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Abstract no.: PR. 6

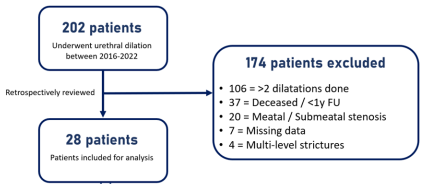
Does urethral catheterisation after urethral dilation affect the recurrence rate? – Data from a 6-year retrospective cohort

Leung THJ, Mak CWH, Pun TC, Leung LH, Chan KW
Department of Urology, Department of Surgery
Kwong Wah Hospital

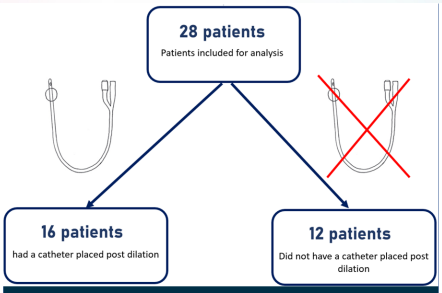
BACKGROUND

Dilation of male urethral strictures is one of the most popular initial treatments options.
It is clear from the literature that repeated dilations is a palliative measure and patients with ≥3 dilations will have a 100% recurrence rate.
Meanwhile, urethral catheterisation post-dilation has been a common practice amongst urologists as it theoretically prevents spongiofibrosis induced by urine extravasation, although there has been no consensus on its efficacy.
This study aims to assess the effect of urethral catheterisation on stricture recurrence rates after dilation.

METHODS



Records of 202 patients who underwent urethral dilation at our centre between 2016 and 2022 were reviewed. Patient demographics, pre-procedure workup, cystoscopic findings and post-procedure outcomes were analysed. The independent t and chi-square tests were employed for statistical analyses.
Recurrent stricture was defined as inability to pass a 16Fr flexible cystoscope on repeat examination or uroflowmetry finding of a plateau pattern with Peak flow rate (Qmax) <10ml/s.
Patients who had follow-up duration less than 1 year, those with meatal or submeatal stenoses, multi-level or recurrent stricture after more than 2 dilations were excluded.



RESULTS

	No Catheter	Catheter
Mean Age	72.91	72.12
Mean FU duration	1130 days	1107 days
Smoker	1/12 (8%)	2/18 (11%)

The two groups were comparable in terms of age, follow-up duration and smoking status. 4 out of 16 patients (25%) in the catheter group and 3 out of 12 (25%) in the no-catheter group did not have repeat cystoscopy and only had uroflowmetry post dilation.

Catheter use was not associated with recurrence (p = 0.445)

	No Recurrence	Recurrence
Catheter	5 (42%)	7 (58%)
No Catheter	9 (56%)	7 (44%)

Stricture site was the only factor significantly associated with stricture recurrence (Penile > Bulbous; p = 0.043)

Site of Stricture	No Recurrence	Recurrence
Penile urethra	2 (22%)	7 (78%)
Bulbous urethra	12 (63%)	7 (37%)

The use of peri-procedural antibiotics did not affect the stricture recurrence rate (p = 0.663). 75% of the 28 patients included for analysis had received peri-procedural antibiotics. All patients with positive urine cultures before dilation received peri-procedural antibiotics.

Peri-procedural antibiotics	No Recurrence	Recurrence
No	3 (43%)	4 (57%)
Yes	11 (52%)	10 (48%)

In the catheter group, the size of the catheter, duration of catheterisation and the material of the catheter (Silicone vs Latex) did not affect the recurrence rate

DISCUSSION

This single-centre retrospective cohort study found that post dilation urethral catheterisation was not associated with reduced risk of recurrent urethral stricture. However, prospective randomised trials are required to validate these findings in view of the retrospective nature of the current study with small sample size. Clinical utility of the findings from this study is also limited by the lack of standardization in the method of dilation, use of peri-operative antibiotics, size and duration of catheterization, choice of follow-up investigations and schedule.

In clinical practice, the guidelines for the management of urethral stricture authored by Mundy should be adhered to, which suggests keeping a catheter for 3 days after urethrotomy or dilatation to reduces the risk of early postoperative urine extravasation and infective complications. This suggestion is, in turn, based on a prospective study published in the 1980s by Desmond et. al. which found that duration of catheterisation after urethotomy that is less than 3 days resulted in higher recurrence, and that, long-term catheterisation for 28 days significantly reduced stricture recurrence, particularly in patients who had fewer than 5 previous operative treatments for their urethral stricture. However, it should be noted that these results were based on patients who underwent direct vision urethotomy rather than dilation.

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