

THE EFFECTIVENESS OF OTIS URETHROTOMY COMBINED WITH SIX WEEKLY URETHRAL DILATIONS UNTIL 40 F IN THE TREATMENT OF BLADDER OUTLET OBSTRUCTION IN WOMEN: A PROSPECTIVE STUDY.

Hypothesis / aims of study

To evaluate the effectiveness of Otis urethrotomy combined with six weekly urethral dilations until 40 French (F) in the treatment of women with urodynamic diagnosis of bladder outlet obstruction (BOO).

Study design, materials and methods

Women diagnosed with lower urinary tract symptoms underwent a complete urodynamic evaluation. Severity of symptoms and quality of life were assessed with International Prostate Symptom Score (IPSS) and Quality of Life (QoL) questionnaires. We used the diagnostic algorithm of Massey and Abrams [1] to assess bladder outlet obstruction in women. BOO was defined as the presence of two or more of the following: maximum flow rate (Qmax) <12 ml/s, detrusor pressure at maximum flow (PdetQmax) >50 cmH₂O and Abrams-Griffiths urethral resistance factor (URF) greater than 0,2. Ten out of 25 women diagnosed with BOO met the criteria. All women underwent Otis urethrotomy to 40 F and six weekly urethral dilations until 40 F. After six months all patients underwent free uroflowmetry. Moreover post voiding residual (PVR), IPSS-QoL were recorded.

Results

Six months post-operatively there was a significant improvement in all parameters: IPSS (p=0.001), QoL (p=0.001), Voided volume (p=0,055), Qmax (p=0.001), PVR (p=0.005). Five women had close follow up during an average of 82 months. They maintained improved QoL (p<0.005) and low PVR (p<0.002). All other parameters lost their statistical significance (Table 1).

Interpretation of results

Our study showed that Otis urethrotomy combined with six weekly urethral dilations improved all clinical and urodynamic parameters in women with evidence of BOO not related to detrusor sphincter dyssynergia or obvious functional and anatomical pathology. QoL and PVR improvements are maintained long term. Otis urethrotomy probably results in: Temporary partial paralysis of the external sphincter in patients with detrusor – sphincter dyssynergia [2]; bladder neck or urethral stricture incision [3]; urethral denervation due to dilatation.

Concluding message

BOO in women is a rare entity with difficult diagnostic and therapeutic approach. Otis urethrotomy combined with urethral dilations could offer an effective treatment for these patients.

Table 1 Urodynamic and clinical findings preoperatively, 6 months and 82 months post-operatively

	Preoperatively	6 months post-operatively	82 (55-107) months post-operatively
IPSS	21,5 (17 - 28)	11 (10 – 15) p=0.001	22 (18-28)*
QoL	5 (5 – 6)	3 (3-4) p< 0.0001	4 (p<0.005)
Voiding Volume	216 ml (157-762)	312 ml (205 – 768) p=0.055	315,8 ml (92-1038)*
Qmax	12 ml/sec (6 –15)	27,5 ml/sec (11,6 – 53) p=0.001	10,3 ml/sec (6-12.4)*
PdetQmax	68 cmH ₂ O (40 – 87)	n.a	n.a
PVR	170ml (35 -610)	27,5 ml (0-30) p=0.005	42ml (15-80) p<0.002
URF	0.44 (0.22 – 0.52)	n.a	n.a

*no statistical significant difference

IPSS, International Prostate Symptom Score; QoL, Quality of Life; Qmax, Maximum flow rate; PdetQmax, Detrusor pressure at maximum flow rate; PVR, Post Voiding Residual; URF, Urethral Resistance Factor

References

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3. Smith PJ. The management of the urethral syndrome. British Journal of Hospital Medicine. 1979; 22:78–87.

Disclosures

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