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CLINICAL OBSERVATIONS ON CYSTITIS IN WOMEN.

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These observations are presented for the purpose of adding to our literature some new facts regarding the treatment of cystitis.

That there is much need for more definite knowledge respecting the treatment of cystitis in women, becomes clearly evident when we consider how many still suffer from this most distressing affection. That our ideas on this subject are unsettled is well shown by the conflicting opinions expressed regarding methods of treatment and the results. In the literature of to-day we frequently find records of cures following certain kinds of treatment which when tested clinically by others, are found to be useless, sometimes injurious. So far, it appears that there is no recognized or standard treatment of cystitis in women by gynecologists. It rather seems as if each surgeon follows his own devices, and the results obtained are often said to be alike wonderful, although obtained by apparently conflicting systems of treatment. That we are drifting towards more definite knowledge is true. We only need more clinical observations, carefully recorded, to place this subject on a par with other departments of surgery which are admitted to be settled.

CASE 1.—The patient was under my care fron November 9, 1869, to February 10, 1870, while suffering from a cystitis, which began after one

of her confinements. She remained under my care for only a short time, circumstances calling her back to her home in the northern part of this State. At that time she had a well marked cystitis of the purulent variety. She was treated in the ordinary way by injections with some benefit. I also employed drainage part of the time, by introducing a catheter in the evening and letting it remain all night. This gave her great relief and permitted her to sleep—a blessing which she had not enjoyed for several years. She was improving in her general health, although her local disease remained about the same, or at least only a little improved. She expected to return for further treatment, but her husband becoming paralyzed, she was obliged to give up the care of herself to look after her family. From that time up to this last July, she continued to suffer tortures during the day, while she was obliged to be up and around attending to her household duties. At night she obtained relief from wearing the catheter, which she continued to use ever since she was taught to do so, twelve years ago. Her sufferings were almost beyond description, but having an iron constitution and extraordinary will power, she managed to live until this summer. During June and July last she failed more rapidly. Having heard of dilatation of the urethra as a cure for cystitis, she urged her physician to try that operation. He did so about the end of last July and repeated the operation one week later. The only effect of this treatment (as stated in the notes of her history, which I obtained) was to reduce the number of evacuations from 160 to 100 a day. Her physician then injected her bladder in the hope of relieving the inflammation and also overcoming the contraction, which was very marked. Immediately after the injection she was seized with violent abdominal pains, and rapidly developed a peritonitis which proved fatal on the second day.

On post-mortem it was found that the bladder was adherent to all the viscera around it; the result, no doubt, of a former pericystitis. Upon the posterior wall of the bladder, and directly opposite the urethra, there was a nipple-like projection outwards, with an opening at its apex large enough to admit a lead pencil. This protuberance had been produced by the long use of the hard catheter. The instrument had worn through the inner walls of the bladder, until the parts had become less resistant; it then pushed the remaining muscular tissue and peritoneum outward, and formed the nipple-like projection. At the time of the fatal attack, the catheter had made way through all the coats of the bladder except the thickened peritoneum. The rupture of the peritoneum was caused by the injection. That was the belief of the physician in attendance, and the history points definitely to the same conclusion. The bladder was firmly contracted and indistensible; its retaining capacity did not

exceed half an ounce. The muscular wall was over half an inch thick; the mucous membrane was all destroyed by the inflammation.

CASE II.—Is that of a lady possessing remarkably good organization. Married and had one child. Her age was thirty when her illness began. While riding horseback she was thrown off and sustained some apparently slight injuries. Her health, up to this time, had been very good, but from the time of her accident, September, 1878, she had symptoms of cystitis. She was residing in the far West at the time of the accident, and as I did not see her for several years after, and have not been able to correspond with the surgeon who then attended her, I do not know the relation which the injury sustained at that time bears to the development of the cystitis. I only know that the one followed the other immediately. The cystitis persisted, and her constitutional symptoms increased from time to time. She then returned from the West to New England to be under the care of her father, who is a physician of known ability and large experience. He gave her every attention and placed her in the care of a neighboring physician who has a high reputation as a gynecologist. Without giving full details of her treatment at that time, I may fairly state, upon information received from her father and her physician, that all the recognized means of treatment were tried, including complete dilatation of the urethra on two occasions. The cystitis was not at all relieved by the treatment, and her constitutional symptoms increased continuously until she became confined to bed. Having a highly sensitive nervous system, she suffered greatly from want of sleep, and the constant pain of cystic tenesmus. I first saw her in consultation about a year from the time when she was first taken ill. It was then that this much of her history was obtained. She continued under treatment for six months longer, and at the end of that time she consulted one of the best known and most worthy authorities in New York. He advised cystotomy and drainage for six months or longer, stating at the same time that, in view of the failure of her former treatment to give relief, there was nothing else left to be done. She declined to submit to the operation at that time. Her father then sent her to me about two and a half years ago. At that time she was obliged to urinate about every hour, night and day. She suffered from constant tenesmus, and her nervous system was greatly debilitated. Dr. McCorkle examined the urine for me and found that it contained a large quantity of pus, and there was a remarkable absence of epithelial cells. The Doctor's report was that the specimen was pus containing a small quantity of urine, and evidently came from a bladder which had entirely lost the upper layer of its mucous membrane. The diagnosis then made was chronic purulent cystitis. It appeared to me that the case was one which called for

cystotomy, but knowing the objection of the patient to that operation, treatment was undertaken and the results soon gave some slight encouragement. The constitutional treatment was at first chiefly tonic in character, and subsequently she took saline waters, lithia waters, bromide of lithia, and finally buchu, benzoin, tar, turpentine and the like. These last preparations, however, did not help her and were not long continued. The local treatment was first instillations of a warm solution of borax. Half an ounce was instilled at a time and repeated until from eight to twelve ounces were used at each treatment. The instillations were always made with very low pressure. As the sensitiveness of the parts diminished, the quantity used was increased up to one ounce, but never beyond that. Three months of this treatment showed improvement. There was less pain, and the patient's general health had improved considerably. About this time nitrate of silver was used, and later, sulphate of zinc, in solution of various degrees of strength, but this always caused pain. Indeed, the suffering caused by this kind of treatment was great, and the benefit which followed being very little it was given up. I then began to use instillations of an infusion of hydrastis canadensis, containing a small quantity of salicylate of soda, which was used to prevent decomposition of the infusion. I am now satisfied that the salicylate was of value in its effect upon the suppurating mucous membrane. The hydrastis was very faithfully used, first by myself, and subsequently by the patient, who made the instillations with unusual intelligence and care. The result was a gradual diminution of the pain and lessening of the frequency of urination. The pus diminished in quantity, and simultaneously young epithelial cells appeared in the urine and increased in number as the pus diminished. At the end of one year of treatment the local and constitutional symptoms had all disappeared. The urine was normal and the patient had fully recovered, excepting that she was obliged to urinate about every four hours. This was owing to contraction of the bladder. To overcome this, gradual distention was practiced. The patient was directed to retain her urine until discomfort, not pain, was felt. Injections were used, each time distending the bladder a trifle more, always stopping short of causing pain. About two years from the time she first came under my care she was perfectly cured of the cystitis and had regained her normal retaining power. Six more months have passed and there is not the slightest evidence of any return of the former affection.

Case III.—This lady, 34 years of age, is married and had four children. She is said to have had retroversion of the uterus, which was held in its abnormal position by adhesions. She was treated for this displacement in the Woman's Hospital of New York, so she says, and while un-

der treatment a cystitis was developed which has continued ever since. After leaving the hospital she became pregnant and her sufferings increased. Two years ago, when her last child was four weeks old, she consulted a physician here in Brooklyn, who advised cystotomy, and soon after he performed the operation, using the cautery. She experienced some relief from the operation, but she still suffered very acutely. Being led to hope that in time the operation would cure her, she bore her afflictions for nearly a year, when she consulted me on the 5th of September, 1881. I then found her to have the tubercular diathesis, rather well marked, but there was no apparent disease of the lungs at that time. The vesico vagina fistula, made by the operation, was large enough to admit the little finger, and the drainage of the bladder was quite complete. Yet, strange to say, she had constant pain in the bladder and a desire to urinate. These symptoms I found to be due to inflammation and ulceration of the urethra and bladder below the fistula. The disease at this location caused pain and irritation, which provoked reflex action, such as that which arises from the presence of urine in the bladder, but in a much greater degree. General tonic treatment was advised, and local treatment employed to relieve the inflammation of the urethra and neck of the bladder. Locally she improved slowly. The pain and vesicle tenesmus subsided almost wholly, but she has not yet recovered completely. My object was to cure the local disease and then close the fistula. This I shall never be able to do. While the local disease is improving she is developing phthisis pulmonalis, which precludes all thought of operating to close the fistula. The facts in this history, which I trust will be borne in mind, are, that this patient was of a tubercular organization. That cystotomy did not cure her cystitis and urethritis, nor relieve her suffering to any marked extent.

Case IV.—Six years ago I had a case of cystitis under observation, which illustrates the same facts in pathology and therapeutics as in Case III.

I shall give a very brief outline of the history, simply to show the result obtained by another method of doing the same operation. This patient was a married woman who had several children. She was of a highly nervous temperament, and came from a tubercular family. She consulted me for a cystitis, the cause of which is not recorded in her history. I treated her with injections for several months without benefit. I also dilated her urethra, with the same result. In fact, I believe she rather grew worse in place of better while under my care. Her general health failed noticeably at any rate, and she gave signs of a tubercular deposit going on in her lungs. Her friends urged her to enter the Woman's Hospital in New York. She did so, and was under the care of

Dr. Emmet, who performed cystotomy, which he did by incision and keeping the fistula open, first by his glass tube and afterwards by dilatation with the finger. After the operation she had an attack of pneumonia—at least she told me this when she returned from hospital. Upon her return home I found that she had been much relieved of her most urgent symptoms by the operation. Still there was cystitis remaining, and she still had vesicle pain and tenesmus. The tubercular disease of her lungs had progressed rapidly, and that portion of her lung which was involved in the pneumonia never cleared up. Her strength rapidly failed, and she died before the cystitis subsided.

I might add to these several other cases of the same kind, but these will suffice to confirm certain points which I desire to bring clearly to the attention of the Society.

The first case illustrates one danger in using the catheter which has not been noticed heretofore, so far as I know. One would hardly suppose that the catheter, retained at night only, would perforate the walls of the bladder; still in this case it did so, and led to the fatal issue of the case. This danger no doubt lies in the use of a hard catheter, which was used. Such was the crude state of my knowledge at the time in regard to draining the bladder that I used that kind of instrument, which I have ever since known to be very objectionable. The non-vulcanized rubber catheter is the only one which should be retained for any length of time.

This case also shows the great danger of trying to distend, by injections, a bladder which has for years been contracted from cystitis. I am satisfied that this practice is exceedingly hazardous, and at the same time it is entirely ineffectual, as a rule. The danger lies in the fact that the walls of the bladder are liable to be attenuated or softened at certain points, and hence very likely to rupture under undue pressure. Again, when the bladder refuses to distend under the normal pressure of the urine, after all traces of cystitis have disappeared, it is good evidence that the walls of the organ are hypertrophied and to a certain extent permanently contracted, or the whole organ is bound down by pericystic adhesions. Indeed, both of these conditions may be present, as in case first. It follows, then, that the only safe and sure way of distending a contracted bladder is by slow, gradual education. The patient should retain the urine as long as possible without causing suffering from acute pain, and once or twice a week a saline solution should be instilled at a pressure only a little higher than the normal pressure of the urine. The quantity used should be regulated by the feelings of the patient. As soon as she is painfully conscious of the distention the pressure should be taken off. I am quite satisfied that this method will succeed in curable cases,

if the patient and surgeon will take the required time and trouble. Case second is a fair example of what I have been able to accomplish in this way.

Forcible and extreme dilatation of the urethra is advocated in the treatment of cystitis by many surgeons otherwise well informed. Within the past few years the medical journals have contained the histories of many cases of cystitis said to have been cured by this operation. This is all quite erroneous. Generally, cystitis can no more be cured by dilating the urethra, than could a gastritis be cured by dilating the sphincter ani. It is a fact that if the urethra be destroyed by overdistention, incontinence will follow and the perfect drainage of the bladder will cure the inflammation; but verily the cure is worse than the disease. I am sure that the mistake in regard to the value of this operation in cystitis comes from its having been practiced in cases of acute cystitis which would have ended in recovery without any surgical treatment, and again in cases of inflammation of the upper third of the urethra which have been mistaken for cystitis. On the one hand the operation gets the credit of curing a disease which cured itself, and on the other of curing a disease which did not exist. It will be observed that in cases first and second the urethra was dilated with no benefit, and to these I could add many others which were treated in the same way with a like result.

Cystotomy, as a means of treating cystitis, is of great importance. There is, however, still some doubt in regard to its relative value and the indications demanding operation. That its merits have been overestimated appears from the prevailing opinion that cystotomy will immediately relieve the pain and tenesmus and cure the cystitis in the course of time. This is not by any means true as a rule. Cases third and fourth were neither cured nor fully relieved from suffering by the operation. The same was the result in some cases operated on by myself. In cases where the inflammation is confined to the upper portion of the bladder, and limited to the mucous membrane, cystotomy will give relief and in time cure the cystitis; but if the neck of the bladder is affected, and especially if the patient is tubercular, the operation will not accomplish either of these results.

It will be observed that the cases which show the best results after cystotomy are, like case second, the ones which yield to local treatment by instillations. Cystotomy certainly gives more prompt relief; but when we take into account the operation, the discomfort of the patient from incontinence, and the second operation to close the fistula, the tax upon the surgeon and patient comes nearly to equaling that of the other method of treatment.

From all this I am inclined to believe that cystotomy, great as its value is in the treatment of cystitis, will become more circumscribed.