THERAPEUTIC VALUE OF DILATATION OF THE URETHRA IN TREATMENT OF URETHRAL NARROWING AND URETHRAL SYNDROME IN PERIMENOPAUSAL WOMEN

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More than one third of all patients seen in a general urologic clinic, have pathological lesion which arise in the female urethra (Roberts and Smith 1968). The diseases of the urethra are more common among perimenopausal women. In institutions which do not provide separate urology service, the elderly female patients have been frequently found to seek advice pertaining to the diseases of the urethra from the gynaecologist. While some of such patients have been found to have undoubted anatomical lesions in the urethra, many more women have urethral symptoms without any definable disease. The urethral symptoms in elderly patients, without any anatomical lesion, in the absence of any evidence of urinary tract infection, has drawn recently the attention of some urologists (Roberts and Smith 1976). This combination of painful micturition without any demonstrable lesion has been called the 'Urethral Syndrome'. The diagnosis which is unsatisfactory, since it has to be made by exclusion, may be applied to large proportion of the women who seek our advice. This would include those patients who have been labelled as tight urethra or urethral narrowing. Urethral narrowing has been well recognized in elderly women suffering from urinary disturbances such as dysuria or acute retention. It may be infective due to birth trauma of repeated pregnancies, difficult labour and/or atrophic urethral change in menopause (Roberts and Smith 1968) for want of oestrogen stimulation. In some cases of urethral syndrome the bladder outlet resistance has been demonstrated to be high (Das Gupta 1972). Similar rise in the urethral resistance has been described to occur due to infection (Essenhigh, Ardran and Cope 1968). In urethral narrowing the synchronous action of the detrussor and urethra has been said to be deranged resulting in difficult expulsion of urine.

It has been convincingly described in the literature that a large number of patients of urethral narrowing get significant improvement in their Symptoms after dilatation (Kasturi Lal 1974). Possibly those cases of obstruction due to fibrosis of the paraurethral glands may also be relieved by dilatation. The results of the efficacy of urethral dilatation in urethral narrowing have been reproduced in case of urethral syndrome. But why the patients get relief still has not been explained in a convincing way. It has been claimed that dilatation acts either by overcoming the muscular spasm or by squeezing infective matter from the paraurethral

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gland and the folds of the urethra (Roberts and Smith 1976).

The efficacy of urathral dilatation has been demonstrated in 40 cases of urethral narrowing and urethral syndrome in the present report. The patients have shown a significant inprovement in the symptoms. The simplicity of the technique, its economy and its effectiveness favours its re-evaluation.

Material and Methods

The subject of this study constitute 40 patients with urinary symptoms referable to diseases of the urthra between the age 41-70 years. They have been treated by simple dilatation of the urethra for urethral narrowing and urethral syndrome. A thorough follow-up of these patients has been possible. Before dilatation the pathological lesions of bladder were excluded by relevant investigations. Complaints and clinical history and physical findings were studied in detail. The minimum investigation performed include, (1) speculum and vaginal examinations, (2) urine analysis, (3) blood urea, (4) urine culture and sensitivity studies, (5) estimation of urethral calibre and residual urine, (6) plain X-Ray of the abdomen, (7) cystoscopic examination and (8) intravenous pyelography.

Observations

The patients were distributed according to their age as shown in Table I.

TABLE I
Distribution According to Age

Age group	No. of cases	Percentage
41-50	18	45%
51-60	16	40%
61 or above	6	15%
Total:	40	100%

Table I shows the distribution of cases according to age.

Table II shows the distribution of patients according to duration of symptoms.

TABLE II
Distribution According to Duration of Symptoms

Duration of symptoms	No. of cases	Percentage
Upto 3 months	4	10%
Upto 6 months	7	17.5%
Upto 1 year	21	52.5%
Upto 5 years	6	15.0%
More than 5 years	2	5.0%
Total:	40	100%

The symptoms were wide and varied as shown in Table III.

TABLE III
The Symptoms and Signs

Symptoms and Signs	No. of cases*
1. Burning micturition	34
2. Frequency of micturition	23
3. Low back ache	12
4. Dysuria	10
5. Thin Stream	7
6. Suprapubic pain	6
7. Urgency	6
8. Bowel disturbances	4
9. Retension of urine	4
10. Fever	4
11. Perineal pain	2
12. Haematuria	2
13. Renal angle pain	2
14. Dribbling micturition	1
Total:	40

*Some patients had more than one symptom and sign.

Table III shows the symptoms and signs.

Associated Gynaecological conditions.*

1.	Premenopausal ..	14
2.	Menopausal ..	26
3.	Leucorrhoea ..	10
4.	Menorrhagia ..	4
5.	Oligomenorrhoea ..	2
6.	Cervicitis and	
7.	Cervical erosion ..	8
8.	Senile vaginitis ..	6

* Some patients had more than one associated gynaecological condition.

Diagnosis**:

1.	Narrowing of urethra ..	28
2.	Urethral syndrome ..	12
3.	Urethral caruncle ..	4
4.	Urethral diverticulum ..	1

** Some patients had more than one disease.

Procedure

The patients were placed in the lithotomy position. The calibre of the urethra was measured by exploring it with diminishing sizes of rubber catheters until one was found that could pass through without difficulty. This gave us rough idea about the calibration of the uretra. Ideally the urethral calibre should be of such a size as to admit No. 24ch bougie. Where the urethra could not accommodate No. 24ch bougie, vigorous dilatation upto No. 30ch was indicated. In cases with retention of urine no rubber catheter could be manoeuvered and a uterine sound had to be passed to relieve the obstruction which gave considerable immediate relief to the patients. Once the calibre of the urethra was determined, the dilatation with Hegars dilators upto No. 12, care being taken not to cause bleeding by overstretching. While actual dilatation may be carried out without anaesthesia, nevertheless it has been better to use a local anaesthetic jelly, such as xylocaine gel, 5 ml being instilled into the urethra 4-5 minutes before starting the procedure. It may with advantage be mixed with 1:5000 Chlorohexidine. Prophylactic antibiotics should be given to minimize the risk of infection.

Results and Follow-up

Dilatation of the urethra upto 12 Hegar produced immediate improvement in 34 cases. In 6 cases the improvement lasted for only 6 to 9 months and repeated dilatation became necessary. Four cases required 2 dilatations only while 2 cases required more than 2 dilatation (Table IV). There has been a wide range of follow-up varying from 12 months to 60 months. The results have been based on the relief of symptoms. The number of dilatations has not been taken into consideration. The results have been excellent in 85% of the cases.

TABLE IV

Results of Treatment and Follow-up

Results	No. of cases	Percentage
Excellent	34	85%
Good	4	10%
Fair	2	5%

Discussion

In early stages of urethral narrowing, the patients present themselves with vague gastrointestinal, nervous, musculoskeletal disturbances besides the urinary problems. The urinary disturbances are frequency, urgency and even bouts of incontinence. In well established cases the patient has to wait and strain to pass urine. The high degree of obstruction with renal damage and hydronephrosis has been de-

monstrated. There are extreme cases who have marked degree of chronic retention of urine. The controversy as to what is the normal calibre of adult female urethra, remains unsolved. Mitchel and Hamilton (1964) regard 24ch as normal calibre, while Roberts and Smith (1968) suggest 22ch as normal calibre. Hole (1972) in a critical study found little correlation between urethral calibre and symptoms. He found a distal urethral calibre of less than 20ch in 30 per cent women without symptoms. Contrary to his observations, a positive correlation between the urethral calibre and urethral symptoms have been found by us. Moreover cases of urethral syndrome with normal urethral calibre have responded while by dilatation of urethra. Dilatation of the urethra in some cases, may have to be repeated at intervals but the results have been gratifying though it often causes temporary urethral bleeding and discomfort. No dangerous consequences such as incontinence or stricture have occurred during the period of follow-up. Better results have prompted us to try this therapeutic procedure which is simple, though not superior but equally efficacious as urethrotomy.

The epithelium in the distal part of the urethra has been found to correspond with the vaginal mucosa of squamous variety. This epithelium responds to oestrogen. When urethral narrowing is related to atrophic urethritis, oestrogen should follow the dilatation. In practice we have found that a month of topical oestrogen cream followed by two months of oral therapy (0.01 mg Lynoral) has been satisfactory. This low dose does not give rise to side effects.

In this communication it has not been our intention to impress upon the technique of treatment which, all of us know, is empirical, but give relief to the patient. What worries us most, is the limited knowledge of many aspects of urethral disease. There is a lack of awareness of the urethra in the mind of many surgeons. Far too many clinicians choose to ignore this short canal, being pleased to regard its symptoms as a mere expression of neurosis. There is a lamentable ignorance about the urethral symptoms without any definable disease. The personal misery and the social disruption which are caused by urethral disease deserve more sympathy. We suggest that the clinicians should prevent their temptations to refer such patients from Surgery Clinics to Urology Clinics to Psychiatry Clinics. They should plan treatment with good humour and their results would be gratifying.

Summay

Forty elderly patients between age 41 to 70 years having urethral narrowing and urethral syndrome were treated with urethral dilatation with good results have been presented.

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