

ingly applied one end of an India-rubber tube to the top of the catheter with which I was examining him, and the other to my ear, and at once heard, with the greatest distinctness, the instrument strike the stone. The evidence afforded was so conclusive, that there could no longer be any doubt on the subject. The gentleman refused to allow any steps to be taken for the removal of the calculus, as he suffered very little inconvenience, and dreaded an operation.

I have, since I saw the above case, performed many experiments with substances of various sizes and degrees of hardness, placed in a bladder distended with water, and have never failed to discover them by the sense of hearing, which I have found much more delicate than that of touch. Even a small piece of soft chalk, not larger than a pea, can be most easily detected; the slightest touch of the catheter or sound being conveyed to the ear, when it could not be recognised by the hand. I feel confident this method of applying auscultation will afford most material aid to the surgeon in forming a diagnosis in doubtful cases.

The apparatus used by me is very simple, and conveys the sound much more distinctly than the flexible stethoscope mentioned by Gross. It consists of a small vulcanised India-rubber tube, about eighteen or twenty-four inches long, to one end of which an ivory ear-piece is attached, similar to that used for ear-trumpets; and into the other end is inserted a metallic plug with a tapering end protruding, which should be pressed tightly into the canal of the catheter; or, if a solid sound is used, the end of the tube, without the plug, may be fastened on it.

REMOVAL OF RENAL CALCULUS.

This rare case is reported by Mr. Thomas Annandale, in the *Edinburgh Medical Journal*. The patient, a farmer, aged sixty-three, had been suffering for several weeks from gastric and renal derangement, the symptoms increasing in severity, and finally pointing clearly to some affection of the right kidney. The first examination determined that there was tenderness on pressure over the lower half of the right kidney, and below it in the direction of the ureter. A very slight fullness in the same region was noted, but no marked swelling could be detected. No fluctuation could be felt, and the introduction of a fine trocar in the lumbar region gave no result.

At the expiration of nearly a month, he was seen for a second time by Mr. Annandale, and upon this occasion his symptoms were very much worse. It was now thought that deep fluctuation could be detected through the anterior abdominal wall just below the region of the affected kidney, and, in accordance with the urgent request of the patient, it was decided to try and do something for his relief, and make at least an exploratory incision. The incision was made through the abdominal wall, in the situation and direction of the incision employed for the ligature of the common iliac artery. Pushing aside the peritoneum and abdominal contents, the psoas muscle was reached with the finger; by the inner side of this muscle an abscess was detected, and within this abscess-cavity was found a calculus, of the size of

a horse-bean, which was seized with the forceps and removed.

The operation gave great relief, and the patient improved steadily up to the fifth day, when a small quantity of thin, feculent matter continued to pass the wound for nine days after the operation, from which time no further discharge was observed. By the end of a month the patient had apparently made a good recovery.

In commenting upon this case, Mr. Annandale remarks that the whole trouble had its origin in a renal calculus, which had given rise to suppuration and ulceration, and in this way escaped from the kidney. The abscess, passing downwards, was preparing to empty itself into the ascending colon or cæcum; in fact, a small opening of communication with the intestine had already been made, and the further destruction of the intestinal wall was only prevented by the free escape of pus. The result of this case affords additional encouragement to surgeons to operate early in cases of abdominal or pelvic abscess, in which the timely use of the knife may relieve suffering and even save life.

ON THE TREATMENT OF IMPASSABLE STRICTURE.

By W. F. TREVAN, B.A., F.R.C.S.

I will now suppose a case of stricture in which the surgeon in attendance is unable to get in any instrument, and I will take it for granted that we are called in to treat the case under those conditions that usually obtain in this country. What is the usual statement made? The practitioner informs us that he has tried to pass the silver catheter without success. I am not at all surprised, for he has by no means exhausted the surgical armoury, and, fortunately, there are instruments in reserve in comparison to which his smallest catheter is large. It is clear, therefore, that up to this stage want of success might have been entirely owing to the large size of the instrument employed. The first thing I do is to examine the patient's perineum. If it be in a normal condition I take one of the smallest filiform bougies, but if there be much induration I select a whalebone one. Having placed the patient with his back against the wall, I take my seat in front of him and try to pass the bougie through the stricture. What is the best method to adopt to get it in? I know of no better word than "wiggle" to express the required action. We must wriggle in the bougie. These small bougies sometimes give trouble from catching in the lacunæ; we can remedy this inconvenience by withdrawing them for a short distance, and then passing them on again, rotating them as we proceed. Arrived at the face of the stricture, we had first better touch it all over with the instrument to see if we can find the entrance, and if that does not succeed we must then try to screw it in. If a quarter of an hour's trial fail, I then withdraw the bougie and give it that peculiar twist at the end which makes it resemble a skeleton key. I may say that this practice is of old repute in Paris. Should this not prove successful after a ten minutes' trial, I introduce one of Leroy D'Étiolles' "bougies tortillées." I usually select one that re-

sembles a corkscrew. If these means fail I do nothing more for two days. I would here remark that my observations on the treatment of impassable stricture refer to that complaint when uncomplicated with retention. I desire the patient to get his bowels thoroughly well open the morning he comes to me, and before I commence the trial I request the patient to make water; this is very important, for the stream of urine washes away any plug of mucus that may be obstructing the passage, and leaves the bladder in the most favourable condition for avoiding any creation, by instrumentation, of a desire to micturate. If on this occasion I fail, after repeating for one half-hour the methods I have already described, I do nothing more for two days. At the next visit I modify my plan of action. It often happens that the reason why we cannot get in an instrument is, that we are unable to find the entrance to the stricture—it is so small. Now, if we pass a full-sized bougie down to the stricture and keep it there for a quarter of an hour, pressing it all the time against the stricture, we shall distend the parts, and the result will be that the mouth of the stricture will become opened, and we shall probably succeed in getting in a small filiform bougie. I have rarely found this plan fail.

I would here recall to the minds of those present M. Mercier's exposition of the pathology of stricture. Stricture is atrophy, not hypertrophy, and not only is the urethra contracted, but it is tortuous. Now, it is most important for us to remember this latter fact, for it shows that as a rule metallic instruments are not suitable for the treatment of tight or impassable strictures, and I think it would be well for the patient if every surgeon remembered M. Mercier's celebrated dictum, "La sonde rigide ne cède pas, c'est l'obstacle qui cède devant elle." No doubt some gentleman has already said to himself, "How is it you do not put the patient under chloroform when you find you cannot get in an instrument?" I will tell you why. Some time ago M. Borovitch, of Tamboff, was over here, and we discussed the subject of impassable stricture. He said to me, "Do you ever give chloroform for retention, or impassable stricture?" I said "No." He then said, "Why not?" I said, "For the best of all reasons; I never found it of the slightest use." "Exactly so," he said, "it is absolutely useless to any surgeon who is experienced in passing instruments." If a surgeon cannot pass the instrument without chloroform, he cannot do it with, for the reason that chloroform does not lessen the bulk of the tissues composing the stricture and its surroundings. M. Borovitch informed me that if he found a stricture impassable, he put half a dozen leeches on the perineum, and allowed them to bleed freely. He rarely found this plan fail; but if it did, he put the patient into a hot bath, and bled him till he was faint. This treatment succeeds by enlarging the constricted urethra, for you lessen the quantity of blood in the canal, and you also take off the pressure from the outside. From personal experience of leeching, I can say that I have seldom seen it fail.

I will now suppose that we have exhausted