Urethral dilatation in women: urologists' practice patterns in the UK

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ABSTRACT

INTRODUCTION Review of the literature reveals little evidence to prove the efficacy of urethral dilatation for adult women with various lower urinary tract complaints. We conducted a postal survey to ascertain the actual practice of urethral dilatation among urologists in the UK.

MATERIALS AND METHODS A questionnaire was mailed to 428 consultant urologists listed as full members of the British Association of Urological Surgeons. The questionnaire consisted of 8 items about urologists' perception of indications, efficacy, and the need for repeated dilatation and anaesthesia.

RESULTS The questionnaire response rate was 42%. Although urethral stenosis was the most common indication (97%), the majority of urologists (69%) indicated that fewer than 25% of patients had evidence of stenosis. Overall, 61% of urologists performed dilatation 7 times or more during the last year and 55% believed that less than half of the patients experienced long-term improvement.

CONCLUSIONS Despite the lack of strong evidence to support the use of urethral dilatation in women, many urologists continue to find it a useful tool in approaching women with lower urinary tract complaints.

KEYWORDS

Urethral dilatation in women – Bladder outlet obstruction – Urethral syndrome – Urinary retention

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Urethral dilatation has been advocated as empirical treatment for adult women with lower urinary tract complaints for long time. The discovery of a distal urethral ring by Lyon and associates led to the hypothesis that urethral stenosis was the cause of recurrent urinary tract infections (UTIs) and dysfunctional voiding in girls.¹ It was postulated that rupture of this ring by dilatation would relieve the obstruction. Kerr and associates decided on cutting this contraction ring with the otis urethrotome rather than dilating it with sounds.² At the same time, they extended this procedure to include adult female patients.

Although reviewing the literature reveals little solid evidence regarding the theoretical basis of this practice, several reports suggest that urologists are still practising urethral dilatation as treatment for a variety of complaints that are not efficiently managed by other means.

To this end, we conducted a study to establish and report the results of an anonymous survey about urologists' practice patterns and attitudes towards the use of urethral dilatation in adult women with lower urinary tract complaints.

Materials and Methods

An 8-item questionnaire was mailed to 428 consultant urologists listed as full members of the British Association of Urological Surgeons. The questionnaire focused on assessing the relative indications of performing urethral dilatation by urologists, perceived effectiveness, frequency of using the procedure, the need for repeated dilatation, form of anaesthesia used and the maximum size of dilators to be used. Consultants were asked to state how long it was since they were appointed as consultant urologists.

Results

A total of 176 urologists completed and returned the questionnaire (response rate 42%), of which 171 returns were considered for evaluation (5 consultants reported that they never offer their patients dilatation). The results of the survey are listed in the Appendix.

Although 12% of urologists believe urethral stenosis is the only indication for dilatation, it was the most common

chosen indication (97%) when more than one condition was selected from the indications list.

Lower urinary tract symptoms with inadequate bladder emptying was the second most common indication (72%). Some 65% of urologists chose to use dilatation for urethral syndrome, 49% for idiopathic acute urinary retention when trial without a catheter fails, while 35% used it for chronic urinary retention. Overall, 61% of urologists performed dilatation 7 or more times during the previous year, and 15% reported using it more than 30 times. The majority of urologists (69%) indicated that less than 25% of their patients had evidence of stenosis. Of urologists, 55% believed that less than half of their patients experienced long-term improvement, while 45% thought that the improvement was experienced in more than 50% of cases.

Overall, 54% reported that repeated dilatation was required in less than 25%, while one-third of urologists considered repeating the procedure in up to half of the cases. Most urologists perform this procedure only under general anaesthesia (90%), while 7% always use local anaesthesia; 18% perform dilatation under either local or general anaesthesia depending on patient's condition. Three consultants said that spinal anaesthesia is one of their options, and one consultant used peri-urethral infiltration. Most urologists tend to dilate up to 32 F (45%), while only 9% dilated beyond 36 F. Four consultants used different sizes of Hegar dilators. The response rate was higher among young urologists.

Discussion

Several investigators have described the use of urethral dilatation in treating women with diverse lower urinary tract complaints. Despite some encouraging reports on its use, the role of urethral dilatation is still somewhat questionable. It remains empirical treatment for disorders without clear aetiology. It also lacks long-term, well-controlled outcome studies.

In our study, urethral stenosis was the most common indication for urethral dilatation, although the majority of urologists (69%) indicated that less than 25% of their patients had evidence of stenosis.

A rational treatment policy is, of course, impossible if the findings in a particular patient cannot be compared with a true range of normal values. There is a surprising dearth of information about the range of urethral calibre that is found in normal healthy adult women, and all past studies failed to demonstrate which size constitutes true stenosis.

Roberts and Smith⁵ considered that a calibre of 22 Ch. was pathological, but offered no evidence in support of this conclusion. Mitchell and Hamilton⁴ stated that: 'the normal calibre averages 8 mm' (24 Ch.), but again did not give the range of normals or any supportive evidence. The position

has been further complicated by the observation of Tanagho and McCurry⁵ that any tube larger than 10 Fr should not cause obstruction under normal voiding pressures. Unfortunately, objective evidence for bladder outlet obstruction or urethral stenosis in these women has not been particularly convincing, mainly because comparison with normal subjects has almost always been lacking.

Urethral syndrome (controversial entity) may include all female patients with lower urinary tract symptoms, such as dysuria and frequency, who do not have identifiable pathology. Roberts and Smith⁵ have shown symptomatic improvement following dilatation to occur in up to 80% of cases, but the study was not controlled to assess the placebo effect. Bergman *et al.*⁶ demonstrated that subjective cure was achieved in 75% of their patients with urethral syndrome after dilatation. Rutherford *et al.*⁷ compared the relative merits of cystoscopy alone and cystoscopy plus urethral dilatation in a randomised study of women with recurrent frequency and dysuria. A significant improvement in symptoms was observed in both groups after treatment. However, no difference in final outcome was observed between the two groups. They concluded that no benefit was achieved from the addition of urethral dilatation to cystoscopy. The assessment of the progress of lower urinary complaints in the previous studies depended upon patients reporting their symptoms. These purely subjective findings are very likely to be influenced by the absence of serious disease at cystoscopy.

There are no reported studies regarding the use of urethral dilatation in patients with urinary retention or inadequate bladder emptying. Potential explanations for the use of urethral dilatation by some urologists in such patients may be related to the fact that mechanical obstruction is thought to play a part in the aetiology.

There was a lack of uniformity about the size to which urologists dilated the urethra, although it appears that most dilated to 32 Fr. This is consistent with previous studies that showed a surprising dearth of information about the range of urethral calibre that is found in normal healthy women. The tendency to repeat dilatation among some urologists might suggest that urethral dilatation is a small price to pay for a possible relief of symptoms, where there are few, if any, sequelae.

The higher response rate among young urologists could indicate that they are more enthusiastic to participate in research activities, and it is unlikely to represent the actual demographic age distribution of urologists in the UK. Although, the response rate was good and likely to be representative of actual practice, it is difficult to know if the attitudes of non-respondents would have influenced the overall results of this survey. It would be interesting to see whether gynaecologists – who deal with similar complaints – have different views about urethral dilatation.

Conclusions

There is little scientific data to support the empirical use of urethral dilatation in women. Nonetheless, despite the lack of such data, many urologists continue to find it a useful tool in approaching women with lower urinary tract complaints. Why the perception that urethral dilatation is an effective procedure exists among some urologists and is absent among others is a matter of debate. Obviously, differences in training and personal experience will affect an individual's practice patterns. Prospective studies with readily definable outcome measures are needed. Until that is done, the presumed beneficial effect of urethral dilatation will remain merely anecdotal.

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Appendix

Questionnaire and responses

1. Which of the following do you consider as indications for performing urethral dilatation (Check one or more):

A. Urethral syndrome	65%
B. Urethral stenosis	97%
C. Lower urinary tract symptoms with inadequate bladder emptying	72%
D. Idiopathic acute urinary retention when trial without a catheter fails	49%
E. Chronic urinary retention	35%
2. In approximately how many patients in the last year, did you use urethral dilatation?

A. 1–3	18%
B. 4–6	21%
C. 7–15	26%
D. 16–30	20%
E. More than 30	15%
3. In what percentage of patients do you find evidence of urethral stenosis?

A. Less than 25%	69%
B. 25–50%	17%
C. 50–75%	9%
D. Over 75%	4%
4. In what percentages of patients that do you perform urethral dilatation on, do you see significant long-term improvement?

A. Less than 25%	17%
B. 25–50%	38%
C. 50–75%	36%
D. Over 75%	9%
5. What percentage of your patients require repeat dilatation if they develop recurrent problems or fail to improve after initial dilatation?

A. Less than 25%	54%
B. 25–50%	34%
C. 50–75%	8%
D. Over 75%	4%
6. What form of anaesthesia do you use?

A. Local anaesthesia 'lignocaine' (patients tolerate it well)	18%
B. General anaesthesia	90%
C. Other (please list)	2%
7. Up to which size dilator (French) do you use?

A. Up to 20 Fr	3%
B. Up to 26 Fr	22%
C. Up to 32 Fr	45%
D. Up to 36 Fr	19%
E. Greater than 36 Fr Hegar dilators	9%
8. How long is it since you started your career as a consultant urologist?

A. 0–5 years	31%
B. 6–10 years	25%
C. 11–15 years	19%
D. 16–20 years	11%
E. 21–30 years	11%
F. More than 30 years	3%