

FALACIES OF LEAK POINT PRESSURE IN PATIENTS WITH NEUROGENIC BLADDER

Hypothesis / aims of study

Leak Point pressure (LPP) a simple urodynamic parameter with its usefulness in female incontinence has also been promoted to evaluate neurogenic bladder dysfunctions.^{1,2} Its value is limited since it does not indicate the duration of sustained rise in bladder pressure with associated detrusor sphincter dyssnergia (DSD). This is detrimental to the upper tracts.³ In this study LPP values were compared in spinal injured patients with changes in bladder compliance, maximum bladder pressures and duration of sustained rise in bladder pressure before and after transurethral sphincterotomy (TURS) to validate its usefulness.

Study design, materials and methods

Forty male spinal injured patients with a mean age of 46.2 years (range 23-70) were evaluated with multichannel urodynamic equipment; Studies were taped, and also transrectal linear array ultrasonic images of the bladder/urethral anatomy were archived during filling and voiding to compare pre and post surgery morphology and urodynamic parameters.

Results

No significant change in the mean maximum voiding pressure and LPP was observed following TURS; However, there was a significant drop in maximum voiding pressures if the initial pressures were over 50 cm H₂O with a significant reduction (69%) in the duration of sustained voiding pressure following TURS (p= 0.005). Mean compliance value dropped by 34% after surgery. The mean post void residual urine dropped to 60 ml from 250 ml with significant reduction in autonomic dysreflexia.

Interpretation of results

There was no significant drop in LPP when there was a significant drop in sustained voiding pressures along with improved clinical voiding parameters. This indicates weakness in depending on LPP values as a significant urodynamic parameter in evaluating in patients with neurogenic bladder.

Concluding message

This study shows that the value of LPP as an urodynamic parameter is limited and could be misleading in evaluating neurogenic bladder patients. Complete cystometrographic profile gives a better perspective in evaluating these patients particularly following TURS.

References

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