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ON THE

DIAGNOSIS of UNILATERAL PYELITIS

AND

PYO-NEPHROSIS IN WOMEN.

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DIAGNOSIS OF UNILATERAL PYELITIS AND PYONEPHROSIS IN WOMEN.

In women when the urine contains pus, and when for various reasons we suspect that the pus comes, in part at least, from the urinary tract above the bladder, it becomes a matter of importance to determine if possible whether the pus comes from one side or both sides, the possibility of relief by nephrectomy being kept in mind. To decide this point catheterisation of the ureters has been proposed and carired out by various observers; the practical difficulties of this proceeding are, however, so great that it is unlikely to come into general use. On this point Skene says:* "Catheterisation of the ureters has been performed by Simon and Winckel, but as it is difficult, not without danger, and of little practical value, I shall not dwell upon it here." Again Erichsen says:† "Catheterism of the ureter, even in the female, cannot be carried out with sufficient certainty to be of any use." The method to which I desire to call attention is, on the other hand, easy of execution, and in the case in which it was tried gave a perfectly satisfactory result. It is as follows: The urethra is dilated; then one piece of a Bryant's rectal speculum is passed along the urethra into the bladder, and so placed that, seen from the front, it occupies one lateral half of the urethra and bladder beyond. When in this position the speculum divides the bladder into two compartments; for example, supposing the speculum occupies the right lateral half of the urethra and the bladder, then the orifice of the left ureter is in view. The surface is gently

* Diseases of the Bladder and Urethra in Women, p. 136.
† Science and Art of Surgery, vol. ii., p. 927 (8th edition).

mopped with cotton-wool, and then the character of the urine escaping from the ureter is observed. As it collects in the hollow of the speculum, some of it may be taken up with a syringe and tested in the usual way. Having finished the examination of the left ureter, the speculum is now quickly turned round so as to lie in the left lateral half of the urethra, thus bringing the orifice of the right ureter into view. When this was done in the case about to be narrated, a little fountain of clear urine about a quarter of an inch high escaped from the right ureter, the exit of the urine from it having evidently been prevented by pressure of the speculum while the left ureter was being observed. Here also, if the obvious characters of the urine do not at once settle the point at issue, some may be collected and tested. The electric light is necessary for illumination, unless direct sunlight be available. In the following case observations made in the manner described showed that suppuration was taking place on one side only, as pus was seen steadily oozing from the left ureter and clear urine came from the right. Guided by the oozing of the pus from one particular point, a hollow probe was passed two inches along the left ureter, but I was not able to pass the probe along the right ureter. The evidence already obtained would not, however, have been rendered any more conclusive by catheterisation of the ureters. I think, then, that in women when the urine contains pus, and when, owing to other considerations — for instance wasting, fever, failure to improve under local treatment, such as washing out the bladder with antiseptic lotions,— we have reason to believe that the presence of pus is not to be accounted for by cystitis alone, the method above described should be employed with a view to give the patient the benefit of surgical treatment if the affection prove to be unilateral. The following is an abstract of the case referred to.

A. G——, aged eighteen, shop assistant, was admitted to the London Hospital on May 15th, 1886, complaining of inability to hold her urine. She first began to experience micturition trouble in November, 1885. She noticed then that she had to void urine more frequently than she had to do before, and had to get up at night to pass it. In January, 1886, she began to have some pain during micturition, which became more and more frequent, and at last the bladder was so irritable, that for some time

before she came to the hospital she had been quite unable to hold her urine. She had never passed blood with her urine. On one occasion, in April, 1886, the patient had a pain across the small of the back and in the stomach. The pain was severe and shooting; it came on suddenly and went away suddenly; it did not cause nausea or vomiting, nor did it pass down towards the legs.

On admission, the patient was anæmic, but fairly well nourished; the temperature normal. There was no tenderness in the abdomen, nor anything abnormal to be felt there. Vulva and skin adjacent to it red and sore-looking. Hymen perfect but lax. On vaginal examination, pressure on the anterior vaginal wall caused pain, much more than the same pressure on the posterior vaginal wall. The uterus and its appendages were normal. The sound passed into bladder a distance of three inches or rather less, the measurement being taken from the external orifice of the urethra. The passage of the sound caused pain. About a drachm of urine was obtained by passing a catheter; reaction amphoteric; it contained pus in abundance, and some shreds or flakes; no casts; only pus-cells and bladder epithelium were seen under the microscope. The other organs were healthy.

The case was thought to be one of cystitis only for some time, and the bladder was washed out daily with liquor carbonis detergens (one drachm to a pint) and afterwards with boracic acid lotion, without however, any improvement taking place.—May 31st: The temperature had hitherto been normal; but from this date onwards the patient suffered from attacks of high fever running an irregular course; the temperature on several occasions being as high as 104°. —July 8th: Examined under ether to-day. No tumour to be felt in the region of either kidney.—August 21st: The patient has lost 13 lb. in weight since June 14th.—31st: There have been general pains during the attacks of fever, but no pain specially referred to the region of the kidneys. For the last three weeks increased resistance has been felt in the region of the left kidney; palpation causing some pain, and exciting the abdominal muscles to contract. When the patient lay on her face, dulness over the left kidney in the back was found to reach two fingers' breadth lower than over the right kidney. Under ether a lump was easily felt in the situation of the left kidney. The observations on the character of the urine flowing from the right

and left ureters respectively were then made, as described at the beginning of this paper. My colleague, Mr. Treves, saw the case with me, and it was agreed that it was probably one of scrofulous degeneration of the left kidney, and that the right kidney was healthy, as evidenced by the urine flowing from its ureter. Although the patient's condition was most unfavourable, yet, as the rapid loss of weight and other grave symptoms made it certain that the case must end fatally in a short time if left alone, we felt it right to suggest operative interference to the patient and her friends, at the same time putting the risk fairly before them. Consent having been readily given, Mr. Treves accordingly operated. The patient did very well after the operation and the temperature was persistently lower than it had been previously, though still febrile. The urine contained (three weeks after the operation) a small quantity of pus, due no doubt to the cystitis which still remained. The amount of pus in the urine was trifling, however, when compared to the large quantity passed before removal of the kidney.

Whatever the ultimate result may be in this particular case, there is no doubt that a diagnosis sufficiently probable to justify an exploratory operation could have been made by the method described months earlier when no tumour was to be felt in the abdomen, and before the patient's strength had been so much reduced as to render her a very unfavourable subject for operative interference at all.

Note on the Operation by Mr. Treves.—"The kidney was approached by the ordinary lumbar incision. It was embedded in an extensive mass of tough adhesions. It was subsequently found that this perinephritic inflammation was the main constituent of the 'renal' tumour, since the gland itself was but little enlarged. The adhesions were broken down with difficulty. It was found impossible to separate the kidney from its capsule or from the suprarenal body. The latter structure, with the entire kidney, were therefore removed. A surgical pedicle could not be established. The ureter, distended with caseous and purulent matter, gave way, the renal vessels were clamped and subsequently ligatured. The kidney was entirely occupied by a series of tubercular abscesses. The wound was stuffed with sponge covered with iodoform, and the cavity left to granulate up."