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THE

URETERAL CATHETER

BY

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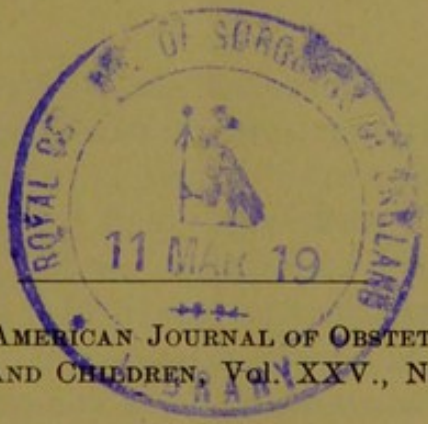

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THE URETERAL CATHETER.

In spite of my efforts to draw the attention of the gynecological profession to the uses of the ureteral catheter, this valuable instrument does not yet seem to form a part of the regular armamentarium of my fellow-specialists. That there are difficulties in the way of its employment I readily acknowledge. It is a delicate instrument, requiring practice and tact for its successful use. An amateur cannot be shown how to use it with the same facility as the Sims speculum or the uterine sound, and even with the greatest skill success is not always the rule.

These difficulties one would think would, however, only prove incentives to the acquirement of that practised manipulation which promises its possessor so much. The acquisition of the skill necessary to introduce a catheter into the ureters, on the part of gynecologists in general, would just as surely entail the conquest of the field of renal and ureteral pathology as part and parcel of the gynecological field.

I will not here again dwell upon the numerous and important differentiations between bladder and kidney, and between right and left kidney diseases, thus to be made, but speak simply of a few improvements which I have made in Pawlik's

valuable instrument, securing finally what I believe to be a perfectly satisfactory ureteral catheter.

The catheter thus made is a slender metal tube, thirty centimetres in length and two millimetres in diameter. At the end which is introduced into the ureter it is slightly curved for two centimetres, and terminates in an olive-shaped point 1.5

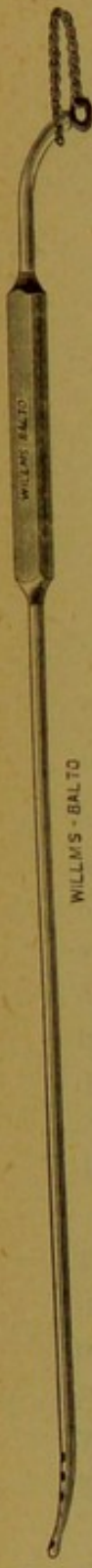

Fig. 1.

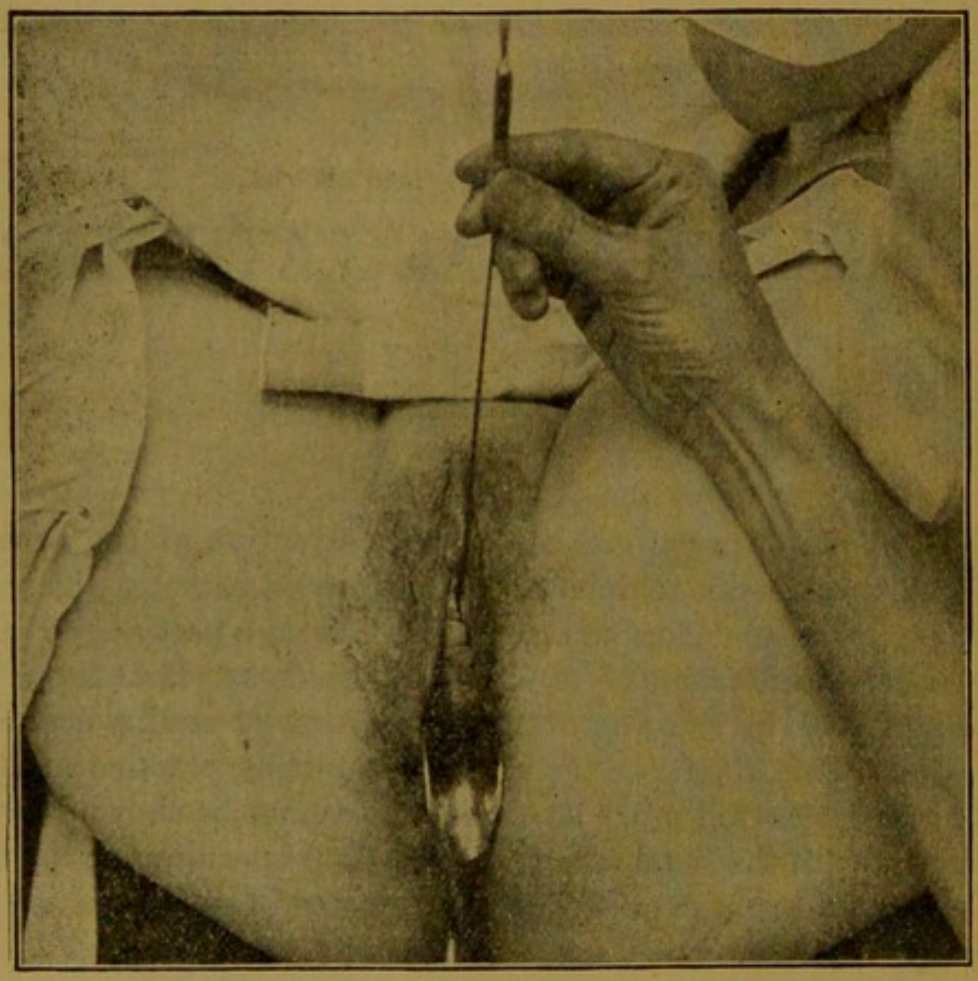

Fig. 2.

Fig. 1.—Kelly's ureteral catheter.

Fig. 2.—The patient in position for catheterization. The bladder has been distended with six ounces of normal salt solution, and the posterior vaginal wall is retracted by Sims' speculum. The operator is now engaged in seeking the right ureteral orifice. His right hand is seen in the picture grasping the ureteral catheter, the point of which lies within the bladder turned forward. The little eminence made on the anterior vaginal wall by the pressure of the catheter at this point is shown in the picture.

millimetres in diameter. Any further diminution of the size of this point renders it liable to pierce the bladder in the attempt to catheterize the ureter, while if it is larger it is difficult to introduce into the ureteral opening.

I found that the long slit of Pawlik's catheter, which lets

the urine into the catheter, would frequently catch and cut the mucous membrane of the urethra as it was being carried into the bladder; I have replaced this in my own instrument by several perforations in a little gutter countersunk on the concave side of the shaft near the point of the instrument. The opposite end of the catheter at the handle is provided with a lip curving downward to facilitate the discharge and collection of the urine in a finely graduated tube. During the introduction of the catheter this end of the tube is plugged

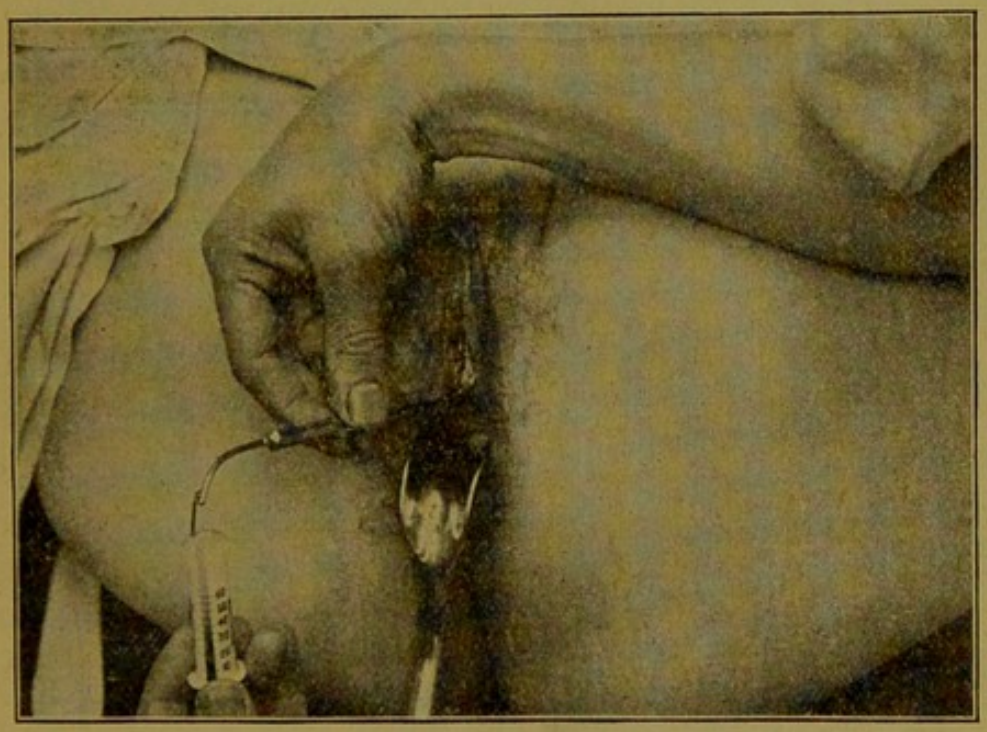

FIG. 3.—The catheter introduced into the left ureter. The direction of the catheter is well shown. The catheter has been assisted by the finger in the rectum, over the brim of the superior strait. The urine as it discharges is collected in the minim graduate for qualitative and quantitative examination.

with a short metal rod, otherwise the urine would continually escape from the bladder while the orifice of the ureter was being sought. This little rod is attached by a fine chain to the catheter to prevent its being lost. I have placed a fixed metal handle four centimetres from the end of the instrument, six centimetres in circumference, and flattened on the side toward which the point is directed. This enables one to conveniently hold and direct the instrument in its introduction, and is better than the split movable wooden handle previously in use.

The catheter thus constructed is altogether a convenient instrument, and its introduction one of the most delicately pleasing gynecological manipulations. I often thus introduce two catheters at the same time—one into each ureter—when by hanging a little test tube on the end of each, urine is simultaneously collected from both kidneys.

The figures show the last case thus catheterized in the Johns

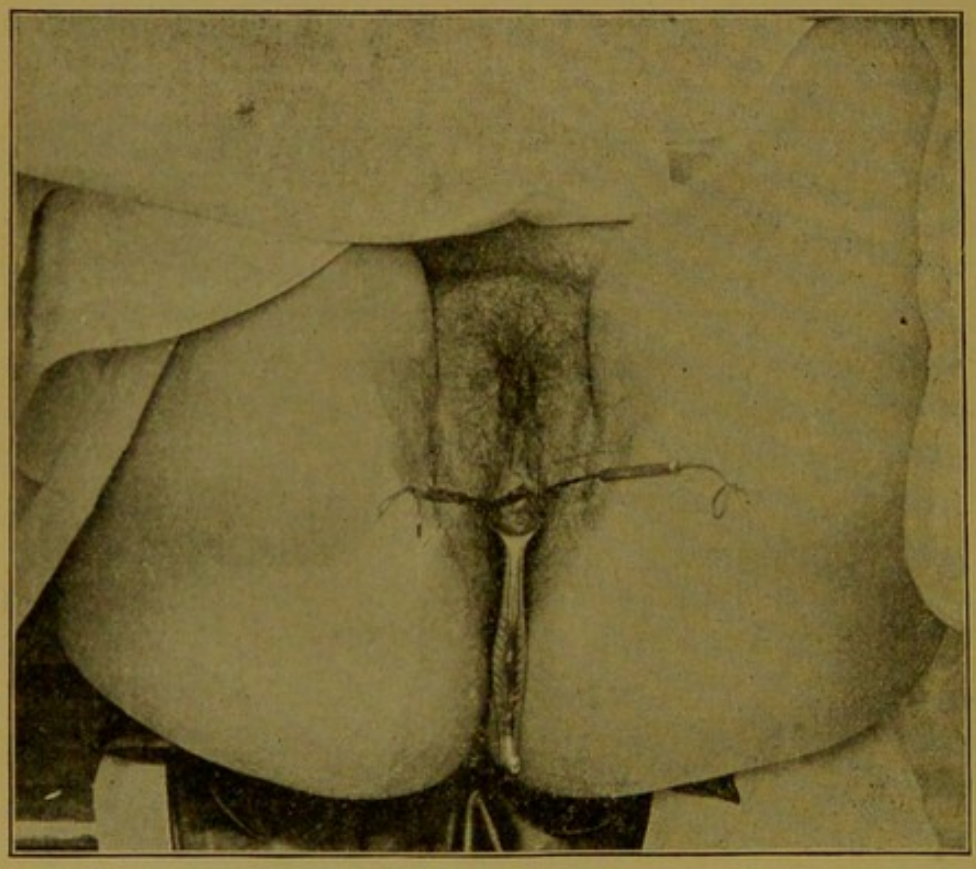

FIG. 4.—Catheters introduced into right and left ureters and collecting the urine from right and left kidneys at the same time. At the end of the catheter to the left, which is introduced into the right ureter, a drop of urine is plainly seen about to fall; this urine has thus passed directly from the ureter into the catheter, and so out of the body traversing without entering the bladder.

Hopkins Hospital. In one a single catheter is introduced; in the other both are draining the kidneys through the ureters simultaneously. The angle between the two is 59°.

The catheter here described is made by Mr. Willms, of Baltimore.