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INSTRUMENTS AND TECHNIQUES*

Dilatation of urethral strictures using an endoscopically placed guide

Derek G Machin FRCS
Surgical Registrar, Victoria Central Hospital, Wallasey†
Reginald B Crosbie BSc ARIC FRCS
Consultant Surgeon, North Wirral Hospitals

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Summary

The blind dilatation of a tight urethral stricture can be a difficult and potentially dangerous procedure. The technique described in this paper enables such strictures to be safely dilated after endoscopic placement of a suitable guide over which Cosbie–Ross bougies can be 'railroaded'. The dilatation can be done gently and progressively using initially very fine bougies, which would be dangerous to use without a guide in view of the likelihood of perforating the urethra.

Introduction

The problem of the management of the tight urethral stricture is one which presents itself from time to time to any surgeon undertaking urological work. The management of such strictures is not easy, especially for general surgeons who may not have experience of carrying out urethroplasties or the use of a direct-vision urethrotome.

As an alternative to blind dilatation we offer the technique described here. It has the benefit of requiring little expenditure as most of the equipment used will already be available.

Materials and methods

An initial urethroscopy should be performed with a cystourethroscope capable of accepting a catheterising attachment and fitted with a 30° or 0° telescope. This preliminary urethroscopy will reveal the site and nature of the stricture. If the stricture appears to be tight, then the catheterising attachment is substituted and, again using a 30° or 0° telescope, a No 4 ureteric catheter is manipulated through the stricture and advanced into the bladder. (If false passages are present the catheter can be introduced gently into each in turn until the urethra is identified.) The metal stylet is left in the catheter, but the plastic end piece is cut off with heavy scissors. The cystoscope is now withdrawn over the ureteric catheter, care being taken not to dislodge the catheter from the bladder. (An operating urethroscope could also be used to pass the guide.)

The dilatation is carried out with Cosbie Ross 'railway bougies' *(1)* (see figure), which are similar in shape to Lister bougies but have a central channel which enables them to be threaded over the ureteric catheter (see figure), which should be lubricated, along with the bougies, with an antiseptic jelly. The dilatation is performed in the usual manner, but it is helpful to have an assistant who keeps the guide taut and follows the movement of the surgeon in order to avoid kinking of the catheter. The bougie is then withdrawn, care again being taken not to dislodge the catheter, and the process is repeated through the full range of bougies.

Cosbie Ross bougies are available with sheaths ranging in size from 8 to 18 Charrière and once the full range of bougies has been passed the cystoscope, together with the guide, is withdrawn from the urethra and dilatation is continued with Lister bougies. It is our practice to carry out a cystourethroscopy after completion of dilatation in order that further assessment can be made of the extent of the stricture and state of the urethra; also any coexistent lesion will be seen.

As with any difficult dilatation Gram-negative shock can result and we normally cover the procedure with prophylactic gentamycin.

Results

The technique described in this paper has been used by one of us (RBC) on nearly 100 patients with difficult strictures over a 10-year period and in only 3 cases did dilatation prove to be impossible at the first attempt. The method was successful in 2 of the 3 cases when it was tried again after a 2-week interval, the problem in both cases being

†Present appointment and address for correspondence and reprints: Surgical Registrar, Broadgreen Hospital, Liverpool

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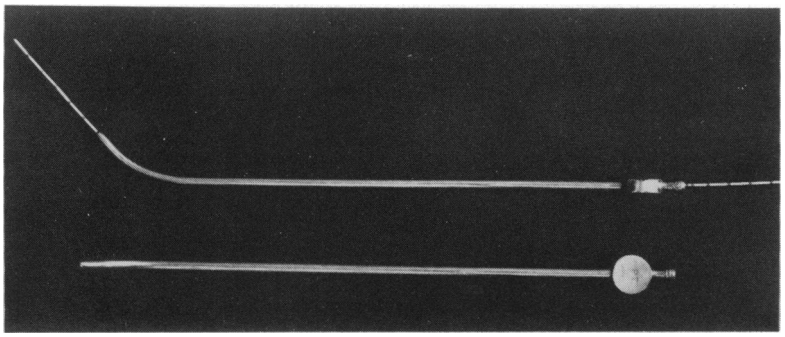

Cosbie Ross bougies, the upper one with a No. 4 ureteric catheter in situ.

multiple false passages in the presence of some bleeding, which made their adequate visualisation impossible.

The third patient, a seaman, suffered a rope-lash injury to his perineum on board a ship which was some 3 weeks out of Liverpool. When he eventually presented his urethra was full of granulation tissue and a suprapubic approach was necessary to effect catheterisation. The subsequent management of his resultant stricture has been greatly facilitated by the use of our technique.

Discussion

The treatment of urethral strictures has advanced considerably over the past two decades with the introduction of improved techniques of urethroplasty and the development of the optical urethrotome.

A considerable number of patients, however, including some in urological departments, are still managed by bouginage. Even under optimum conditions in specialist units urethral dilatation is attended by a high morbidity rate *(2)*, especially in relation to 'difficult' strictures. It is in just such cases that our technique proves to be so useful because of the precise and gentle way in which dilatation is carried out, thus avoiding further injury to the urethra.

Enquiries concerning Cosbie Ross urethral dilators should be addressed to Messrs Charles Thackray, of Leeds.

References

1 Ross JC. 'Railway' bougies in treatment of urethral strictures. Lancet 1956;2:126.

2 Devereux MH, Burfield GD. Prolonged follow up of urethral strictures treated by intermittent dilatation. Br J Urol 1970;42:321–9.