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University of Nebraska College of Medicine

# The Pulse

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STUDENTS, ALUMNI AND FACULTY
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UNIVERSITY OF NEBRASKA COLLEGE OF MEDICINE

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"THE HEIGHT OF OUR AMBITION"

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The Pulse

Vol. VIII. Omaha, Neb., November 14, 1913 No. 3

## TUBERCULOSIS OF THE BLADDER

By A. C. STOKES, B. Sc., M. D.

The bladder is the reservoir for the urine. Its absorptive power is very little. Its blood supply below normal, and its lymphatics few in number. There are four ways in which the bladder may be infected by tuberculosis:

(a) From the blood stream; (b) from the lymphatics; (c) from the urethra, and (d) from the kidneys.

The first two may be disposed of together with these words, namely, that bladder infection through the lymph or blood stream, if it occurs at all, occurs very rarely.

The other two causes are not so easily laid aside. Much discussion has been had as to which way is the more common. The older writers and many of the later, as, for example, Zuckerhandl, believe that the most frequent way is by the ascending route from the urethra, and he says this (page 668, Vol. 11, F. and Z.):

"Fast ausnamlos ist bei blasentuberkulose eine niere als erkramkt nachweisbar," i. e., very exceptionally is the kidney infected at the same time as the bladder.

Baumgarten and Kramer made many experiments on animals with the result that they believe the infection to always travel in the direction of the stream of the secretion.

Walker's statistics are the most complete. They may be given as follows: Of 441 cases of tuberculosis of the bladder he found the kidney involved 244 times. Of 22 cases of bladder tuberculosis in the Johns Hopkins Pathological laboratory he found the kidney infected 21 times.

Rovsing describes 56 cases in which he made early diagnosis of tuberculosis of the kidney and found the bladder infected three times. He says, "The kidney must be regarded as the prime cause of bladder tuberculosis."

Kummel reports 84 cases and believes that the kidney is nearly always the cause. In five cases with double-sided tuberculosis of the prostate Kummel found dormant tuberculosis of the kidney in every case. Leguere and Desnos are of the same opinion (P. Medicale No. 37, 49).

Leschneff reports one case of bladder tuberculosis completely cured by removing a tubercular kidney (Centralblatt fur Inner Medicine No. 46).

Rosenstein reports two cases completely cured, first, by removing the focus, and then in one case, one injection of Rovsing solution, and in the other case eight injections (Berlin Klin. Woch. No. 25).

Rovsing's solution is a 6 per cent solution of carbol in water injected into the bladder in about 250 c.c., and immediately drawn out and used once daily. (See Arch. fur Chir. Vol. 22 p. 11.)

The consensus of recent articles upon the subject seems to agree with Baumgarten that the kidney is largely the origin and that ascending tnberculosis from the bladder is rare, and also that primary tuberculosis of the bladder is quite as rare.

**Pathology.** Much of the following discussion is taken either from Halle and Motz or Walker. Walker divided tuberculosis of the bladder into four divisions, as he says, arbitrary divisions:

1, period of invasion and formation of tubercles; 2, period of superficial ulceration; 3, period of deeper infiltration, and, 4, period of more widespread destruction.

The first period is the period of lodgment and development of the tubercle bacillus, and this beginning stage is rarely seen; however, Halle and Motz have observed it, and Walker has seen it once. The most frequent point of beginning of tuberculosis is at the mouth of the ureters, and if one sees ulcers of this part of the bladder they are suspicious of tuberculosis.

The second most common point is at the opening of the ureters. Microscopically, the tuberculosis begins in the accumulation of round cells with the tubercular areas in the centers. Soon large lymph cells with clear neuclei are seen, and then the appearance of the giant cell with consequent caseous degeneration.

The sub-epithelial zone is always the seat of the beginning tuberculosis; often, as Halle and Motz have noted, one is able to find miliary tubercles under the layer of the epithelium. By the confluence of these large cells tubercles are formed. Around the tubercle may be seen the signs of inflammation.

The second period of superficial ulceration begins by the tubercle becoming caseous and degenerating, leaving behind the ulcer, extending to the muscularis mucosa. The edges of this ulcer are full of tubercular degenerations; the process thus extends and the ulcer enlarges. This may coutinue for some time, and the ulcer enlarge and others appear. So long as the infection remains confined to the tuberculosis the extension is slow and regular, but very soon the ulcer formed becomes secondarily affected and the process is no longer purely tubercular, but mixed infection.

One may find there different kinds of infection and ulcers, which were originally tubercular. Some with hyperplasia of the mucosa, some with excresences, at other times bleeding, adaoma. The process may be limited to the ureter mouths and may remain so a long time; it may not extend very rapidly. Again, it may begin to travel rapidly over the mucosa until the trigone and often large portions of the entire bladder are affected. The ulcers may rapidly become confluent.

Third, period of deeper infiltration. Finally the process may attack the submucosa and muscular layer. Cases are reported in

which the entire mucous membrane was thus destroyed. In many cases, however, the process is stopped by the inflammatory changes and limited to the submucosa. Walker describes this stage as follows:

Some specimens show only such an inflammatory change; in others there is a general dissemination of the tubercle bacilli, with a consequent formation of tubercles scattered throughout the tissue. The muscle, which was hypertrophied before, now becomes much more thickened by this infiltration, more irritable, and consequently more responsive to stimulation, as a result ensues an exaggeration in the frequency of micturition. As this stage progresses, there is a degeneration of the muscle, and a replacement of it by connective tissue, which gradually interferes with the contractile power, so that the bladder becomes unable to empty itself.

The wall of a bladder in the stage of infiltration is always thickened, sometimes enormously so, and the whole organ is very much reduced in size, so that its capacity ranges from 100 c.c. to 20 c.c. Immediately surrounding the outside of the bladder there is formed a somewhat thick layer of inflammatory tissue.

The histological structure of the ulcerating surface and of the muscle in the above condition has already been described.

**Caseous Massive Infiltration.** This is a rare variety of the stage of infiltration. For its production two factors are necessary: First, very virulent micro-organisms, and ,secondly, a very feeble resistance on the part of the tissues. In this form there is a very diffuse spreading out of the tuberculous process on the surface of the bladder and a rapid invasion of the muscular coat with widespread caseous degeneration.

**Diphtheroid Form.** This is a variety which is difficult to classify, but more nearly conforms to the infiltrative type than to the other processes. In this there are virulent tubercle bacilli, to which are added streptococci, or a very active form of the colon bacillus. The picture is that of an acute process, and shows an extremely rapid and extensive invasion of the mucous membrane and the muscles, which gives rise to the formation of an enormous yellowish-gray fibrinous exudate.

**Histologically,** there is a very extensive inflammatory reaction, as shown by a general lymphoid and leukocytic infiltration, an enormous production of the fresh tubercles and extensive localized areas of necrosis, but an almost complete absence of large masses of cheesy degeneration as seen in the massive type. The picture, therefore, resembles more closely that of a streptococcus inflammation, to which has been added the formation of the multiple tubercles. The exudate is made up of coagulated and necrotic fibrin and resembles somewhat that seen in diphtheria.

**Stage of Destruction.** In this stage the muscular coat has been more or less completely destroyed by a rather slow chronic type of tuberculosis and has been eroded, its place being taken by a granulating membrane. The bladder has lost its contractile power and has been converted into a distended flaccid bag. Throughout this newly formed tissue the tuberculous processes may or may not be present;

there are usually no active lesions and occasionally the tuberculosis has entirely disappeared. Motz and Halle have observed and very carefully described several such instances.

Heiler found at autopsy so complete a destruction of the bladder that it was difficult to find any remnants of it; in its place was a small granulating sac, with a fistula into the vagina, through which the urine continually dribbled.

**Varieties.** Fourth. Casper's description of a general tubercular cystitis, i. e., a condition in which tubercle bacilli are found over the entire surface of the bladder. A marked infection is present in these cases.

Bryson, Stoekel and Mirabeau report different varieties in this stage, i. e., different end results. They are many. All the forms from a general paracystitis form to a local tuberculosis in bladder.

**Pericystitis.** The infection may, in some cases, extend to the region about the bladder, producing an adhesive inflammation. English has described the matting together of rectum, intestines and bladder in these cases.

**Mixed Infection.** It is difficult to find in the literature an exact statement of how frequently mixed infection accompanies tubercular infection. Walker believes it comes rather late in the course of tubercular infection, while Motz and Halle seem to think it a very common early condition. The micro-organisms which have been found are colon bacilli, streptococci, staphylococci, gonococci and Moten's group.

Streptococci and staphylococci tend to aid the activity of the tubercle bacilli, while the colon bacilli set up a general cystitis with symptoms, but do not aid the bacilli. The proteus groups set up an ammonical fermentation, which increases pain and burning, but possibly lessens the activity of the tuberculosis.

**Location of Lesions.** Walker finds in his series of cases, out of 83 cases, localizations were found in the trigone, 27 times; at the orifice of the ureters, or on their margin, 23 times; in base of bladder behind the trigone, 10 times; posterior wall, 7 times; anterior vesical neck, 7 times; and in the superior portion of the bladder, twice.

Le Fur, quoted by Walker, found out of 60 cases the internal opening affected 12 times; base, 10 times; posterior wall, 9 times; anterior wall, 5 times; in trigone, 5 times; on neck, 3 times; and on the neck and trigone, 3 times.

Simple ulcers limited to the anterior wall have been seen by Strauss.

**General and Local Symptoms of Tuberculosis of the Bladder.**

The chief local symptoms of this disease are: Frequency, pain and tenesmus. How long a bladder may be tubercular before it produces symptoms has not been decided. Undoubtedly the first stages of tuberculosis of the bladder do not produce any symptoms, and often secondary infection is present before any symptoms appear. In some cases this class of symptoms may appear and no tuberculosis be present.

Keys recites an interesting case of a patient who had the above symptoms to such a degree that he was compelled to urinate every

five or ten minutes, still at autopsy there was no pathology found in the bladder.

**Frequent Micturition** is, perhaps the most common first symptom of the disease. There is necessarily a certain irritation preceding this condition. The nerve endings in the bladder are irritated by the toxine which stimulates the center of urination. At first the increase is hardly perceptible, later it is discovered that the patient must arise at night, and then more frequently in day, and, finally, the frequency is very much increased, up to every five or ten minutes in some cases. The frequency is not altered by night or by day, by rest or by work; it remains constantly the same.

**Pain** is at first absent. As the disease advances it becomes more and more in evidence. It is a dull, heavy pain ,bearing down in the pelvis. It may be felt along the entire urethra, or may be confined either to the prostate or to the glans penis. In some cases the pain is absent entirely and in others it is present in sharp, cutting fashion, depending upon the location of the bladder ulceration. If the process is mostly found in the bladder neck it is rather painful; if in the upper portion, it is sometimes not painful at all.

**Changes in Urine.** The urine is usually acid, although in Walker's 46 cases, 28 were acid, 14 alkaline, 3 ammoniacal, and one neutral. Specific gravity is usually 1,018 to 1,006. There are no chemical changes in the urine, except as it may be secondary to the kidneys. There is usually a great deal of debris in the urine, epitheum, caseous material, micrococci, tubercle bacilli, pus and, sometimes, blood cells.

**Blood.** Haematuria is a late symptom. It may be present for a number of years before its true significance is made out. In 146 cases collected by Walker, bleeding was noticed at some stage of the disease, and in twenty it was the initial symptom. Bleeding is first the result of congestion, and the affect produced by contraction of the bladder, breaking down the capillarys (in thsi case it is usually very little in amount), and, second, by the ulcers breaking through the arterial vessels, when it often comes with a gush and approaches exsanguination.

If it is from the first cause, it may be more or less continuous; it from the second, it is spasmodic.

**Tubercle Bacilli.** Walker states that they can always be found if adequate examination is made. This we believe to be true. The urine must be carefully centrifuged and the debris carefully stained for the bacilli. If these bacilli are found, it does not necessarily mean bladder tuberculosis, but with the above symptoms it is pretty certain.

**The General Symptoms** are fever from 100° to 102°, chilly sensations, blushed face, great anaemia, loss of flesh and a general tired worn feeling. The pulse is often increased with the signs of a general septicaemia.

**Complications** of bladder infection are numerous. Among the most common may be mentioned pyogenic infection, stone, urethral stricture and prostatic ulcers.

**Diagnosis.** The symptoms described above generally point toward a bladder tuberculosis, but the same symptoms are often produced by

kidney disease alone. The differential diagnosis will, therefore, be the most difficult condition to determine. Given progressive frequency of micturition, pain, tenesmus, pus in urine as well as tubercle bacilli, we are confronted with the proposition that we have to deal either with tuberculosis of the kidney or bladder, or some of the complications.

Catherization of ureters must be the final means in all these cases of determining the exact condition of the kidneys. Great care should be had in doing cystoscopy not to traumatize the walls of the bladder or introduce a second infection. By this means we will be able to determine whether pus or tubercle bacilli can be found in the kidney urine. If not, after reasonable examination we are safe in making a diagnosis of bladder tuberculosis without kidney infection, which is very rare.

The technique of catheterization of the bladder in these conditions very often offers considerable difficulty. The bladder is often very sore and will not dilate, or the urine contains so much blood and pus that one is unable to see anything on the bladder wall, let alone the ureter openings.

**Cystoscopy** is of no value in differentiating kidney or bladder infection, or both, and the same may be said about the so-called functional tests of the kidneys, i. e., the use of phloridzin or methylene-blue, etc. Tuberculin is, in my mind, to be used as well as the Moro and Pirquet test. The Calmette test may be used whenever it is thought necessary, but great care should be used iu its concentration.

**Treatment.** A careful diagnosis having been made, the question of treatment is nearly settled. For, when the local focus is found, the only treatment is the removal at the earliest possible moment. The difficulties are those of diagnosis. Little can really be done for tuberculosis of the bladder itself.

Suprapubic drainage, first done by Guyon in 1885, only relieves the symptoms if it is of any value at all. The suprapubic opening also offers a better avenue for attacking the diseased bladder, but it does not cure the infection. We have had once a case where we made a suprapubic opening for relief of symptoms where there remained a fistulae and the patient afterward died of a septicaemia—about two years afterward. Suprapubic cystitis can only be of value when the primary focus has been removed, and the bladder itself is to be attacked in such cases, we regard it a commendable surgical procedure but in no other.

Perineal cystotomy is even worse in Walker's 26 cases; ten died, one was nearly cured, 5 improved, two improved and two were made worse. This operation is to be generally condemned. In two cases the entire bladder has been removed. Both patients died in a short time. The entire mucous membrane has been dissected off in a few instances with equally bad resnlts. Portions of the bladder have been removed in some cases, always with bad results.

All surgical treatment depends upon the removal of the primary focus—kidney, prostate, seminal vesicles, or whatever may be the cause. In many cases the bladder tuberculosis has been entirely healed following nephrectomy for tuberculosis. This is generally

true if the infection is not old and no deep ulcers have formed. Nephrotomy is valueless. Many other methods of treatment of tuberculosis of the bladder have been from time to time in vogue. They may be mentioned as: Cauterization through cystoscope, producing vesico-vaginal fistulae; resection of sensory nerves, etc., all of which are, in my judgment, useless.

**Instillations** have been used in multiple and varied forms. An Ultzmann's instillator is used and 10 to 30 drops of the chemical are introduced into the bladder and allowed to remain there. Of these substances bichloride of mercury holds the first place, starting with 1 to 10,000th it is gradually increased to 1 to 1,000th. Guaiacol in 3 per cent strength in oil. Iodoform emulsion in glycerine 10 per cent iodoform. Gemmenol, lactic acid, pyrogallic acid, formalin, creosote, etc., have all been used to very little purpose, and, as I believe, sometimes causing harm.

Silver nitrate is used as an aid in diagnosis. It causes such terrible pain in bladder tuberculosis that it is diagnostic of bladder tuberculosis. It is contraindicated as a therapeutic agent.

Irrigations of boric acid, corrosive sublimate, carbolic acid, formalin, etc., have been used very much, and, so far as I know, all to no purpose. They do not do more than give temporary relief, which in same cases is valuable, and the authors recommend the use of corrosive sublimate irrigations as valuable only as a transient remedical agent.

Finally, after reviewing the entire treatment, both surgical and medical, of tuberculosis of the bladder, we come to the conclusion that the best and only efficient treatment is removal of the primary focus, local treatment for the pyogenic infection, and a proper sanitary life with plenty of good food.

## SENIOR NOTES

Jack Goodnough formally requests all professors to kindly change their tone when calling roll at the end of the hour. However, Jack's excuse for that nap is all sufficient. Who wouldn't be "all in" after swimming the "Big Muddy" from Council Bluffs twice a week?

A word from the wise: Bill Scholten says, "Never run after a street car or a woman; another will be along in a minute."

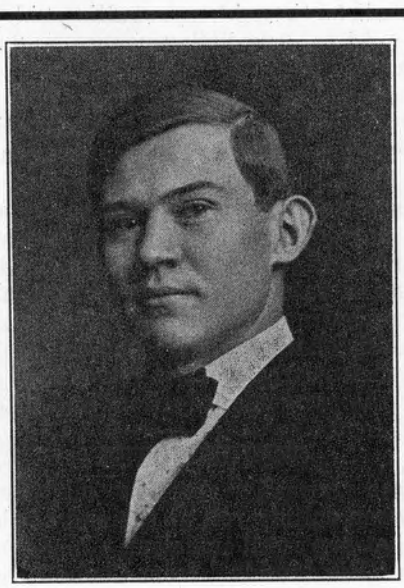
Burns, King and Moon, accompanied by Dr. Anderson, '10, attended the funeral of Dr. C. L. Stewart at Glenwood last Wednesday.

No more does the pestilential odor of formaldehyde permeate our class rooms. Mildred has lost her position (not job) at the Child Saving Institute.

Hooray! We're got our Keyes. Miss Quinlan knows what they're for.

"Chuck" Moon has acquired the habit of spending his week ends out of the city. He gives us to understand that he is in consultation with his brother-in-law, but, of course, that doesn't deter us from speculating.

Announcement has been received of the marriage of Dr. George B. Prichard, '08, to Miss Ina Fogelstrom of Wahoo. Dr. Prichard is now house physician at the Immanuel hospital in this city, and the couple will make this institution their home during the coming year.



The Late Dr. Charles Roy Stewert, '10

# The Pulse

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## EDITORIAL

Dr. F. W. Scott, of Lodge Pole, has kindly contributed the foliowing paragraphs in memoriam of his old friend and classmate, Dr. Charles Roy Stewert.

Dr. Charles Roy Stewert was born in Fremont, Neb., May 26, 1886, removing to Nickerson, Neb., at the age of 11 years. Here he received his preliminary education. He next entered the Fremont normal school, where he studied pharmacy, graduating in 1902 at the age of 16. His next move in educational lines was matriculating in the University of Nebraska College of Medicine, from which he graduated May 19, 1910. While in the university he served as assistant in medical zoology under Professor Barker. During his Junior year he served as the druggist in the dispensary. June 1, 1910, he entered the Methodist Hospital as one of the resident internes, serving for one year.

In June, 1911, he established himself in Curtis, Neb. From the start he was successful, and on August 30, 1911, was united in marriage to Miss Mary Windham, a graduate of the Methodist Hospital Training school, whom he met during his service in that institution.

His early departure from the ranks of his chosen profession occurred on November 1, 1912, about 10:30 a. m., when he was found dead on the road three miles south of Curtis, underneath his machine, which had upset and was on his back. Dr. Stewert was returning from a consultation call into the country at the time of the accident, and as he was alone no one will ever know just what occurred. The switch plug was thrown off of connection and the car out of gear when found. As the doctor's heart gave him some trouble, it is more than likely that he felt something wroug and endeavored to stop the car as death occurred, the car upsetting after he became unconscious.

To the members of his class he was always known as "Stew," and his ever-constant smile and jovial disposition won for him a strong place in our affections. No class or fraternity gathering was considered complete without his presence, and he will be sadly missed by all who knew him on these occasions. Always out for a good time,

and ever willing to help the writer carry the singing, I shall miss him very much.

An extract from the Curtis Enterprise, to which I am indebted for many facts given here, expresses much better than I can the sentiments of the community in which he had built up an excellent practice:

"In the two years of Dr. Stewert's residence here he had won the love and esteem of all who knew him, and his circle of friends were many, not only in Curtis but in the country all around. 'How can we spare him?' is the sad question everybody is asking. He was honest, careful and successful. No physician could be more sympathetic and kind. Children loved him and became impatient for his coming, and when he came his happy face and jovial manner made the little sufferers feel glad.

"When he had done all that he could and saw that some one must cross the river of death, he would confide in the pastor and ask for prayer in their behalf.

"Among the young people he was a great favorite and no pleasure circle was complete without him. Everywhere throughout the community hearts are sad because he is no longer with us."

Dr. Stewert was a member of the Methodist church, being confirmed at the age of 15. He belonged to the A. O. U. W. and was a member of the Phi Rho Sigma fraternity.

Dr. Stewert is survived by his wife. He was buried at Glenwood, Ia.

F. W. SCOTT, M. D., Class '10.

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## The Philosophy of Life According to "Cull"

Occasionally a bit of self-analysis comes not amiss, even though it impels one to sermonize. Therefore, having fairly warned you, we shall risk giving you an outline of the results of such a process. We shall do this, not with the intention of laying down a plan of action for our readers, but, perhaps, to call to mind that broad-minded principle of condoning the faults of those who do not come up to our personal standard. For we believe it to be true that no great benefit is conferred by the sermonizer upon his victim unless the thought expressed agrees with a law (moral or otherwise) conceived by the recipient's brain. That is to say that, while it is possible for a man to imbue another with his ideas, every man must develop his own thoughts and formulate his own plan of action from the results of a habit of introspection.

It is admitted that a man who chooses the practice of medicine for his life work is a man who has cultivated the habit of introspection and makes an occasional effort to define his relation to society. But we further believe it to be true that the man who can abandon himself to act like a long-horned steer now and then is the man that can bring more pressure to his serious work.

So I would say to those under-class men who have expressed surprise that the other students of the school do not display a more professional attitude: If you cannot go and do likewise, you would better overlook the offense of the majority.

# Alumni News Notes

Dr. Jos. G. Walker, '03, is now located at Iola, Kas.
(November 10-15—for demonstrations in radiology.)

Dr. Carl E. Gage, '03, has moved to Sioux Falls, S. D.

Dr. D. F. Lee, '02, is assistant city physician of Omaha.

Dr. C. C. Morison, '03, is associate editor of the Western Medical Review.

A fine daughter recently arrived at the home of Dr. and Mrs. C. Rubendahl.

Dr. B. W. Christie, '02, is president of the Omaha Douglas County Medical Society.

Dr. L. L. Henninger, '02, is vice president of the Council Bluffs Medical Society.

Dr. Merle Warner, '07, is sick at the Jennie Edmundson hospital in Council Bluffs.

Dr. T. E. Sample, '04 ,has given up the practice of medicine and is engaged in selling Florida land.

Dr. A. P. Overgaard, '00, of Fremont, is councillor of District No. 5 of the Nebraska State Medical Society.

Dr. A. E. Lane, '05, of Laramie, Wyo., ranks as major on the medical staff of the Wyoming State Guard.

Dr. O. G. Smersch, '03, has abandoned the practice of medicine and is interested in fire insurance in Omaha.

Dr. Geo. C. Shockey, '01, is instrnctor in nervous diseases in Northwestern University Medical School, Chicago.

Dr. Lee B. VanCamp, '98, of Omaha, is a tennis shark and divides his time about equally between medicine and tennis.

Dr. W. H. Anderson, '05, who is practicing in Seattle, was called to Council Bluffs in August by the death of his mother.

Dr. L. S. Trostler, '04, of Chicago, is on the program of the Clinical Congress of Surgeons of North America, which meets in Chicago.

Dr. J. M. Patton, '04, of Omaha, attended the American Academy of Optholmology and Otolaryngology at Chattanooga, October 27-29.

Dr. J. B. Potts, '07, is chairman of the arrangement committee of the Fifth Annual Alumni Clinic week and is already laying plans for a big meeting next fall.

Dr. E. S. Lauzer, '05, of Rock Springs, Wyo., is a vice president, and Dr. N. D. Nelson, '04, of Shoshoni, Wyo., is treasurer of the Wyoming State Medical Society.

Dr. Roy A. Dodge, '01, as treasurer of the Alumni Association, is still receiving 1913 dues from those who were unable to attend the meeting but who want a copy of the proceedings.

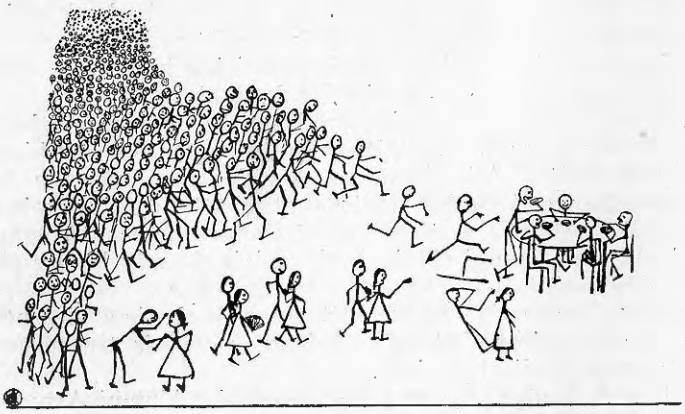
Dr. Jeanette Throckmorton, '10, of Chariton, Ia., has been appointed a member of the State Council on Public Health Education by the president of the Iowa State Medical Society.

## THE MOST RECENT EXPLANATION OF HAEMOLYSIS

(Copyrighted by the Pulse.)

Some very modern sidelights have been thrown upon the phenomenon of haemolysis with the general explanation of course—still resting upon the side-chain theory of Ehrlich. Naturally, we are too modest to disclose the promulgator, but come around to physiology class any day and you can hear a few propounded. Here's one: Take, for instance, an assemblage, say, where there are one thousand young men present and five young ladies; the refreshment for all consisted of five sandwiches on a small serving table. You may liken the thousand young men to the "amboceptors" in the blood stream, if you please, and the five young women to the "complements"—the serving table and the clubhouse sandwiches taking on the likeness of an erythocyte with side-chains to keep it from skidding. Now, some of the Claudie boys are real gallant and offer to escort some of the fair maids to the refreshment booth—but, upon arriving, find that some of their ruder brothers have seated themselves and there is no room, so the young couples hie themselves thither, causing such a commotion that the viands are left unmangled—and the party breaks up in a riot.

And now the application of this little allegory. We mean to say that when there is an excessive number of amboceptors present we cannot have haemolysis in that we must have the combined efforts of amboceptors and complements to destroy the red blood corpuscles—and since some of the amboceptors have already linked onto the side-chains, there can be no reaction with potent haemolysin.



## TENNIS

As you all know, the tennis association has been formed, with D. B. Park president and J. J. Keegan as secretary-treasurer, with Doctors Poynter and Guenther and Roy Sherwood making up the balance of the executive committee.

Upon interviewing the president it was learned that arrangements have been made to further level, roll and drag the courts, getting them in the finest of condition before the other improvements are begun. The backstops have been ordered and will consist of an iron framework with cement base, sufficient, the experts say, to withstand any stray vicious serves of even the mighty Dr. Willard. Nets have also been secured for two courts, and it behooves all to get out their snowshoes and racquet and swat the ball about a bit—as a mere constitutional, don't you know, before Yule-tide.

As will be seen below, a novel idea has been installed in the rules of the organization whereby any one connected with the school can become a life-long honorary member by simply relieving himself of five dollars, which we consider a decided privilege to students and physician enthusiasts who live here in Omaha.

### Constitution.

The name of the association shall be "The Gifford Tennis Association."

The object of the association is to provide amusement for its members and to develop a team to enter various tennis tournaments.

### By-Laws.

The team shall be chosen from the men showing the best scores in a tournament to be held on the local courts and participated in only by eligible active members.

Membership shall consist of two classes, honorary and active men. The eligibility of men to be decided upon by executive committee. Any person donating $5.00 or more to the association is eligible to honorary membership and is exempt from dues and retains membership as long as the association shall be in existence.

### Officers.

President—To be elected every semester and shall be chosen from student members. Secretary and Treasurer—Chosen each semester from student members.

The rules committee shall consist of two faculty members and one student, who shall have a term of office for one year. Duties shall be to make rules and regulations governing the courts and look after the general business of the association and audit accounts. They shall meet with the president and treasurer as the executive committee and approve of all expenditures and carry on such business as may come before the committee.

Dues shall be $1.00 for first semester and 50 cents for each following semester.

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Dr. C. W. M. Poynter, '02, as professor of anatomy, has stimulated the study of this important subject among the faculty to almost as great an extent as amoug the students.

## THE MEDICAL LIBRARY

This paragraph is about the library. Ye editors have met with considerable difficulty in writing this paragraph. Some of ye editors were afraid to write it—others just naturally couldn't, never having been in it. So we tackled it.

The library consists of a room full of white-painted wooden shelves, many musty books and lehrbucker. There is one large table in the room, on which repose various minor medical periodicals, and the most recent copy of the Pulse. We understand that the Awgwan has been barred. The library has two phases—open and closed. In the open phase a nice lady presides over the studious retreat and worries her grey matter over the needs of the ever studious studes. But upon being interviewed Mrs. Berry states that on the days when we come from the press the crowd is too great for the little room to accommodate, and suggests that more chairs and another table would be a considerable aid to the pursuit of learning.

Dr. Guenther believes in the library. His belief is militant. This militancy the Sophomores are getting the benefit of. Hence the recent superfluity of Sophomores in that vicinity. Ask any of them why they stick around. They answer: "Guenther." It is enough. Amen.

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## SOPHOMORE NOTES

Moser enters physiology lab. and pays Sage a long-standing debt of $1. Sage, never having expected to see the iron man again, emits great signs of joy, which are nipped in the bud by Parks, who is standing by, and who takes away the dollar for tennis association dues. Sage then asks Parks if he has subscribed for the Pulse. No! So the elusive sheckel gets back into Ick's bad hands again, but he is obliged to give it then to Moser as he is business manager of the sheet. Then Parks hits Moser again for tennis dues, and the poor crane never does see the simolian, but two men were admitted thereby into the fine privileges of the new courts, and another man gets a record of all proceedings in the Pulse.

Rebanis Sisler proves to be the chief offender in class these days, pulling off brilliant remarks, one on the heels of the other. For instance: (1) "The pulse is caused by the viscosity of the vessel wall." This is considered especially choice, but the others aren't so bad. (2) "The air innervates the pharynx and causes a more rapid respiration."

In breathing coal gas the active principal causing distress is $CO_2$, which, in combination with oxygen, causes injurious oxides.

Bill Ross called on a fair fem the other night who had a very lady-like cat in her possession by the name of "Mabel." As you all know, the animal room is sadly lacking in felines, and the next day the girl's pet was gone—and Bill gets a haircut with the proceeds. But when the lady saw Bill again!

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Dr. A. C. Stokes, who graduated from Ames in 1892, received notice of his election as one of that class to become a member of Phi Kappa Phi, a new honorary fraternity, just making its appearance in the west.

**WANTED—SOME P-E-P ! PEP ! !**

Why don't some unsophisticated freshman attempt to raise his numerals over a greased flagpole to see if the sophomores can't get it down and rub his nose in the still fresh paint? Or why don't we have some day set aside for a parlor game of mecidine ball, or a series of class football games?

Maybe if you went through a little work-out on the outside the director of the laboratories wouldn't have to take such preventative measures to discourage Fourth of July celebrations in the hall, cactusing on the steps, and cat chorus in the rest rooms.

Or if you don't care to get your collar mussed in such proceedings, why don't some one arrange for a big theater party down at the Gayety and let the howling mob insure the community at large that we're here because we're here. We haven't heard that ditty about "We're Going to the Hamburg Show" for some time.

Let's get together on something if its nothing larger than a wiennie roast. Plenty of dogs in the animal room.

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Drama enacted on the fourth floor of the Medical College Building: Euphonious title of "Breech Presentation" announced. Dr. After B. Somers, chief hero, enters and begins a monologue. Audience enters the realm of Morpheus, wooed to pleasant rest by a drug known only to the Senior class. The plot is unraveled before their sub-conscious minds and the first act consists largely of an injunction to wait and a lengthy discussion as to ways and means for starting something. The scene is full of action in the way of emphatic gestures, from which the furniture is ever in imminent peril. The inevitable sub-hero and heroine enter, and acquit themselves with credit considering the minor parts which they are given to portray. The villain and cause of it all is brought upon the scene during the last few moments of the drama. The aforesaid villain is alternately chucked in hot and cold water until he cries with deep remorse. Our hero bows before the final curtain amid a thunder of applause from the carpenters in the basement and cat-calls from the north wind whistling through the gallery. The gong rings and awakens the class. One realizes that it is Friday night and suggests that they forego the hypo and attend a real show at the Gayety. The vote is uh-huh.

The Phi Rho Sigma Seniors held a dancing party at the Chapter house Friday, October 24.

Phi Rho Sigma gave an informal dance at Jacob's hall Saturday evening, November 8. Dr. and Mrs. W. F. Milroy and Dr. and Mrs. A. C. Stokes were the patrons.

The Pulse received an encouraging communication from an alumnus, who says that he enjoyed our paper so much that he sat in his office long past his supper hour reading about his old school.

Hallowe'en was celebrated by an old-fashioned party, followed by a dance, at the Phi Rho Simga house, Friday, October 31.

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Nu Sigma Phi entertained at a dinner-dance for out-of-town guests Saturday evening, November 8th.

## CLINICAL DEPARTMENT

Case 1—G. K. Male, aged 54. Occupation, harness maker. Married. Family history negative. Has never had any previous illness except for a slight attack of rheumatism eight years ago. The patient says he drinks moderately and also uses tobacco to excess. He was admitted to the dispensary Monday, October 27, and gave the history that he had come to Omaha three days previously in search of a position and that he had been intoxicated during a large part of that time. Monday at 4 a. m. he was awakened by a severe pain which extended from the right elbow to all the finger tips on the right hand. He had, at the same time, some pain in his stomach region and vomited everything he had eaten since that time. He had no temperature and no lencocytosis.

There was an oedema extending from his right wrist to the shoulder and over the front of right chest and right back as far down as the ninth rib. From this point the oedema extended across the back and into both flanks. The heart was enlarged one-half inch to the right of the sternum and also the left of the mid-clavicular line. There were two murmurs, a systolic and a diastolic, over the aortic area. The liver extended four fingers breath below the costal margin. Lungs were apparently normal. On percussion, however, we elicited dullness to the right of the third dorsal behind. There was anaesthesia of the four fingers and as far up as the wrist of the right hand. There was loss of the pain sensation but not a loss of ability to distinguish between heat and cold. Above the wrist there were spots of hyperaesthesia. This condition of the hand and arm was supposed to be due to the pressure of the oedema on nerve trunks.

The pulse was larger on the right. Albumin and casts were found in the urine. The condition was diagnosed as pressure on the right innominate vein, occluding the venous return from the axillary vein and the azygos major and minor vessels. There was no fluid in the pericardium, as Osler describes in a similar case. Further, a tentative diagnosis of dilatation of the right auricle and consequent compression was made and 1-64 strophanthin was injected intravenously. This was supplemented by rest in bed and digitalis leaves, with the result that there was a partial disappearance of the oedema and a total disappearance of the anaesthesia and hyperaesthesia.

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## FORUM

What does "Co-Education" mean? Does it mean that either sex is lifted far beyond the other? If it does, I am using your valuable time to no avail. But if it means equality, I wish to ask what equality is shown in the lounging rooms of our own school? The males, constituting about 90 per cent of the student body, have in their room two or three plain chairs and a plain table. The fairer sex, constituting only 10 per cent of the student body, have a rest room with rockers, rugs, and I know not what, because that is forbidden territory. Do you call this equality?

WM. SHEPHERD.

**VACATION !**

Thanksgiving is coming ! In a few short days now the resounding corridors of this, our beloved college, will resound no more. The only noise to be heard in the silent halls will be the steady drone of the quiz master as he goes through the Freshman quiz. This is automatic and requires no Freshmen. Everyone else will be on the dear old farm once more, with their feet under mother's table, conscientiously breaking all the carefully learned rules of health instilled by the profs.

Everyone, in fact, will be eating turkey and—and—and—and ! But we wish to state that during this period of rest and festivity the Pulse staff will still and continuously be on the job, thinking up dope for the Ghoulish Number. Don't miss it ! The faculty will faint with horror ! The postal authorities will suppress it ! But we will deliver it by hand if necessary. Be sure and get your copy!

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Privilege has been given to the superintendent of nurses to send pupil nurses to the various departments for experience in dispensary service.

This plan is of mutual benefit. The training schools are required by the reciprocity board of New York to give nurses three months' work in a public dispensary. The training schools of Omaha are anxious to comply with this requirement, and already two Senior nurses from the Wise Memorial Hospital have been in attendance.

Miss Shestak, R. N., assisted Miss Stuff in the management of the dispensary the past week.

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Miss Stuff in her dispensary reports says that an average of twenty-three cases have been treated per day during the month of November. Outside calls and the Union Pacific dispensary bring the total up to an average of forty-one cases per day.

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A delegation of the Central States Orthopedic Club, headed by Dr. John L. Porter of Chicago, Dr. Reilly of St. Louis, and Dr. Steindler of Des Moines, spent the afternoon and evening of November 8th in Omaha. Drs. Jonas, Davis, Summer and Lord gave clinical demonstrations at the different hospitals. The visiting surgeons then visited the University of Nebraska College of Medicine, and were later entertained at an 8 o'clock dinner at the Omaha Club.

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On November 11th Drs. Jonas, Summers, Davis, Findley, Stokes and Lord left to attend the fourth annual meeting of the Clinical Congress of Surgeons of North America, which is in session at Chicago.

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Nu Sigma Phi gave a Hallowe'en party November 1st to a company of twenty-three at Carter lake.

Phi Rho Sigma had a "ghost" party October 31st at their new home, 2815 Farnam street.

Nu Sigma Nu gave an informal dancing party at their house on October 25th, at which Mrs. Quinlan was chaperon, and another on November 8, Dr. and Mrs. Guenther being the chaperons.