

(3) that the fistula was not merely a vesico-vaginal one. The quantity passing by the fistula was ascertained in the following manner: the catheter was passed into the bladder every two hours, and the quantity measured; then the patient was made to sit on a chamber for two hours on several occasions, and the quantity which dribbled away was carefully ascertained. While the two quantities together measured sixteen drams every two hours, the quantity which dribbled away in that time was only five drams, while the quantity drawn from the bladder was about eleven drams. After the examination the fistula closed up completely, and for five days she was perfectly dry, for the first time in eighteen months. The explanation of this temporary improvement was that the manipulation with the probe had set up a local inflammation, with swelling of the lining of the fistula, so that its calibre was closed. In a few days, however, the wetting of the bed and clothes began again, and I decided to operate for its closure. Being loth to resort to the serious operation of transplantation of the ureter until I had first given her the chances, however small, of having it cured by a vaginal-plastic operation, the latter was undertaken, with the promise to the patient that if it failed, as it had done twice in London, I would almost surely cure her by opening the abdomen and transplanting the ureter. Bovee in his excellent paper says: "In but very few of the uretero-vaginal fistulæ can cure be procured by vaginal plastic surgery. The danger of relapse from heavy strain from cicatricial contraction is too great to permit this plan to be adopted in any but the most favorable cases."

*Vaginal Operation.*—The fistulous track was dissected out with sharp curved scissors and tenaculum, and three silk-worm gut sutures were passed around it with great difficulty, owing to the mass of cicatricial tissue in the vagina reducing the canal very much in size, and making it conical with the point of the cone exactly at the fistula. Much to my regret this only stopped the flow for a few days, after which it was worse than ever. One more attempt was made, this time by removing a strip of vagina all around a distance of one centimetre, and then bringing the raw surfaces together. This was exceedingly difficult, but was finally accomplished; but the tissues were so friable that the stitches cut through, and the patient was still worse. The poor woman was by this time very discouraged, and worn out physically, so that I felt fully justified in doing the more radical operation, and at the same time one more sure of effecting a cure, and to this the patient readily assented.

*Transplantation of Ureter.*—On the 17th August, 1901, assisted by Dr. Ritchie, England, and Dr. Gillespie, the following operation was undertaken. The abdomen was incised in the middle line, from the pubes to umbilicus down to, but not through, the peritoneum. The latter was then easily pushed off the abdominal wall