

# THE OBSTRUCTED URETHRA\*

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'And if any man think that he knoweth any thing, he knoweth nothing yet as he ought to know.'

1 Cor. 8. 2.

The obstructed urethra is still a problem. In spite of recent advances which all aim at producing a urethra which will require no subsequent dilatation, the fact remains that there is still a choice of several methods. Further, two-stage operations have in the past been the bugbear of urological patients; so much so that many a patient with an adenomatous prostate has avoided surgery, and a fair percentage of patients undergoing urethroplasty have been satisfied to accept the inconvenience of a first stage, rather than submit to the physical discomforts of further surgery. Actually, in my view, it was Terrence Millin, with his outstanding contribution to prostate surgery, who led the way to a more humane approach in our speciality.

## ONE-STAGE OPERATION

With this in view, an attempt has been made to relieve the lot of the patient who has a defective urethra, and so far the results have been encouraging. Nothing new is claimed for the method; it is simply an adaptation of previous attempts, and possibly owes more to Hamilton Stewart than anyone else. The basis of the repair is the extraordinary viability of skin which has muscle immediately subjacent, such as that found in the scalp and the scrotum. Provided a pedicle of dartos muscle is retained, skin from the scrotum can be used for plastic work in any part of the urethra.

Essentially, two methods are used: (1) the patch graft, and (2) the tube graft.

### 1. The Patch Graft

When easily exposed, the stricture is split longitudinally, the incision extending into normal urethra at either extremity (Figs. 1 and 2). A self-retaining Foley catheter is then passed into the bladder and the balloon is distended.\*\* Selecting a convenient portion of the skin of the

scrotum, a patch is outlined to fill the defect. From the margin of the original incision curved scissors are then used to separate the dartos muscle from the loose, subjacent areolar connective tissue. The skin is put on the stretch and, as the patch is defined, the edges spring apart and their separation is encouraged with a few light strokes of a sharp scalpel (Figs. 3 and 4).

The patch now stands out clearly, lying on its muscle base, and the distal portion is mobilized. Forceps now draw the graft back into position over the catheter, where a few sutures fit the patch to the defective urethra (Fig. 5). At the extremities, the graft is pushed into the lumen of the urethra and fixed (Fig. 6); this manoeuvre appears to prevent the stricture formation so liable to occur and to cause frustration. Drains are left in the wound for 48 hours and the catheter is removed on the 7th-10th day, depending on the degree of healing of the wound (Fig. 7).

### 2. The Tube Graft

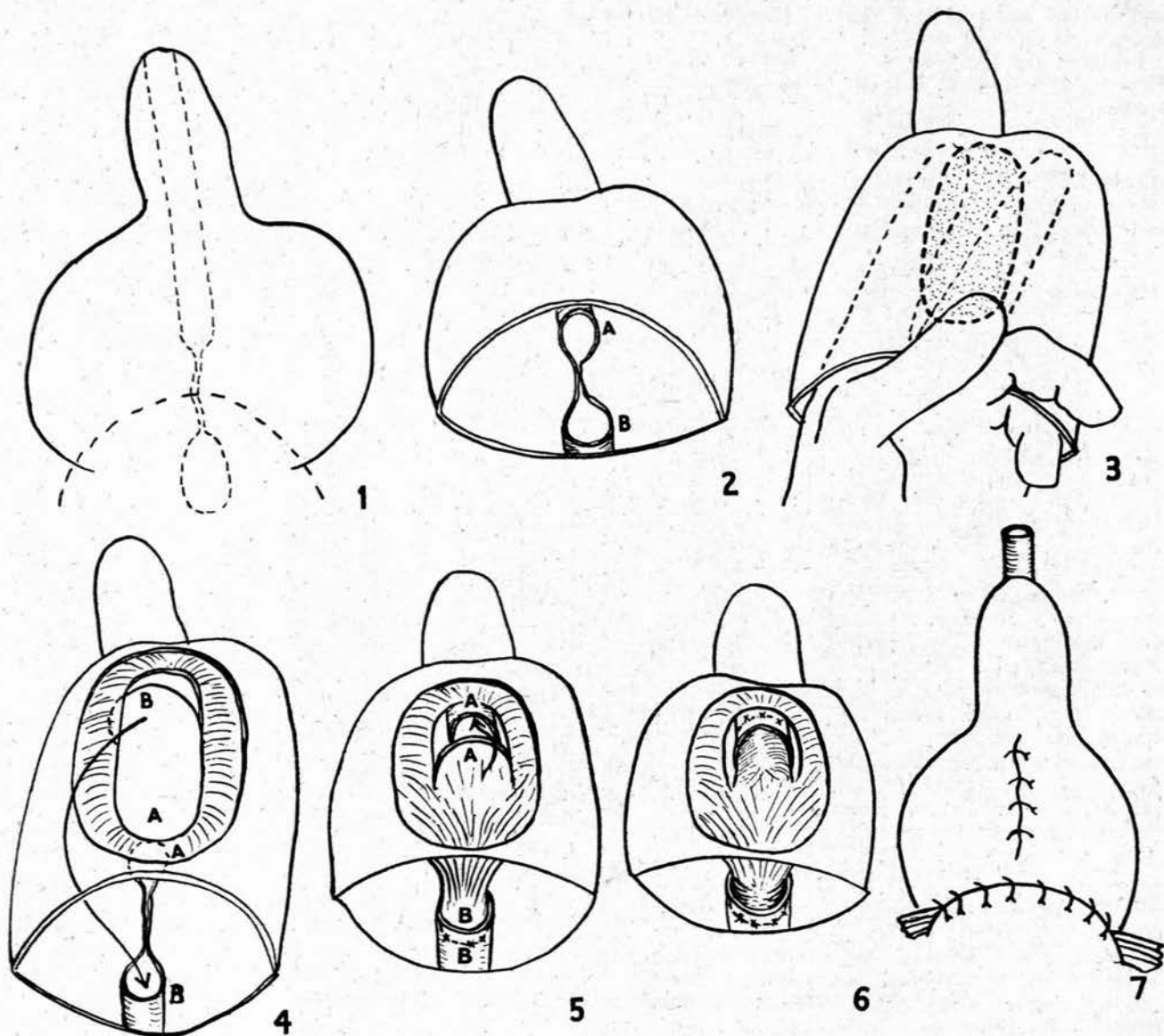
This is used where the defect extends up into the triangular ligament, and where visualization of normal urethra is well-nigh impossible. The distal undamaged urethra is exposed and opened, and an attempt is made to trace back through the stricture to the prostatic urethra. In the gross injuries, which I frequently see, this often ends in failure. Then the bladder has to be opened and a sound passed in reverse to reveal the opening.

The whole urethra is now dilated and a self-retaining Foley catheter is placed in position. The area to be bridged is next marked on the catheter, the bag is deflated and the tube withdrawn into the wound. A scrotal graft, using the marked catheter as a guide, is then outlined, drawn back and sutured as a tube round the catheter. The proximal end is tied firmly round the catheter and pushed into position with non-toothed forceps, and the bag is inflated. The distal end of the graft is guided into the lumen of the normal urethra and a few stay sutures are inserted. It is advisable to stitch the repaired scrotum to the abdominal wall so that the perineal wound is not overlapped. If the bladder has been opened, it is closed at this stage.

This, of course, is just a modification of the pull-through operation, and, so far, I have had no failures, although on occasion I have had to operate again to repair a sinus.

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\*\* For the sake of clarity the catheter is not shown in the diagrams (except in Fig. 7).



Figs. 1-7. See text.

#### Comment

As far as I can ascertain, there does not seem to be any tendency for these grafts to contract, and with their muscular and vascular pedicles, no change would really be expected. Careful mucosa-to-mucosa suturing appears to be unnecessary.

I have so far not had the opportunity of dealing with an anterior urethra, but if a case presented I would have no hesitation in tackling it, including a hypospadias, which I am convinced could be treated in one stage.

I should like to thank Mr. C. D. Kisner for drawing the diagrams.