S. ..............................................Palmyra
Whittem, E. M. ............................................Omaha
Wise, H. G. ...............................................Omaha
Wilcox, W. P. .............................................Omaha
Wilcox, W. M. .............................................Harvard
Wilson, D. S. ..............................................Fairbury
Wilson, W. H. .............................................Table Rock
Williams, J. ...............................................Kemah
Woodard, D. S. ............................................Hampden
Wright, S. A. ..............................................Farnese City
Zellers, M. T. .............................................McCook

Non-Resident Members:

Carter, James ..............................................Red Oak, La.
Barton, L. O. ...............................................Cal.
Dittebrant, C. B. ........................................Summerville, Ore.
Gruwell, W. ..............................................Independence, Ore.
Hinz, A. F. ................................................Idaho, Col.
Huddleston, B. H. ........................................Bartow, Fla.
Macone, D. .................................................Columbus, N. Y.
Rawlins, J. W. .............................................Washington, D. C.
Sowers, A. H. ..............................................Denver, Col.
Vos, T. W. .................................................Moncart, Mexico.
Waltz, J. B. ...............................................Medford, Ore.
Noxon, D. C. ..............................................Bloomington, N. Y.
Elder, C. E. ...............................................Kansas City
Linn, W. I. .................................................Jolo, Kau.
Whitmore, B. F. ...........................................Detroit, Mich.
INDEX.

A Case of Labor with Occipit in Hollow of Sacrum—By E. S. Smith, M. D.................................................. 64
Antiseptic Midwifery—By A. B. Somers, M. D.............................................................. 37
An Unsuccessful Case of Cesarean Section—By G. L. Humphreys, M. D.............. 47
Biography of Dr. Lane.................................................................................. 6
Chorea—By F. A. Butler, B. S. M. D........................................................ 11
Committee on Uniform Medical Legislation.................................................. 6
Cystotomy, with Cases—By A. F. Jonas, M. D................................................... 24
Difficult Obstetrics—By Aurelius Bowen, M. D............................................. 58
Election of Officers.................................................................................. 7
Errors of Refraction and Headaches—By D. C. Bryant, M. D.......................... 75
Fracture Through Head of the Radius—By W. O. Bridges, M. D..................... 16
Hyperemesis of Pregnancy—By Fred D. Haldeman, M. D........................... 60
Icterus Neonatorum—By Mary R. Butin, M. D............................................. 14
List of Members.................................................................................. 103
Malformation of Fetus—By M. A. Perkins, M. D......................................... 66
Next Place of Meeting............................................................................ 7
Officers and Committees for 1890-91........................................................ 2
Pendulous Abdomen as a Factor in the Causation of Difficult Labor—By J. W. Bullard, M. D.................................................. 43
Practical Hints on Diseases of the Eye—By W. L. Dayton, M. D...................... 79
Quinine vs. Ergot as an Oxytocic—By I. N. Pickett, M. D.............................. 49
Report of Case of Concussion of the Labyrinth—By W. L. Dayton, M. D........ 86
Report of Committee on Necrology............................................................. 6
Report of Committee on Credentials.......................................................... 3
Report on Laryngology—By E. A. Benton M. D...................................... 99
Report of Secretary................................................................................ 3
Report of Treasurer............................................................................ 6
Report on Progress in Medical Jurisprudence, Medical Chemistry and Toxicology............. 101
Report on Progress in Pathology and Histology—By G. L. Humphreys, M. D.................................................. 95
Report on Progress in Public Hygiene and Medical Legislation—By W. F. Milroy, M. D.......................... 89
Report on Obstetrics—By Charlotte M. Norton, M. D.................................. 34
Report of Progress................................................................................ 8
Rule to Regulate Discussions................................................................. 6
Resolutions.......................................................................................... 7
Roll of Members.................................................................................. 3
Section of Practice of Medicine.................................................................. 8
Some Thoughts on Specialties and Specialists—By M. L. Hildreth, M. D..... 19
Surgical Section—By M. V. B. Clark, M. D................................................ 23
The Induction of Premature Labor in Habitual Death of the Fetus—By B. B. Davis, M. D.............. 54
The Treatment of Abortion—By J. P. Lord, M. D...................................... 66
The Sexual System—By W. O. Henry, M. D............................................. 70