

two years follow up. Our better results may be because of shorter mean follow up of 10 months (range 8-13 months).

Although the number of patients is small with short follow up & assessment lacks flow rate evaluation, we believe that the "CUT TO LIGHT" endoscopic procedure is a useful technique with minimal morbidity & short hospital stay compared to other more invasive treatment modalities for the same. It leaves the field virgin for any subsequent urethroplasty if so required.

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With the patient in modified lithotomy position, suprapubic tube was removed & 0.038" guide wire (COOK) was passed into the bladder through supra pubic cystostomy tube. Tract was dilated & 19 Fr. Cystoscope with 70 degree telescope was passed over the guide wire into the bladder & placed into bladder neck. Simultaneously, 20Fr. Visual Urethrotome with 0 degree telescope was introduced per urethra. Operating theatre & Visual Urethrotome lights were dimmed. Visual urethrotomy was done over the brightest light spot of the light shining across the bladder neck or over the projection caused by the guidewire/ ureteric catheter from the supra pubic cystoscope. Guide wire or 5 Fr. ureteric catheter was pushed via supra pubic cystoscope across the stricture into the distal urethra & finally brought out through the external meatus. Adequate visual urethrotomy was carried out at 12 'O' Clock position over the guide wire/ureteric catheter & 16 Fr. Silicone Foleys type catheter was passed per urethrum into the bladder. Suprapubic diversion was continued for three weeks after which both urethral & suprapubic catheters were removed. Patient was put on clean intermittent self catheterisation (CISC) programme for six months. The average hospital stay was 2 days (range 2-3 days).

Results

The results were assessed after six months. They were categorised as GOOD when patient passed urine with normal stream & had post micturition residual urine in bladder of less than 60 ml. It was categorised as FAIR if patient had weak stream & post micturition urine volume was less than 60 ml. Results were considered to be POOR if patient went into acute retention of urine requiring other treatment modalities. Good results were achieved in 5 patients (71%) & fair results in 2 patients (29%). One patient with fracture pelvis has total incontinence of urine since primary trauma & is on intermittent self catheterisation. He has partial impotence as well & is already father of three children (Table-2)

Table # 2

| Results | No. of Patients (7) | Percentage (%) |
|---------|------------------------|-------------------|
| Good | 5 | (71%) |
| Fair | 2 | (29%) |
| Poor | 0 | (0%) |

Post operatively all patients had voiding cystourethrograms (VCUG) & ultrasonograms (USG) for post micturition urine residue in the bladder.

Discussion

Dense posterior urethral strictures are a difficult challenge for the urologists & mostly result from fracture pelvis. Initial management usually consists of suprapubic cystostomy diversion with delayed repair at three to six months. Immediate intervention has high risk of stricture, incontinence & impotence (Morehouse DD, 1972). Conventional management of such strictures consists of extensive perineal, transpubic or combined open urethroplasties with prolonged hospital stay & considerable morbidity (Waterhouse K, 1980, Lieberman SF, 1982). The endoscopic management of such strictures was first described by Sachse H. in 1978. Several other authors have also found this technique to be very successful (Lieberman SF 1982, Gonzalez R, 1983, Gupta NP, 1986).

In our study 5 patients (71%) had good results & 2 patients (29%) had fair results. One patient has total incontinence of urine since primary trauma with unstable fracture pelvis. He is on intermittent self catheterisation so as to keep him dry and does not have stricture any more. Also since primary trauma he has partial impotence with less than normal erection but can penetrate vagina. These results are comparable to the ones of Gupta NP, and Gill IS, 1986. Six patients (86%) required eleven visual urethrotomies for recurrent stricture urethra. Cure rates vary from 81% (Gaches CGC, 1979) to only 25% (Boccon Gibod L, 1982) at

ENDOSCOPIC "CUT TO LIGHT" MANAGEMENT OF POSTERIOR URETHRAL STRICTURES

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Abstract

Seven patients with impassable traumatic, iatrogenic and infective posterior urethral strictures were managed by this technique. The results of endoscopic "CUT TO LIGHT" technique compare favourably with other more invasive open procedures. This procedure is easy to do and carries very low morbidity.

Key Words: Urethral Stricture, Endoscopy, Stricture, Urethrotomy.

Introduction

Road traffic accidents, urethral instrumentation & infection are the commonest causes of posterior urethral strictures. Conventional urethroplasties are a major undertaking with known morbidity. (Waterhouse K, 1980). Urethroplasty using skin flaps even in skilled hands has significant morbidity including recurrent strictures requiring more than one major operations (Blandy JP, 1976). Blind urethrotomy and intermittent dilatation also have high complication rate (Blandy JP, 1980). We managed these dense impassable posterior urethral strictures endoscopically with minimal morbidity.

Patients and Methods

This technique was attempted in 11 male patients but was successful in 7 cases (64%) & unsuccessful in 4 cases (36%) in the beginning when stricture was found to be too dense to safely carry out blind visual urethrotomy. Only these seven successful cases were included in the study. They were managed by "Cut to light" procedure

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during the period March 1991 to January 1993 (23 months). Patients age range was 10 to 27 years (mean 21 yrs.). Four patients (57%) had previous fracture pelvis following road traffic accident. They were managed initially at other hospitals with supra pubic cystostomy & railroad procedure. The average time length from initial trauma to endoscopic management was six months (range 4-12 months). Remaining three cases (43%) gave history of urethral discharge followed by repeated blind urethral dilatations & intermittent prolonged urethral catheterisations (Table -1) All seven patients had impassable posterior urethral strictures with supra pubic cystostomy diversion. Confirmation of posterior urethral strictures was done by voiding cystourethrograms & ascending urethrograms in all cases. All strictures were less than two centimeters in length. All patients had normal upper urinary tract as they all had suprapubic diversion. All procedures were done under general anaesthesia & antibiotic cover. Post operatively patients were asked to do clean intermittent self catheterisation (Lapides J, 1972), twice weekly for one month & then once weekly for further five months (Roberston GSM, 1991), using 16 Fr. Nelton catheter lubricated with lignocaine jelly. Only symptomatic urinary tract infection was treated during this period. Failure to pass catheter required readmission & visual urethrotomy which was done eleven times in these six patients. Once cured of structure, urinary tract infection was finally treated according to the culture & sensitivity results. Follow up was done by patients interview, cystourethrograms & ultrasonograms for post micturition urine residue. The average length of follow up was 10 months (range: 8-13 months).

Table # 1

| Aetiology | No. of Patients (7) | Percentage (%) |
|----------------------------|------------------------|-------------------|
| Trauma | 4 | (57%) |
| Infection or Iatrogenic | 3 | (43%) |