Clinical Lecture

ON

DISEASES OF THE BLADDER REQUIRING
THE RETENTION OF A CATHETER.*Delivered at Westminster Hospital.*By BARNARD HOLT, F.R.C.S.,
SENIOR SURGEON TO THE HOSPITAL.

GENTLEMEN,—During the last few months you have had various opportunities of witnessing the benefits that have arisen from the retention of the winged india-rubber catheter in the bladder in cases where the patient has been unable to micturate excepting through a tube; and I purpose to-day to draw your attention, among others, to the case of Charles R—, who is at present under my care in Matthew ward, as one specially illustrative of this method of treatment. Although on the present occasion I shall mainly refer to this case, yet I may mention that the treatment is equally applicable to cases of atony or paralysed conditions of the bladder, either associated or unconnected with enlargement of the prostate gland; and I may also add that, wherever a catheter can be worn, the flexible winged one is the most successful.

Charles R—, aged fifty-two, a traveller, was admitted under my care on August 8th, 1870. He had been frequently the subject of both syphilis and gonorrhœa, and for the last fourteen months he had experienced great and increasing difficulty in passing his urine, which is now loaded with mucus and pus. The desire to micturate is very frequent, and he cannot expel more than two tablespoonfuls of urine at a time. He has constant pain over the pubes and at the prostate, and also pain in the glans penis after micturition; and a purulent and bloody discharge exudes from the end of the penis. His aspect is careworn and anxious, and he is very much thinner. His nights are restless, and his general health is materially damaged.

An examination per urethram proved the absence of stricture. A large-sized catheter could be readily passed, but it produced great agony as it entered the bladder. The examination per anum proved the prostate enlarged, and it was very painful on pressure. An examination of the urine proved the presence of albumen, mucus, pus, and vesical epithelium. It presented a white filmy aspect, and was highly ammoniacal. About two ounces and a half of urine were removed by the catheter, and no greater quantity of warm water could be injected. A subsequent examination with a sound proved the bladder free from calculus.

Here, then, was a case in which the diagnosis was not difficult, but where the prognosis was doubtful. The examination with the sound proved the absence of calculus in the bladder. The symptoms did not warrant the conclusion that there was stone in the kidney, for in calculus pyelitis there is usually lumbar pain, increased by exertion, and the penis pain precedes micturition, and is always relieved when the bladder is emptied. In calculus vesicæ, or ulceration of the neck of the bladder, the pain is after micturition, and results from the empty bladder grasping the stone, or approximating the ulcerated surfaces. In this instance the introduction of an instrument produced intense pain as it passed over the neck of the bladder; and when that viscus was emptied, the suffering was greatly increased, but at once relieved by injecting a small quantity of warm water. As mentioned before, the urine was loaded with pus and mucus; and, to assist the diagnosis, it was necessary to ascertain whether this was secreted by the bladder or kidney. All the urine was, therefore, removed by the catheter, and the bladder was washed out with warm water until the water so injected came away clear. A small quantity of urine was now collected in a test tube, as quickly as it was secreted, and, when examined, only a trace of mucus could be detected; and so far, when taken in connexion with the abundant bladder epithelium, tended to prove that the disease was confined to the bladder and prostate. Thus the case was clear: chronic inflammation

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and temporary contraction of the bladder, with either abscess or ulceration of the vesical aspect of the prostate. There was no reason to believe, either from the history or the aspect of the patient, that the disease was malignant. With such a diagnosis the prognosis was doubtful; but the treatment was clear: absolute rest in the horizontal position, the retention of a soft and perfectly flexible catheter in the bladder, frequent removal of the fetid urine, injections of warm water after the urine was withdrawn, improvement of the general health by suitable medicines, and the use of opiate suppositories to relieve pain. And this was the outline of treatment adopted; and you have now the opportunity of seeing the result. The patient bears no longer an aspect of suffering, he has gained considerably in weight, his appetite is good, his functions properly performed; his bladder will now hold ten ounces of urine, which is perfectly clear, devoid of pus or mucus, and deprived of the epithelium, which escaped so freely before. There is, however, the anticipated drawback. He cannot empty the bladder without the aid of the catheter, and I fear he never will; but this is of little moment compared with his wretched state on admission, for, being now taught to pass his own catheter, he can relieve the bladder at will.

It is not, however, to cases of enlarged prostate and its consequences that the use of the winged catheter should be confined. A very interesting example of retained urine, the result of atony of the bladder, has lately come under my care.

J. M—, aged sixty-five, who, excepting for his bladder ailment, was a moderately healthy man, consulted me for what was supposed to be irritable bladder. He stated that, in consequence of the peculiarity of his business, he had for some years habitually retained his urine for a longer period than was desirable. Two years previously to my seeing him he had retention of urine, and since that period he has been compelled to pass water every hour or hour and a half. The quantity ejected is very small, highly ammoniacal, and containing both mucus and pus. His health is now impaired, and for the last twelve months he has constantly worn an india-rubber urinal. An examination of his abdomen revealed a distended bladder, which was further confirmed by the introduction of a catheter, and the removal of two pints of fetid urine. I requested his surgeon to empty the bladder twice in the twenty-four hours, and decided when his urethra was less sensitive to introduce the self-retaining catheter, so that he might relieve himself at will. Unfortunately, in passing the catheter, his surgeon lacerated the prostate, which occasioned considerable hæmorrhage, and subsequent inflammation of the bladder. Rest, opium, and leeches to the perineum having subdued this, the winged catheter was introduced, and the patient was desired to remove the urine every four hours, and wash out the bladder with tepid water night and morning. The character of the urine speedily improved; it lost its ammoniacal fetor, and the mucus and pus gradually diminished. His health was gradually regained, and he is now so far well that he can resume his business. The catheter is removed once in ten days.

Most of you will remember the old man with paralysis of the bladder associated with hemiplegia, who wore one of the winged catheters for a period of five months. In his case the bladder was so small that it would not hold more than six or seven ounces of urine; so that it was necessary (previous to the winged catheter being worn) to draw off the urine six times in the twenty-four hours. Being incapable, in consequence of his paralysis, of passing a catheter for himself, he became a great tax on the house-surgeon; but after the winged catheter was inserted, no further trouble was occasioned—the nurse could remove the peg and relieve him without difficulty.

I could multiply these cases both from my hospital and private practice, were it necessary to do so; but I feel that the examples I have related to you are sufficient to show you that in cases of enlarged prostate, and atony or paralysis of the bladder, the winged catheter is of essential service; and in most cases it can be worn with but trifling inconvenience.

I will now relate an interesting case of numerous fistulous openings in the perineum and scrotum that was speedily cured by the retention of the catheter.

An officer in the Indian army, who had long suffered from

stricture of the urethra, consulted me in consequence of the serious inconvenience occasioned by the urine escaping from numerous channels in the perineum and scrotum. He had suffered from extravasation of urine, and from abscess; and he was now compelled to sit over a large pan whenever he required to pass his urine. There were two fistulous apertures in the perineum, one in the scrotum, and a fourth in the buttock.

At my first examination I experienced great difficulty in passing a No. 1 catheter. There was a tight stricture in the spongy portion of the urethra, which grasped the instrument with great tenacity. On my next seeing him I passed a No. 1 gum elastic catheter, which was retained, and in two days I was enabled to introduce the dilator, split the stricture, and pass a No. 9 winged elastic catheter. He suffered very little inconvenience from the operation, and he wore the catheter with ease. The urine now escaped entirely through the catheter, and he could remove it at will. After the lapse of a week it was withdrawn, and found to be slightly coated with phosphates. This was washed off, and the same instrument again inserted. To prevent the redeposit of phosphates he was directed to inject a weak solution of hydrochloric acid twice a day; and when the catheter was again removed it was free from any deposit. This gentleman continued to wear the catheter for a period of four months, when the fistulous openings had entirely healed. The instrument was then removed, and the urine flowed in a good stream. He was taught to pass his own bougie, and has returned to India perfectly well.

I have now related to you four cases as examples of different forms of disease in which the winged india-rubber catheter may be worn with advantage, and I wish particularly to impress upon you the fact that where a catheter *can be borne* the india-rubber one gives the greatest comfort, and secures to the patient the command of the bladder without the chances of its escaping, and without the necessity of its being fixed by tapes or any other contrivance.

I have used the expression "where it can be borne," because there are many cases where the retention of any instrument excites so much irritation that the patient cannot bear it, and in private I have found this more frequently than in hospital practice. Private patients, as a general rule, will not persevere where pain is occasioned, and they will not consent to remain in bed until the urethra and bladder become accustomed to an instrument. In hospital cases the patients are under more control, and you will often succeed with them when you cannot do so in private. On the other hand, there are a certain number of sensitive persons who cannot bear the retention of a catheter under any circumstances, consequently you must not consider this method of treatment as applicable to all. Where any other catheter can be retained there, the india-rubber one is infinitely to be preferred, but where the patient is specially sensitive, some other plan must be adopted.

To estimate the value of this kind of treatment you must inquire into the pathological changes that take place in the genito-urinary apparatus. Retained urine not only produces enlargement of the bladder and distension of the ureters and pelvis of the kidney, but disease of the kidney itself, and it is only when the bladder is enormously distended with urine that it can be acted upon by the pressure of the abdominal muscles, the contraction of which squeezes out a small quantity of urine, which gives relief for the time. But in cases where the bladder is hypertrophied and contracted, the patient suffers from absolute retention; the bladder has no power to contract, and no muscular force of the abdominal walls can assist it; and when we recollect that in addition to this, retained urine produces chronic inflammation of the bladder, resulting in not only decomposition of the urine, but a large secretion of mucus and pus, with shedding of bladder epithelium, we cannot be surprised at the fatality of such cases. The patient in very many instances not only endures extreme suffering, but he is continually poisoned by the absorption of the perverted urine, and gradually and surely dies.

I have hitherto only spoken of the mechanical means by which good can be effected; but, although it must be admitted that, in the main, mechanical means must be resorted to, yet great assistance is frequently obtained by the judicious administration of certain drugs. Copaiba is frequently very serviceable. Hydrochloric acid and opium may be prescribed with advantage. Quinine, where the health is fail-

ing, is especially valuable. But, whatever adjunct you may choose, nothing will supersede the removal of the urine and washing out the bladder with tepid water. I have occasionally used weak hydrochloric acid, or highly diluted carbolic acid; I cannot, however, say that I have ever seen any decided advantage from either, and I believe warm water is better than anything else.

The catheter is made of india-rubber, with wings to prevent its escape from the bladder, and is similar to that of which there was an engraving in THE LANCET some months since. It has the advantage of being self-retaining, and is indestructible; and it may be worn for any time without removal, provided it remains free from phosphatic deposit. To determine the special tendency to this, I always advise that the catheter should be removed at intervals, at first of four or five days, the intervals being gradually increased in accordance with the tendency to deposit; for while in some cases it may be worn for a month without any accumulation on its end, in another phosphates may be detected after the expiration of a few days. This rule should not under any circumstances be departed from.

In order to prevent this accumulation, I have latterly used the catheter with the addition of a highly polished silver cap, which not only facilitates its introduction, but certainly prevents phosphatic deposit in anything like the time that it will become affixed to the india-rubber. Mr. Baker is now making these caps, which will before long be ready for use.

TYPHOID FEVER AND DYSENTERY AT THE SEAT OF WAR.

By HERMANN WEBER, M.D., F.R.C.P.,

PHYSICIAN TO THE GERMAN HOSPITAL.

As the medical incidents of the war between France and Germany are of some interest to most of the readers of THE LANCET, I beg to lay before them part of a letter just received from Dr. Wibel, one of our resident medical officers at the German Hospital. Dr. Wibel belongs as "Battalionsarzt" to the second principal field hospital of the Bavarian army, and is stationed at one of the barrack hospitals near Nancy. In his letter, dated November 17th, he says:—

"Though we have no wounded, we attend a great number of cases of typhoid fever, dysentery, and complications of both diseases, affording plenty of work of the greatest interest. Our barrack hospital forms now a complete medical colony. We have separate localities for the administration, kitchens, cellars for washing and drying, &c.; we have a chapel, convalescent rooms, quarters for officers and medical men, a dispensary, even our own public-houses—i.e., 'Markettenderchalets.' There is a regular omnibus serving to and from the town twice a day, and a temporary railway line facilitates the transport of the sick and wounded. We have also at last good stores of food and other necessaries, but we fear they will soon be exhausted. Our greatest drawback is bad meat, which is 'required' of the town; and this is not improved by the manner of cooking. On the whole, however, the patients are doing well; they receive the most necessary things, though there is room for further wishes. Thus we not rarely are short of eggs, milk, and wine; and cigars begin to become very scarce.

"We have had many severe cases of typhoid fever and dysentery, and most troublesome is the complication of both. Exanthematic typhus in an unmistakable form we have not had, though we had cases in which the line of distinction between this and typhoid was difficult. During the last weeks the number and severity of epidemic diseases were diminished; and especially since the capitulation of Metz the health of the army is improved. Professor Niemeyer is in constant communication with us, and performs many post-mortem examinations. We have also formed a Medical Society, counting at present thirty-four members, Niemeyer being first, and Dr. Krulle second president, Dr. Hitzig, of Berlin, and myself, acting as secretaries. Four months ago I had not dreamt that I should now be a member of a German Medical Society at