Otis. (F. N.)

ON

SOME IMPORTANT POINTS IN THE TREATMENT

OF

DEEP URETHRAL STRICTURE

(Read before the MEDICAL SOCIETY OF THE STATE OF NEW YORK, February 1, 1887)

BY

F. N. OTIS, M. D.

CLINICAL PROFESSOR OF GENITO-URINARY DISEASES IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK

Reprinted from The New York Medical Journal for February 19, 1887

NEW YORK
D. APPLETON AND COMPANY
1887

ON

SOME IMPORTANT POINTS IN THE TREATMENT

OF

DEEP URETHRAL STRICTURE

(Read before the MEDICAL SOCIETY OF THE STATE OF NEW YORK, February 1, 1887)

BY

F. N. OTIS, M. D.

CLINICAL PROFESSOR OF GENITO-URINARY DISEASES IN THE COLLEGE OF PHYSICIANS AND SURGEONS, NEW YORK

Reprinted from The New York Medical Journal for February 19, 1887

NEW YORK
D. APPLETON AND COMPANY
1887

ON SOME IMPORTANT POINTS

IN THE

TREATMENT OF DEEP URETHRAL STRICTURE.

In regard to the locality of urethral strictures, it may be broadly stated that they are important in proportion to their distance from the external urethral orifice; and, again, that strictures at any point anterior to the bulbous region are, to a great extent, free from the chief difficulties and dangers which may attach to strictures located in the deeper portions of the urethra. It is fortunate, therefore, that we find by far the greater proportion of urethral strictures situated in the penile portion of the canal—a fact which is reasonably explained and corroborated by the well-known greater frequency, severity, and persistence of inflammations in this locality.

Careful examination by means of the urethrometer and the bulbous sound, in more than one thousand cases which I have examined critically, has shown that less than 10 per cent. were found at a point beyond four inches from the urethral orifice. Through similar examinations by means of the urethrometer and the bulbous sound in any case of strictures, their presence as well as their exact locality may be readily demonstrated, and thus the distinction between cases of much or little importance may be absolutely determined. Notwithstanding this, it is still a common practice to make

the diagnosis of strictures through *symptoms* alone, and to treat them by dilatation—not infrequently by division, without any knowledge of their exact location. For instance, a man comes to the surgeon complaining of a persistent gleet: the presence of stricture at some point in the urethra is naturally inferred; a flexible bougie or steel sound of the size of the urethral orifice is introduced, and, if it can be made to traverse the entire canal and passed well into the bladder, the first step in the treatment of stricture by dilatation is successfully initiated, and then a course of dilatation is carried out, without the least practical reference to the exact locality of the stricture. The stricture for which this procedure is initiated may be, and often is, confined to the anterior urethral orifice or its near vicinity, and yet the dilating instrument is carried not only through the entire penile urethra, which is usually very tolerant of unnecessary interference, but through the membranous and prostatic portions of the canal, where alone the greatest dangers of gradual dilatation reside.

In cases practically identical with those above referred to, where the strictures were of large caliber and in the penile urethra alone, I have known the passage of the flexible bougie or sound to produce epididymitis in many instances, in two cases going on to orchitis and abscess, with complete loss of the testicle in each; in other cases urethral fever, in several with suppression of urine; acute prostatitis often, with prostatic abscess in two cases, one of which was in a surgeon of some distinction, and where the stricture was within one inch of the external urethral orifice. In other cases acute cystitis has resulted. All the above-mentioned accidents would have been avoided had the exact locality of the stricture been determined previously to the inauguration of the treatment, and this confined to the immediate locality of the stricture.

Again, in cases where difficulty in urination constitutes the chief symptom of stricture, and only small flexible instruments can be passed, the same mode of procedure is not uncommonly practiced—the surgeon recognizing, perhaps, that the obstruction to the passage is in the deeper urethra, but overlooking entirely the presence of anterior contractions of greater or less caliber which are potent to produce spasmodic

contractions of the membranous portion of the canal, which may perfectly simulate close organic stricture at this point.

It is especially true of strictures of small caliber in the deeper portion of the urethra—say at from a quarter to one and a half inches anterior to the bulbo-membranous junction —that, in using the small flexible bougie, the instrument, after passing the above-mentioned strictures, is again arrested at a deeper point, and yet is finally made to pass on into the bladder, though often closely hugged.

It is in just such cases as this, and they are not infrequent, that the surgeon, satisfied that there is a close, deep organic stricture *beyond the bulb*, resorts to the urethrotome of Maisonneuve, or possibly performs an external perineal urethrotomy, on a diagnosis based upon information afforded by the small flexible or filiform bougie alone. It is, however, of the greatest importance that the error should not be made of mistaking for an organic stricture of the deeper urethra a spasmodic stricture caused by an organic stricture in the bulbous urethra. It is in just such cases as that above described that the preliminary and careful use of the *bougie-à-boule*, or the bulbous sound, becomes imperative, as it will not infrequently put an entirely different aspect upon the difficulty by revealing the presence of one or more linear strictures immediately anterior to the bulbo-membranous junction, on the removal of which, a full-sized sound may be made with ease to pass into the bladder. Permit me to cite a case in illustration.

Mr. W., aged forty, came to my office in November last, suffering with a retention of urine of a few hours' duration. He had a history of gonorrhœa fifteen years previously, followed by gleet, and, for a period of some ten years, was treated by injections and by dilatation for supposed stricture from time to time, but never had complete relief from his discharge. Finally, becoming discouraged, he discarded the use of the sound entirely, and contented himself with the occasional use of a mild astringent injection. Being a man of regular and temperate habits, except from the slight gleet he experienced no trouble of consequence until some two years ago, when he had a retention of urine.

Prolonged and urgent attempts to pass a catheter failed, and he was finally relieved by the hot bath. Much blood was lost in the

attempts at catheterization, and, as a metallic catheter was passed down near to the bladder, it is probable that one or more false passages were made. Although he voided his urine habitually in a small and interrupted stream, he had no further retention for a year and a half, when he had a repetition of his former experience. Repeated attempts at catheterization again failed, and he was again relieved by hot-water applications. Again a period of comparative freedom from usual trouble, until the morning of his visit to me. He had accomplished his urination with no more than his usual difficulty on rising, but on attempting the act a few hours later he was unable to pass more than a few drops. No complaint of pain, only of anxiety lest his former experiences in catheterization should require repetition. On examination, I found a penis of three inches and a quarter in circumference; length of pendulous portion, four inches and a half. The urethrometer was introduced to five inches, where it was easily expanded to 32 F., demonstrating on its withdrawal two narrowings of four millimetres at three inches and two inches and a half, and a meatus of 27 F. No. 27 solid sound was arrested at five inches. I then began a systematic examination with the metallic bulbous sounds. After careful and patient trial with sizes diminishing by one millimetre each, No. 6, the bulb of which represented six millimetres in circumference, slipped through a narrow ring of stricture and passed on, hitching over two or three little folds within the next half inch, into a sort of pouch or dilatation. I then enlarged the linear stricture with successive bulbs easily up to 8 F., and attempted to pass a catheter of this size, and, failing also in this, smaller sizes were patiently tried, besides various filiforms, but all were resisted at about six inches. I then started the Croton faucet, with directions that the patient should make no effort to urinate unless he had the desire, and left him for half an hour, thinking, later, to try the introduction under ether, if necessary. On my return he had voided eight ounces of fairly clear urine, and remarked that he had not made so large a stream in the last five years. On the following day he called and reported sustained improvement. I then passed No. 9 bulb easily just to the pocket beyond. He complained of severe smarting when urinating soon after; this, however, soon passed off, and as he left he remarked that he did not think he had ever passed a larger stream in his life. A few hours after he started for a neighboring city. He was obliged to stop *en route* during the night, on account of another attack of retention. Here catheterism was attempted and failed, and the

bladder was aspirated, about eight ounces of urine only being withdrawn. On arriving at his destination, on the following morning, another retention occurred, accompanied by fever and great suffering. This time the surgeon who was called, on hearing the history of the case, declined to attempt catheterism, but passed a trocar at once into the bladder through the rectum, and drew off over a pint of urine. The cannula was retained *in situ* for four days, when, a few hours after its removal, he passed his urine *per viam naturalem* with great ease. He returned to New York the next day, accompanied by his surgeon, from whom, in conjunction with the patient, the foregoing account was received. The patient expressed himself as considerably enfeebled, but as performing his urinary functions better than for many years. The day following the patient was etherized.

The stricture at five inches was readily defined with Nos. 9 and 10 bulbs. No. 10 flexible bougie was resisted at the bulbo-membranous junction. The staff of a Maisonneuve was then introduced six inches, and a blade, cutting to 28 F., was passed to and not beyond five inches and a half. After division of the meatus to 32 F., my dilating urethrotome was introduced to six inches only, and turned up to 32, and the stricture at five inches to five inches and a half divided, also the contractions anterior, alluded to in the first examination. A No. 32 steel sound was then passed easily and without force well into the bladder. There was no hæmorrhage, only the oozing of a few drachms of blood, during the night following the operation. There was no constitutional reaction. The urine was drawn for five days subsequently, in order to guard against the occurrence of urethral fever. The patient had been much debilitated by his retentions and the means used to relieve them; his recovery was on that account considerably delayed, but he was out on the tenth day. The only special treatment which he received, besides that above referred to, was the introduction of a 32 F. solid steel sound every other day, until the complete healing of the wounds of operation, when he left the city apparently well.

It has been in my experience to meet with several cases practically identical with the one just cited, where close organic stricture in the bulbous urethra presented all the characteristics of true stricture of the membranous portion, and where operative measures, rigidly confined to the urethra *anterior to the bulbo-membranous junction*, have sufficed to re-

move all evidences of stricture *beyond that point.* The cases of urethrismus, or chronic spasmodic stricture, previously reported by me during a discussion of that subject in the "Hospital Gazette," June 28, 1879, and subsequently, were shown to be due to the presence of strictures of *large caliber* in the *penile urethra.* Strictures which have been demonstrated by means of the bulbous instruments in the immediate vicinity of the bulb were formerly accepted by me as deep organic strictures, and operated on either by external urethrotomy, or by the use of the urethrotome of Maisonneuve, as I do not consider the amount of cutting sometimes necessary to completely divide the stricture by dilating urethrotomy justifiable in the deep urethra, or beyond a point where any resulting hæmorrhage can be readily controlled by external pressure. It is, however, possible that many cases which present the usual evidence of deep organic stricture may, through careful exploration with small bulbous instruments, be relegated to the much less important class of strictures anterior to the bulb.

It will sometimes occur that strictures may be traversed by filiform instruments, and can be located by very delicate bulbous instruments, but where the caliber of the stricture is too small to admit the smallest guide bougie of the urethrotome of Maisonneuve. In such cases, where immediate operation has become necessary, the only resource is an internal urethrotomy. For aid under such conditions, I have had constructed, and have frequently used with much satisfaction, a miniature Maisonneuve, of scarcely more than half the size of the ordinary instrument, carrying a blade of not more than three or four millimetres' breadth. This, with due care, may readily pass a stricture where no other cutting instrument can, and subsequently the ordinary-sized urethrotome of Maisonneuve may be readily entered.

This little instrument in my hands has, in repeated instances, saved the patient an external urethrotomy, when without it such an operation would have been unavoidable. Some time since, a patient presented at my clinique at the College of Physicians and Surgeons, who was reported to be the subject of an impermeable stricture. On careful explora-

tion, several strictures of large caliber were found in the penile urethra, and one at about five inches, which was defined by No. 6 bulbous sound, two millimetres less in size than the shaft of the ordinary urethrotome of Maisonneuve. The miniature instrument was introduced, and the deep stricture divided so that the ordinary instrument was easily made to follow. With the latter, room sufficient for the introduction of my dilating urethrotome was secured, the deeper as well as the anterior strictures were fully divided, and, with no cutting beyond five inches and a half, a steel sound, thirty-two millimetres in circumference, was passed easily into the bladder.

I do not fail to appreciate the fact that such cases as I have recited are quite exceptional. I believe they would be found to be much less so, if the means of diagnosis which I have described and advised were more generally adopted.

Permanence of results after operations on deep strictures depends, as in the case of anterior strictures, upon completeness of division. Complete sundering at some point is essential to radical cure.

This I first publicly maintained in 1873, as the result of careful re-examinations, several at least a year after operation. In 1881 I was able to report over a hundred well-authenticated cases where the cure had remained perfect from two to twelve years after division, and the experience of the subsequent years has still further confirmed the proofs of the statement that complete division of urethral stricture, as a rule to which there are but few exceptions, means radical cure. Division of all *anterior* strictures is, has been proved to be, essential to the cure of deep strictures. Sir Henry Thompson, in his latest teaching on the treatment of stricture, students' edition of 1884, says: "I am convinced, therefore, of the necessity of *complete* division of *all* the obstructing tissue, not only in relation to future results, but to the present well-doing of the patient, and thus have an additional support for the value of my maxim, 'If you cut one, cut all.'" And again, on page 10, "If you cut at all, cut all"; that is, he further says, *all the points* in the urethra in which the presence of obstructing deposit is to be demonstrated.

"Such," says Sir H. Thompson, "is the unhesitating conviction which a very considerable experience of internal urethrotomy has forced upon me."

Again he says, page 12: "I have no hesitation now in advising internal urethrotomy whenever organic stricture, single or multiple, near or distant from the meatus, shows signs of not yielding readily to dilatation. No delay is, in these circumstances, of any value as regards the stricture itself. Division must be made sooner or later, if the organs behind it are to be preserved from injury; the sooner, therefore, other conditions being favorable, the urethra is rendered freely patent, the better it will be for the subject of it."

The reason why the results of division of deep strictures by perineal section are often but temporary, is because most commonly the anterior strictures are not also divided. Without this, the full size of the urethra in the perineal portion can not be kept up until the healing of the perineal incision; hence re-contraction sooner or later is inevitable.