RICHARDSON URETHROPLASTY FOR FEMALE URETHRAL SYNDROME

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SUMMARY

Thirty cases of female urethral syndrome with recurrent dysurea and obstructed urinary symptoms but with normal detrusor contraction, were treated by Richardson Urethroplasty. This method essentially consists of excision of the band of fibroelastic tissue between vagina and the distal half of urethra and then reconstitution of the vaginal wall. All the patients were followed up for a period varying from 6 months to 3 years. 26 patients (86.6%) were totally relieved of their symptoms. They did not require dilatation of urethra after surgery. In two patients (6.6%) the obstructive urinary symptoms disappeared but stress incontinence continued in one and dysurea in another. Two cases (6.6%) who had chronic retention of urine and gross bladder trabeculations before surgery, continued to have chronic retention postoperatively because of associated bladder neck stenosis.

Dilatation of urethra offers temporary relief in these cases. But Richardson Urethroplasty offers excellent results in cases of female urethral syndrome. It is a safe and simple procedure with minimum complications and offers a suitable and permanent alternative to aggressive meatotomy and dilatation. Inadvertent perforation of urethral mucosa during surgery offers no complications.

Introduction

Recurrent dysurea in female which has been attributed to the so-called urethral syndrome, is a major problem. Urethral dilatation in most cases gives temporary relief from symptoms which shows the existence of lower urinary tract obstruction.

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According to Woodburne (1961) normal micturition is the result of synchronous contraction of the detrusor with shortening and widening of the urethra. Gleason and his Colleagues (1973) observed that the mechanism of obstructed voiding in females appears to be a mismatch between urethral compliance and bladder power. Although Richardson considered the cause of this non-compliance as fibro-elastosis of the distal half of the

urethro-vaginal septum, Evans (1971) regarded increased collagenisation of the peri-urethral tissue as the cause of this outflow obstruction.

The aim of treatment of urethral syndrome should therefore be directed to change to non-compliant distal urethra into a passive conduit by excision of the band of tissue between the vagina and the distal half of urethra. This can be done by the technique of urethroplasty described by Richardson (1969).

In this paper we report our experience with 30 patients of urethral syndrome treated by Richardson Urethroplasty.

Materials and Methods

Patients with one or more of the symptoms like frequency, hesitancy, poor stream, interrupted stream, and even acute or chronic retention of urine were included in this study. Urinalysis, culture and sensitivity, blood urea, serum creatinine, blood sugar and KUB was done routinely. IVP and Micturating Cystourethrogram (MCU) was done in selected cases. Cystometrogram was done when residual urine was more than 100 ml and in cases of diabetes mellitus to know detrusor hypotonia. Cystoscopy was done in all cases to see the degree of bladder trabeculation.

All the 30 patients underwent Richardson urethroplasty either under general or local anaesthesia. The patients were put in lithotomy position. With a snug-fitting male steel sound in urethra, a T-shaped incision was made in the anterior vaginal mucosa to expose the urethro-vaginal septum. The short crossarm of T was made transversely for about 1/2 inch at the mid anterior edge of the vaginal mucosa. The vertical arm of the T was made longitudinally for a distance of 1/2 inch from the midpoint of the transverse incision. The edges of the T shaped incision were then reflected laterally to expose the underlying connective tissue of the urethro-vaginal septum. This tissue was excised by sharp dissection. There was no line of cleavage, so that care was taken to avoid perforation of urethral mucosa. Then vaginal layer was reconstituted with interrupted 000 chromic catgut sutures. When meatal stenosis was present, a posterior meatotomy was performed before the urethroplasty. The patient was kept on indwelling urethral catheter for four days.

Observations

The age of the patients ranged from 12 to 64 years, most were in the 40 to 50 age group. One patient was grossly diabetic and 3 had chronic retention of urine with high blood urea and serum creatinine. 3 cases with large residual urine were found to have some degree of detrusor hypotonia on cystometry which ultimately disappeared with continuous bladder drainage for two weeks. Urethral syndrome was associated with kidney stone in one case, urethral caruncle in 3 cases, urethral polyp in one case and prolapsed urethral mucosa in one case. Associated urethral conditions were treated during urethroplasty. In 2 cases urethral mucosa was perforated during surgery. The mucosa was apposed by 000 chromic catgut interrupted stitches. This created no post-operative complication.

Results

All 30 cases showed histological

changes of fibro-elastosis in the resected urethrovaginal septum. The patients were followed up for a period varying from 6 months to 3 years. 26 patients were completely relieved of their symptoms. They needed no dilatation of urethra after surgery. One patient continued to have stress incontinence. We think this was due to debility, and old age (60) years and laxity of urinary sphincters. One patient of depressive psychosis continued to have dysurea although obstructive urinary symptoms disappeared. So we think dysurea may be a part of the mental problem. Two patients with chronic retention of urine and gross bladder trabeculations but no detrusor hypotonia continued to have chronic retention even after surgery. We think by a process of exclusion that these are the two cases of bladder neck obstruction.

Discussion

Urethral calibration was used initially to note the degree of urethral resistance but was abandoned later because it did not correlate with the symptoms and the degree of trabeculation. This is in agreement with Richardson (1969) and Splatt and his Colleagues (1977). The diagnosis of bladder neck obstruction is made by a process of exclusion rather than any positive method - radiological or endoscopic (Roberts and Smith, 1968). Hence we think 2 of our patients had associated bladder neck obstruction who failed to respond to urethroplasty.

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