DILATATION OF BLADDER NECK IN TREATMENT OF BLADDER NECK OBSTRUCTION IN PERIMENOPAUSAL WOMEN

by

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Fibrotic stenosis of the bladder neck is not uncommon in elderly women. It is one of the important but little known complication of chronic inflammatory urethral narrowing. The attention was recently drawn to it by viega-Pires and Elbute (1967), Brooks and Bateson (1968) and Marcus (1969). Birth trauma of repeated pregnancies, difficult labours, and oestrogen deficiency in old age are also included in the list of causes of urethral narrowing. The condition has been well recognized in elderly women suffering from acute retention of urine or dysuria.

Either dilatation of the urethra or urethrotomy is indicated for the treatment of urethral narrowing and fibrotic stenosis of the bladder neck in females. The efficacy of urethral dilatation has been demonstrated in the present communication of 30 elderly women who have shown a significant improvement in the symptoms. This procedure has been undertaken not only as a therapeutic trial before performing other investigations to rule out specific pathologic conditions of the bladder, but as a specific method of treatment for permanent cure of bladder neck obstruction. The simplicity of the technique, its economy and its effectiveness favoured its re-evaluation.

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Material and Methods

During the period July 1969, through January 1973, 30 patients between the age 40 to 70 years who have been treated by simple dilatation of the urethra for bladder neck obstruction and followed up thoroughly, are presented. Before dilatation the pathological lesions of bladder were excluded by relevant investigations. Complaints and histories were studied in detail. The minimal investigations considered essential in the patients were, (1) physical examination, (2) speculum and vaginal examinations, (3) urine analysis, (4) blood urea, (5) urine culture and sensitivity studies, (6) estimation of urethral calibre and residual urine and (7) plain X-Ray of the abdomen. In selected cases where there was suspicion of some other pathology due to atypical symptoms, intravenous pyelography and cystoscopy were done.

Observations

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

TABLE I

Showing the Distribution of Cases According to Age

Group	Age	No. of Cases	Percentage
1	40-50	21	70%
2	51-60	6	20%
3	60 or above	3	10%
Total:		30	100%

Duration of symptoms was variable as shown in Table II.

TABLE II

Showing the Distribution of Patients According to Duration of Symptoms

Duration of symptoms	No. of cases	Percentage
Up to 3 months	6	20%
Up to 6 months	9	30%
Up to one year	12	40%
Up to five years	2	6.66%
More than 5 years	1	3.34%
Total	30	100%

Symptoms and Signs

In early stages of urethral narrowing and bladder neck obstruction the symptoms were wide and varied (Table III). The patients presented themselves with vague gastrointestinal, nervous, musculoskeletal disturbances besides the urinary problems. The urinary disturbances were frequency, urgency and even bouts of incontinence. In well established cases the patients had to wait and strain to pass urine. The tendency to residual urine tended to become more frequent in advanced age. Frequently, the urethral narrowing was obvious at the external urethral meatus. But, in some of the cases the whole length of urethra showed similar changes. It was noticed specially in menopausal women who had rigid and golf hole type of urethral opening comparable to ureteric thickening in tuberculosis. These cases had stress incontinence and they did not reveal any degree of pelvic floor weakness. However, these patients, on cystoscopy showed thickening of bladder neck and loss of elasticity which probably interfered with proper closure of the sphincter. As the urethral mucosa in the female is as sensitive to oestrogen as is the vaginal mucosa, it is expected that these patients do well with oestrogen. But the author does not have any personal experience. The high degree of obstructions with renal damage and hydronephrosis due to longitudinal folds in the posterior urethra had been demonstrated in one of our cases with intravenous pyelography. Exceptionally, there were extreme cases who had marked degree of chronic retention of urine.

TABLE III

Showing the Symptoms and Signs

Symptoms and Signs	No. of cases
1. Low backache	26
2. Dysuria	25
3. Frequency	21
4. Suprapubic pain	14
5. Urgency	9
6. Bowel disturbances	8
7. Retention of urine	8
8. Renal angle pain	5
9. Incontinence	4
10. Fever	4
11. Perineal pain	2
12. Haematuria	1

Gynaecological History

Premenopausal	— 12
Menopausal	— 18
Leucorrhoea	— 8
Menorrhagia	— 6
Oligomenorrhoea	— 2

Local Findings

Urethral prolapse	— 3
Urethral caruncle	— 4
Cervicitis and Cervical erosion	— 8
Senile vaginitis	— 6

Procedure

In 30 cases selected for dilatation, the calibre of the stricture 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 urethra. Ideally the urethra should be of such a size as to admit No. 16 french catheter without any resistance. The calibration gave the results as follows. Considerable resistance was felt with No. 12 catheter in 4 cases, No. 13 catheter in 8 cases, No. 14 catheter in 5 cases, and No. 15 catheter in 5 cases. In 8 cases with retention of urine no catheter could be manoeuvred and a uterine sound had to be passed to relieve the obstruction which gave considerable immediate relief to the patients. While actual dilatation may be carried out without anaesthesia, nevertheless it is 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. General anaesthesia is seldom necessary or advisable. Once the calibre of the structure is known, the stricture is gently dilated, care being taken not to cause bleeding by overstretching. Dilatation of the urethra to 10 to 12 Hegar produced immediate improvement in 21 cases. In 9 cases the improvement lasted for only four to six months and repeated dilatation became necessary. Seven cases required 2 dilatations only while 2 cases required more than 2 dilatations.

Followup

There has been a wide range of follow-up varying from 6 months to 3½ years. The results have been based on the relief of symptoms, repeated examination of urine for pus cells, freedom from further attacks and freedom from continued medication (Table IV). The number of dilatation has not been taken into consideration. The results have been excellent in most of the cases. Only in 2 cases internal urethrotomy was advised and one case was lost to follow-up.

TABLE IV

Illustrating the Results of Treatment and Follow-up in the Entire Series

Results	No. of cases	Percentage
Excellent	21	70%
Good	5	16.67%
Fair	3	10%
Lost to follow up	1	3.33%
Total	30	100%

Discussion

The controversy as to whether as definite glandular element at the neck of the bladder is existing or absent, remains unsolved. Immense literature has been accumulated in the past. The existence of definite glandular elements at the neck of the bladder is denied by a majority of investigators. Recent investigation reveal that bladder neck is essentially a fibromuscular structure. The longitudinal folds are found to exist in the posterior urethra and the bladder neck. The epithelial structure in the urethra has been found to be of squamous variety with the transitional cells near the neck which is continuous with the bladder. This epithelium responds to oestrogen. Oestrogen, usually in the form of an oestradiol implant, prescribed to postmenopausal patients gives satisfactory results in a few patients in whom urethral narrowing appeared to be confined to the region of the external meatus. The efficacy of urethral dilatation in the management of bladder neck obstruction was first found out by us when elderly patients where this procedure was undertaken got immediate relief of symptoms. Initially, dila-

tation was done as an investigative procedure in these patients. But better results prompted us to try it as a therapeutic measure. To avoid major surgical procedures, simple dilatation is advocated. It is a simple procedure which is not superior but it is equally efficacious as urethrotomy. Our results encourage us to advocate re-evaluation of urethral dilatation in elderly patients by obstetricians, general surgeons and urologist.

Summary

Thirty elderly patients between age 40 to 70 years having bladder neck obstruction and urethral narrowing were treated by urethral dilatation with good results are presented.

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