THREE CASES
OF
CALCULI,
REMOVED FROM THE URETHRA,
WITHOUT THE USE OF CUTTING INSTRUMENTS.

By ASTLEY COOPER, Esq. F.R.S.

SURGEON TO GUY'S HOSPITAL.

Read June 24, 1817.

IN the first volume of the Medico-Chirurgical Transactions, a very interesting paper is given by Mr. Thomas, on the *Dilatation of the Meatus Urinarius*. When I perused that paper, I resolved to take the first opportunity which might occur of employing the same principle in the extraction of a stone from the bladder; and having made the successful issue of a case known by relating it in my lectures, two of my friends, Mr. Wright of Nottingham, and Mr. John Okes of Cambridge, employed the same means, and with similar advantage.

CASE I.

Phillis Keen, who had not been able to retain her urine from her last delivery, which was in the summer of 1809, was admitted into Guy's Hospital on May 30, 1810, with symptoms of stone. At twelve o'clock on Thursday, the 21st of June, a piece of sponge was passed into the meatus urinaris, which, on the following day at one o'clock, was withdrawn, and a pair of middle-sized stone forceps were passed into the bladder, and a stone more than one inch long, and three-fourths of an inch wide, was extracted. On the 27th of June she was discharged cured, being free from every symptom of the stone; but the incontinence of urine, when she quitted the hospital, continued as before the operation.

CASE II.

Mr. John Wright, of Nottingham, having heard of the preceding case, performed the operation, and sent me the following letter:

“ DEAR SIR,

“ I am in hopes that the following case of extraction of a stone from the female, will be acceptable

to you, and beg your acceptance of the calculus. I am, dear Sir,

Yours, &c.

JOHN WRIGHT."

Elizabeth Nutt, a small weakly child, six years of age, had laboured under symptoms of the stone for four years, when she was admitted into the Nottingham General Hospital, on the 28th of April, 1812. The urethra was distended by means of sponge tent, until the 5th of May, when a large stone, weighing an ounce and a half (avoirdupois) was extracted with a pair of polypus forceps, and the girl left the house free from complaint on the 9th, only four days after the extraction.

Nottingham, May 12, 1812.

I received the following letter from my friend and pupil, Mr. Okes:—

"DEAR SIR,

"Allow me to submit to you the particulars of the extraction of a calculus vesicæ urinariæ after artificial dilatation of the urethra.

I am, dear Sir, with all respect,

Your very obliged and sincere friend,

JOHN OKES."

CASE III.

Case of extraction of a calculus vesicæ urinariæ, after dilatation by sponge tent, by Mr. John Okes, Member of the Royal College of Surgeons in London, and Surgeon in Cambridge.

The case here recorded is not offered to your notice on account of its novelty, but as a further confirmation of the dilatability and contractibility of the female urethra. The os uteri, vagina, and rectum, are capable of dilatation to a most prodigious extent; and Mr. Thomas, in a case in the first volume of the Medico-Chirurgical Transactions, has demonstrated, that not only may the female urethra be very extensively dilated, but that it will, after such extension, recover its tone, and the patient be left free from incontinence of urine, a circumstance almost invariably the result of an incision through the sphincter vesicæ urinariæ.

In June 1815, a girl about eleven years of age, having a calculus in the urinary bladder, consulted me, and expressed herself willing to submit to any operation which held out a prospect of relief from her dreadful sufferings. It was determined to dilate the urethra by sponge tents, and as she was in good health, no other preparation was necessary than to empty the bowels by a cathartic medicine, previously to the attempt at dilatation. In the

evening after this had been administered, a piece of prepared sponge, with a string affixed to it, as large as could be introduced, was passed into the urethra, and directly afterwards she took forty minims of tinctura opii; she passed a tolerably quiet night, the urine draining away through the sponge. On the following morning, the sponge which was excessively swelled was removed, a larger piece introduced in the same manner as before, and the same dose of tinctura opii was directed. This second tent produced more pain than the first did, but not enough to discourage a perseverance in the plan; the sponge was therefore repeated morning and evening for three successive days, increasing the size of it as much as could be borne, and giving at intervals as much tinctura opii as was necessary to keep down the pain. On the afternoon of the third day, the urethra appeared to be sufficiently dilated to justify the attempt of extracting the calculus, and a pair of forceps were easily passed into the bladder, and the calculus extracted without much difficulty. The difficulty in the extraction of the stone was increased by the forceps having seized it from point to point at its major axis; the parts, however, received no material injury, as only a few drops of blood followed the operation. The child slept comfortably during the night, and only very slight feverish symptoms came on the next day. The treatment common upon such occasions was adopted; the urine flowed involuntarily for three days,

at the end of which period the incontinence ceased, and she has ever since retained her urine perfectly well. The calculus, of which I send you an etching of its natural size, weighed four drachms, and is in circumference at its major axis three inches and three eighths, and at its minor three inches and one eighth; and as the forceps unfortunately seized the stone at its major axis, it may fairly be allowed, that if the thickness of the blades of the forceps be included, the urethra was distended to a circle of three inches and three fourths in circumference. The result of the operation being favourable, even under the disadvantageous circumstance of the stone being seized at its major axis, is an additional argument for the use of distension, and it is proper also to observe, that much advantage was obtained by the use of sponge for dilating the urethra; as it at the same time allowed the urine to drain off, and by that means prevented the irritation which must have taken place if any other tent had been used, which might have prevented the flow of urine from the bladder.

Remarks.

In the adult it will only be necessary to introduce a piece of sponge for twenty-four hours, and a stone of large size may be extracted without any great irritation being excited by it; but in the child the dilatation should be more gradual, as they suffer more from it on account of their greater

irritability. The retention of their urine whilst the sponge is in the urethra also occasions considerable irritation, and it will be proper to have a groove made in the side of the sponge, to allow of the gradual escape of the urine, or, as my friend Mr. C. Hutchinson suggested, a catheter might be placed in the center of the sponge.

A great advantage will result from this mode of operation, if it should be found that in the majority of cases the urine is retained after the extraction of the stone, as the great objection to the use of the gorget or knife in the operation in the female, is the loss of power of retention which follows it, leaving the patient offensive to herself and friends, and the subject of continued excoriation. It is true, Mr. Hey has suggested the introduction of a sponge into the vagina, in the hope, that by the constant application of the surfaces of the wound to each other, they might be made to unite, and when cutting instruments are employed, such a trial will be proper.

Another advantage will be derived from this plan, *viz.* that it may be employed as soon as a small stone is discovered in the bladder, when it can be extracted with great ease, and at a time that a more dangerous, important, and painful operation would be hardly proposed.