AN ACCOUNT
OF A
CASE
IN WHICH
NUMEROUS CALCULI

WERE EXTRACTED FROM THE
URINARY BLADDER,
WITHOUT
THE EMPLOYMENT OF CUTTING INSTRUMENTS.

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ALTHOUGH the operation of Lithotomy is now performed with a degree of celerity and safety, which renders it much less appalling to the patient, and less difficult to the surgeon, than prior to the time of Cheselden; yet every candid person must admit, that if means could be suggested, by which the operation could be rendered less frequently necessary, it would be one of the greatest blessings which could be conferred upon mankind; for even when performed under the

most favourable circumstances, the operation of extracting a stone is attended with severe pain, and when the calculus is large, with considerable difficulty and danger.

It was, therefore, with a high degree of pleasure I witnessed the following case, in which numerous calculi were extracted from the bladder, by means which did not expose the patient to any loss of blood, did not produce the slightest danger, or occasion any very considerable degree of suffering.

I am fully aware of the impossibility of extracting large urinary calculi by the means which are here recommended ; yet I cannot but feel a hope that they may be removed in the early stages of the disease by the following means, before they have acquired a bulk too large to pass by the urethra.

In the infant also, it will be ever extremely difficult to contrive an instrument of sufficient delicacy to be introduced into the bladder through the urethra, which shall possess such a degree of strength as to enable it to grasp the stone firmly, and to extract it with safety.

I shall now proceed to detail the circumstances of the case as they have been related by the patient himself, and will then conclude with some observations upon the means which were employed

to obtain relief, and explain the particular case in which it is practicable to afford it.

CASE as related by the Rev. Mr. Bullen.

The Rev. John Bullen, of Barnwell near Cambridge, aged 64, of a spare habit of body, and of a sanguine temperament, having enjoyed an uninterrupted state of good health, capable of partaking largely of the amusement of hunting, and living always with great moderation, was attacked, in May 1818, with the symptoms of which he gives the following account:—

“ I was suddenly seized with a frequent inclination to pass my water, and an uneasy sensation along the course of the urethra, which continued with greater or less violence for about a fortnight, when I was surprized by the appearance of a small round white stone at the orifice of the passage. The escape of this small calculus, which was attended with scarcely any pain, failed to produce any beneficial effect on my former symptoms, which continued unabated, both as to the degree of irritation and the frequency of making water. In this state I remained till June following, during which month several similar calculi passed, to the number of about thirty, producing no other inconvenience than a slight smarting pain along the

urethra. At the end of June, without any assignable cause, I was suddenly relieved from this discharge of calculous matter, and from every other symptom but that of a frequent desire to void my urine, which latter inconvenience occasioned me no feelings of anxiety or apprehension.

“ In the ensuing winter, I was seized with pains across the back and loins, for which Mr. Brewster, of Cambridge, supposing they proceeded from gravel, ordered me medicines which he considered likely to alleviate them, but without producing any permanent good effect.

“ I was however still enabled to pursue my favourite amusement of hunting, though frequently obliged to dismount to make water : at this time making no alteration from my accustomed mode of living.

“ Without any material change, I remained until the December of 1819, when I found the exercise of riding was becoming considerably more painful, and the inclination to pass my water more frequent, attended with some degree of difficulty in its passage, and a change from its usual colour and clearness to a fluid resembling chocolate. For these symptoms several formulæ of medicines having been prescribed, without any material benefit, I was induced to consult Mr. Abbott, a most re-

spectable surgeon at Cambridge, who ordered me medicines highly beneficial in their first effects; the relief, however, they afforded me, was but of short duration, for my symptoms recurred with all their former violence; and though the prescriptions were repeatedly altered at Mr. Abbott's suggestion, no sensible impression could by the most judicious treatment be made on the disease.

“ My friend Dr. Thackeray of Cambridge was in the June following called in consultation with Mr. Abbott; and both agreeing that the symptoms were produced by stone in the bladder, the sound was introduced to ascertain its presence, but failed to discover it. My symptoms continuing unabated, Mr. Abbott, a fortnight afterwards, still impressed with the idea of stone, again sounded me, but the stones, for the reasons hereafter given, escaped detection. To relieve my frequent inclination to make water, and to mitigate the pain I experienced in its discharge, I was recommended the use of an opiate glyster at bed-time, which afforded me considerable relief; but if the injection were omitted but for a single night, the symptoms returned with all their former violence.

“ In this state of suffering, I determined to consult Mr. Astley Cooper, and on the 17th of August went to town for that purpose. Mr. Cooper, suspecting from my account that a stone was present in the bladder, sounded me, but, after searching for some minutes, was unable to detect one; he

then directed me to discharge the water from my bladder, and the sound being again introduced, was distinctly heard to strike upon a stone. He then informed me that there were no hopes of permanent relief but from the operation of Lithotomy, at the same time remarking, that as I had not been sufficiently reduced by the irritation of the disease, to render me a favourable subject for the operation, it would be better for me to return to Cambridge, and by pursuing a certain plan of diet and regimen to reduce the high health which I appeared to possess. He also prescribed alkaline medicines for the purpose of lessening irritation. With this advice I returned home, where I remained till October 1820, pursuing the use of the soda and the opiate injection. My sufferings being alleviated only for the moment, and seeing no probability of experiencing further relief from medicine, on the 23d of October I came to London to submit myself to the operation; and the 30th was the day proposed for its performance.

“ On the day appointed, Mr. Cooper, his nephew Mr. B. Cooper, and Mr. Merriman, junior, attended at my house. Upon sounding me, the instrument could be distinctly heard by every person present, and even by myself, to strike against a stone. Mr. Cooper, however, was of opinion that the stone was so small as to admit of extraction without cutting into the bladder, and therefore determined not to perform the operation, but told me that he

would try less dangerous means to rid me of this complaint, and happily under these circumstances the operation was deferred.

“On the 3d of November, I called at Mr. Cooper’s house, when he passed a full-sized bougie into the bladder, for the purpose, as he said, of dilating the urethra, and thus giving the stone an opportunity of passing with the flow of urine. This operation was repeated on the 6th, 10th, and 13th of November; but on the 14th, an inflammation took place in the prostate gland from the introduction of the bougies, and put a stop to the prosecution of this plan of treatment. The effect of this inflammation was a retention of urine, rendering it necessary for Mr. Cooper to draw off my water every twenty-four hours, at which time the calculus could always be distinctly felt by the catheter. After the inflammation had subsided, the power of making water not having returned, Mr. Cooper passed an elastic catheter into my bladder, and directed me to wear it, teaching me at the same time how to withdraw it when it became either painful or obstructed; and on several occasions I discovered small white stones in the opening of the instrument, similar to those which I had passed in 1818. Mr. Cooper, upon being acquainted with this circumstance, expressed a wish to remove the instrument himself, when upon withdrawing it, a stone was seen large enough to fill the opening in the side of the elastic catheter. The passage of these calculi suggested

to Mr. Cooper the possibility of inventing an instrument by which he might remove those which remained in the bladder; and on the 23d of November, he brought with him some instruments contrived for the purpose, one of which he directly employed, and was so fortunate in the first trial as to remove eight calculi of small size. The operation was productive of a very inconsiderable degree of pain.

“On the 28th, eight more were removed by the same means, of a larger size than the former, two being as big as horse beans. This operation was attended with even less pain than the former.

“On the 30th, eleven were extracted, three or four being engaged each time the instrument was withdrawn. The removal of these gave me great relief, for I was immediately enabled to pass a considerable quantity of urine by my natural efforts, and previously to this, ever since the large bougie had been introduced, I had been unable to pass my water without the aid of the catheter.

“On the 8th of December, six stones were removed by the same means.

“On the 13th, nine more were taken away.

“On the 19th, three more were extracted.

“On the 23d, twelve were removed, and thus only allowing the intermission of a day or two for the irritation to go off. The operation was continued until eighty-four calculi were, by these means, extracted from my bladder, when Mr. Cooper pronounced, after a most careful examination, they were all removed. My health has been all this time uninterruptedly good, with the exception of the attack of retention of urine from the use of the large bougie, and I am now able to discharge my urine without the use of the catheter, and to walk nearly as well as I ever did.”

REMARKS.

When a great number of calculi are found in the bladder, as was the case in the Rev. Mr. Bullen, the circumstance is generally attended with an enlargement of the prostate gland, and it depends upon a sacculus being formed in the bladder directly behind the enlarged gland. In these cases the bladder is rarely completely emptied of its contents, and the calculi crystallize from the urine retained in this sac.

Such stones do not in general acquire the magnitude of those formed under the usual circumstances, and, from their number and collision against each other, their surfaces are generally smooth, and

their shape is commonly rounded. Fifty-six such calculi were found in the bladder of Mr. Perkins the brewer, who died from retention of urine; and a hundred and forty-two I extracted from a patient of my friend Mr. Carden's, surgeon at Worcester, who had for some time attended him for retention of urine.

Persons who labour under this form of disease, sometimes pass the smaller of these calculi whilst making water; but the larger still remain, produce retention of urine, and the operation of Lithotomy has been frequently performed for them.

When calculi are thus placed, they are so concealed in the bag in which they are contained, that, in sounding, the instrument is liable to pass over them without their being discovered, and it is therefore necessary to dip the point of the sound towards the rectum as it enters the bladder, in order to detect them, or to pass the finger into that intestine, to raise them from the bed in which they are concealed; and it is for want of attention to this circumstance that I have known a person pronounced not to have the stone, from whom I afterwards removed thirty-seven by the operation of Lithotomy.

The instrument which I first had made for the purpose of removing these stones from Mr. Bullen, were merely common forceps, made of the size of a

sound, and similarly curved ; but Mr. Weiss, surgeons' instrument maker in the Strand, shewed me a pair of bullet forceps, which he thought would, with a little alteration, better answer the purpose I had in view. He removed two of the blades of these forceps, for there were four, and gave them the form of the forceps which I had constructed : the blades of this instrument could be opened whilst in the bladder by means of a stilette, so as to grasp and confine the stone, and they appeared so well constructed for the purpose, as to induce me to make trial of them. (See Plate VI.) On the 23d of November, 1820, I first employed them, and the manner in which they were used was as follows : Mr. Bullen was placed across his bed, with his feet resting on the floor, and a silver catheter was then introduced, and the bladder emptied of its urine. I then passed the forceps into the bladder, and was so fortunate in my first operation as to extract eight calculi.

The instrument gave but little pain on its introduction, but when opened to its greatest extent, and the stones admitted between its blades, their removal was painful, more especially at the glans penis, which appears to be the portion of the urethra, which furnishes the greatest resistance to the removal of the stones.

A dose of opium was given after each operation, which Mr. Bullen has described ; it fre-

quently allayed all irritation ; and in the intervals between the latter operations, he walked from Brompton into London ; nor was he ever, after the symptoms of retention had left him, either confined to his bed or to his room.

Drawn & Engraved by C.J. Canton.