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Remarks on the treatment of cystitis.

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REMARKS ON THE TREATMENT OF CYSTITIS.

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THE following observations are based on the records of a number of cases which have come to my notice within the last eight years. I have little to say of rare or severe forms of vesical disease and shall consider chiefly the treatment of the ordinary run of urinary symptoms met with in out-patient and office practice; but the commonplace in medicine is not always the least important.

Most of the cases were of gonorrhœal origin and in nearly all the inflammation was confined to the neck of the bladder. Extension backward of gonorrhœa into the neck of the bladder, accompanied by a sharp onset of urinary symptoms, is of course common enough. In non-gonorrhœal cases the cause of the cystitis is not always clear, but in a certain number is apparently traceable to a posterior urethral catarrh resulting from congestion of the prostatic portion, with or without inflammation of the seminal vesicles, and brought about by prolonged and repeated sexual excitement. It begins insidiously, has little or no tendency to recover, and is apt to be difficult to manage.

As regards the treatment of cystitis, of the various internal remedies I prefer the saline diuretics, especially benzoate of sodium. Few surgeons nowadays, however, would long defer local treatment of the disease. For the simple purpose of washing out the bladder, perhaps a saturated solution of boric acid gives on the whole the best results. For the purpose of producing a decided impression upon the mucous membrane of the vesical neck I have had very gratifying experience with nitrate of silver and permanganate of potassium. I have tried various other substances, but not to a sufficient extent to furnish data of any value.

Nitrate of silver is of course familiar to all, and I suppose is more used than anything else in the deep urethra, and deservedly so, for it

is probably the most valuable remedy we have. It is, therefore, so well known and has been so much written about that little need be said of it here. I will merely remark that I use a milder solution than formerly, rarely going above one per cent, but usually inject rather more, that is to say, ten or fifteen minims instead of four or five. I think also that these injections are much more effectual if immediately preceded by the passage of a large sound, except in the more acute cases.

Permanganate of potassium, so far as I know, has not been very extensively used in the bladder; at least, I do not remember having seen the reports of its use. I have employed it a good deal in the last six years with great satisfaction in cystitis and chronic prostatitis, and reported some cases four years ago. Where it fails, nitrate of silver often succeeds, and *vice versa*.

The bladder should be thoroughly irrigated with the permanganate solution, and this is conveniently done by means of a large Ultzmann syringe (which has a capacity of about five ounces) connected with an elastic or soft rubber catheter. One syringeful at a time is injected and allowed to flow out again, and so on until the solution comes away with as bright a color as it went in; then two or three ounces are injected and left in the bladder, which the patient should hold as long as he comfortably can. It does not seem to me necessary to have the eye of the catheter just in the deep urethra during the injection, as advised by Ultzmann and others; if it projects a little beyond, it seems to serve the purpose as well. The fluid apparently settles down into the neck of the bladder as the patient walks about, and exerts a stimulating and astringent action on the mucous membrane; this is checked, however, before it has time to become irritating, by the decomposition of the solution, which takes place as soon as a small quantity of fresh urine is secreted. It is well to begin with a solution of about 1 to 4,000 or 5,000; weaker than this is useless on account of its rapid decomposition. It may be increased at the next sitting, generally after an interval of four to six days, to a strength of 1 to 3,000. For the third and subsequent injections a 1-to-2,000 solution may be used, if well borne. The treatment is a mild and safe one, but is more troublesome to carry out than the instillations of silver nitrate. If good is to result, it is soon apparent, and if there is no improvement after a few injections it might as well be abandoned.

In order to show the practical results of treatment I will briefly report a few illustrative cases:

Case I.—W. M., twenty-eight years old, on August 11, 1888, was afflicted with his second attack of gonorrhœa, which had already lasted

nine months; for three months micturition had been painful and abnormally frequent. The bladder was washed out with a solution of permanganate of potassium (1 to 4,000), three ounces being left in. This was repeated ten days later, and on the 30th he reported that he could hold his water four or five hours without trouble. He was now irrigated with a 1-to-3,000 solution, and on September 6th micturition was normal. He remained well until the following May, when he contracted a fresh gonorrhœa, and on June 6th complained of being obliged to urinate every half hour day and night, the act being very painful, and followed by severe tenesmus. He was given an instillation of silver nitrate, one per cent, which was followed by partial retention, and two days later the bladder was irrigated with a permanganate solution (1 to 2,000). June 11th he reported great relief, but continued partial retention. He was catheterized, fourteen ounces of turbid urine evacuated, and the bladder again washed out with a 1-to-2,000 solution, and on the 13th with a 1-to-1,500 solution. After this there was entire relief from urinary symptoms, although the urethral discharge continued. No further local treatment was required. The patient was seen a month later, and at that time was perfectly well.

Case II.—J. C., age twenty-one, on May 24, 1890, had a gonorrhœa of six weeks' duration, and for five days had been urinating with pain and difficulty every hour day and night. He was irrigated with permanganate solution four times with entire relief. On June 3d micturition was normal, and continued so.

Case III.—A woman, twenty-eight years old, on May 6, 1892, had urinary symptoms of two weeks' duration accompanying gonorrhœa. Micturition was increased in frequency by day, although there was little trouble at night. There was severe burning during the act, and painful contraction at the end, followed by severe tenesmus. There was considerable urethral discharge. The urethra was irrigated with a solution of corrosive sublimate, after which the catheter was passed into the bladder, and urine containing a large amount of pus drawn off. The bladder was then washed out with a permanganate solution (1 to 3,000), and three ounces left in; it was followed by considerable tenesmus. The irrigation was repeated three days later, as a result of which the cystitis was wholly relieved and did not return.

Case IV.—D. M., age twenty-eight, on July 23, 1892, had had gonorrhœa several times, the present attack having lasted five months, with vesical symptoms of five weeks' duration. Micturition was scalding and very difficult, sometimes stopping suddenly, and increased in frequency; there was pain at the end of the penis. The urine was

high-colored, with offensive odor and a thick muco-purulent sediment. Examination for stone was negative. A catheter was passed, and five ounces of very foul residual urine drawn. The bladder was then washed out with a permanganate solution (1 to 3,000). Relief was prompt and improvement progressive. The irrigation was repeated six times within the next two weeks, and then the patient continued it daily at home for two or three weeks longer. On September 20th the urine was normal, and all symptoms had vanished.

The following case was of interest to me as presenting more than average difficulty in treatment:

Case V.—J. C., age thirty-four, was first seen March 25, 1892. He was suffering with his second attack of gonorrhœa, which had lasted three months. Cystitis had set in during the first week of the disease. He had had internal treatment only, and had been confined to his room for the last month. Local treatment was begun with deep injections of silver nitrate. No relief being experienced, permanganate irrigations were tried, but were not well borne, and daily irrigations with boric acid were substituted. The patient was allowed to go about at first, but got worse and was then kept in his room nearly a month, the boric-acid irrigations being continued, and later increased to two a day. Improvement was marked for a while, but finally came to a standstill. I became convinced that the prostatic urethra needed stretching, and that he would not get well without it; so, on May 16th, dilatation was cautiously begun. Sounds, followed by deep injections of silver nitrate, were passed three times a week, gradually increasing in size from No. 25, the meatus being freely divided. When No. 32 was first passed it seemed tight and caused a good deal of pain. Suddenly something was felt to give way, and the patient experienced a sharp pain; the withdrawal of the sound was followed by considerable bleeding. No. 33 was immediately passed and slipped in with ease. From this time improvement was more rapid. The dilatation was continued until No. 36 passed easily. June 29th, when treatment was suspended, there was still at times a slight sense of irritation at the neck of the bladder and a few shreds in the urine; these symptoms subsequently entirely disappeared. The expulsive force of the bladder, which was impaired throughout the disease, has not been wholly recovered.

I will conclude this paper with the report of a case of vesical catarrh:

Case VI.—A. S., fifty-seven years old, has been under my treatment for chronic cystitis and stricture at intervals for about four years. Micturition has been abnormally frequent and more or less difficult

for many years, requiring occasionally the use of a catheter. In March, 1893, he broke a catheter in his urethra; the end slipped into the bladder and formed the nucleus for a stone. In July I found him in great distress and removed the stone, which gave marked relief; but the cystitis remained in an aggravated form. During the next three months the strictures were cut and the bladder was pumped out twice and washed out frequently with various solutions; but, with the exception of a few periods of temporary improvement, he grew worse until it seemed as if some radical operation must be done to relieve his great suffering. As a last resort an emulsion of iodoform was injected into the bladder. The effect was almost immediate, and very striking, entire relief from the more distressing symptoms being afforded. The injections were given three times a week, later twice a week, and continued several weeks. They enabled him to live in comparative comfort, although abnormal frequency of micturition and an ammoniacal condition of the urine persisted.