Urethroplasty in the Management of Urethral Stricture

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There is a singular paucity of reports pertaining to urethral stricture in the Indian literature. The study of available literature reveals only two isolated case reports of urethroplasty by Bhave (1963) who has given a clinical record of a free skin graft procedure, and Sahi (1965) who reported one Badenochs procedure. Over the five year period between 1969 and 1973, 22 patients of urethral stricture were admitted to the third surgical service of the Medical College Hospital, Patiala. They had reported either with acute retention of urine or complaints of urinary infection and/or thinning of the urinary stream. Of these ten patients were treated by intermittent dilatation. Intermittent dilatation has the advantage of simplicity of the procedure. However, it is beset with many drawbacks. The patient is exposed to the risks of repeated anaesthesia and instrumentation. Urinary infection is a rule rather than an exception and bacteraemic shock is a potential hazard. The patient becomes not only hospital dependant but dependant on an individual surgeon.

In twelve cases urethroplasty procedures were carried out. The chief indication was either failure to pass a bougie or when bouginage was required too often. I. V. P. and voiding cystourethrography was carried out in all the cases. Retrograde urethrography was done in addition. A small size Foleys catheter was introduced per urethra and the bulb was gently inflated to snugly engage the urethra distal to the stricture. 76 per cent Urografin was instilled through the catheter under pressure with a 20 c.c. glass syringe. No ill effects were observed and urethrograms obtained were quite satisfactory.

Analysis of cases :

Stricture site	No. of cases	Etiology
External meatus	5	pyogenic
Penile urethra	4	traumatic
Bulbous urethra	2	gonococcal
Posterior urethra	1	traumatic

Meatal stricture ;

The stenosed external meatus was slit ventrally for 1.5 cm. and a doubled up local flap of penile skin was interposed in the urethral slit and stitched with 5-0 chromic catgut. No indwelling catheter was used.

Stricture of Penile Urethra :

Two patients with localised stricture of the penile urethra were treated by excision & end-to-end anastomosis using 00000 chromic catgut (Fig 1,2). Minimal stitches were used with knots lying outside the urethral wall. No urethral catheter was used, though a suprapubic bladder drainage was carried out. In the other two cases where the stric-

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Fig. 1—Urethrogram showing the stricture at the peno-scrotal junction

Fig. 2—Urethrogram after excision and end to end anastomosis

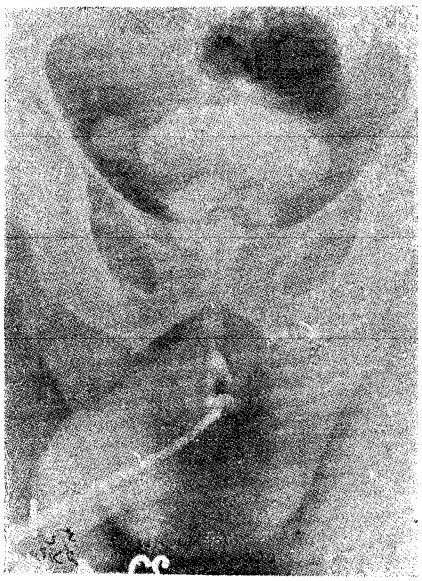

Fig. 3—Urethrogram shows dilatation of the ejaculatory ducts, sacculation in the prostate and a vesical diverticulum. The proximal bulbar and prostatic urethra are dilated.

Fig. 4—Urethrogram shows a long stricture of the posterior urethra

ture was longer, the strictured part was laid open and repaired by the principle of Johansons urethroplasty. One of the patients had a well developed false passage beginning just proximal to the glandular urethra.

Stricture of bulbous urethra :

Two post-gonococcal cases had stricture of the distal bulbous urethra. Both were beyond 50 years of age and had first contacted the infection over 20 years back. One of

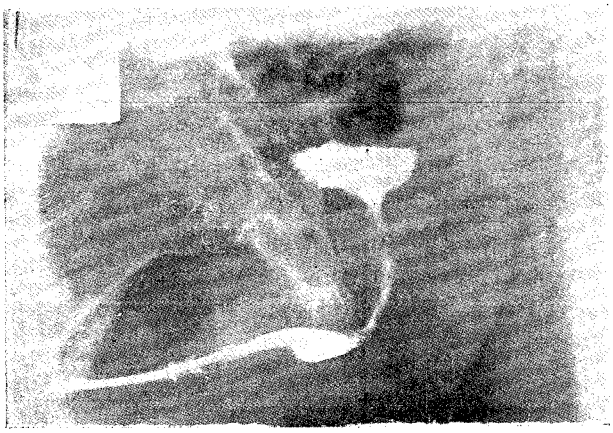

Fig. 5— Shows a urethera of good calibre after a Badenoch procedure.

them revealed pyelonephritic changes in the kidneys, diverticulation of the urinary bladder, dilatation of the ejaculatory ducts, sacculation and calculi formation in the prostate (Fig. 3). The second patient was disabled with ischaemic heart disease. In both the cases a first stage urethroplasty of the Leadbetter type was carried out. The proximal urethral opening was fashioned by a posteriorly based perineal skin flap. A good urinary stream was restored and urinary infection got eliminated. The urethroplasty was not completed in both the cases, since both were satisfied with the micturition and thought further operation as unnecessary.

Stricture of posterior urethra :

One patient, a child had a stricture of the posterior urethra following an intrapelvic rupture (Fig. 4). A Badenoch (1950) pull through procedure was done. Postoperative urethrogram showed a good calibre urethra (Fig. 5), but the patient relapsed into the strictured state three months after the operation.

Discussion :

Meatal stricture is an annoying condition to treat. Meatotomy alone is followed by a denser stenosis even though the margin of the urethra is stitched to the skin of the glans. Local penile skin flap procedure is highly satisfactory, healing occurs with epithelialisation and no further bouginage is required. Excision with end-to-end anastosis is the procedure of choice for a localised stricture. The result was excellent in the two operated cases and the patients felt that the joy of micturition had been restored to them. Urethroplasty procedures for stricture of the penileurethra using the buried intact epithelium technique not only gives good results but also require no undue skill mainly because of easy accessibility. For stricture of the bulbous urethra, construction of a good proximal opening by the skin flap procedures serves to remove the obstruction. And the need for further operation is obviated in a bad risk patient. A Badenoch procedure performed in one case proved a failure probably because of the long length of the strictured urethra. The scrotal flap procedures as that of Blandy et al (1968) are of greater promise for strictures that are both long and inaccessible.

Summary and Conclusion :

1. Twelve of the 22 patients admitted with stricture urethra and treated by urethroplasty procedures are reported.

2. Local skin flap procedure is preferable to meatotomy in meatal stricture.

3. Excision anastomosis is ideal where feasible while urethroplasty for stricture of the penile urethra is both satisfactory and easy.

4. In aged and bad risk patient if a proximal urethrostomy can be fashioned a good functional result ensues.

5. Attention is drawn to the apparently neglected problem of stricture urethra in this country. And it is stressed to undertake more of the urethroplasty procedures rather than to subject all patients to bouginage.

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