

## APPLYING PELVIC FLOOR MUSCLE TRAINING UNDER BIOFEEDBACK IN PATIENTS WITH URINARY INCONTINENCE AFTER TUR AND HOLMIC LASER ENUCLEATION OF BENIGN PROSTATIC HYPERPLASIA

### Hypothesis / aims of study

The risk of developing urinary incontinence following transurethral resection of the prostate (TURP) for BHP is close to 3.4 percent (Yucel M., 2013). Up to 44 percent of surgically treated patients run the risk of developing stress UI following holmic laser enucleation of the prostate (HoLEP) (Endo F., 2010). This complication is due to injury of the bladder sphincter. Training pelvic floor muscles is used as the first-line therapy in the treatment of urinary incontinence after transurethral interventions for BHP. The authors have compared the severity of UI and the efficacy of training pelvic muscles via feedback after TURP and HoLEP.

### Study design, materials and methods

Pelvic floor muscle training under biofeedback control was employed in 35 patients with urinary incontinence after transurethral surgery for benign prostatic hyperplasia.

The patients had a median age of 70 years (range: 60-80)<sup>1</sup>, the prostate volume was 65 (40-115) cc, with PSA level of 2.6(1-5.4) ng/ml, the volume of resected tissue was 21( 16-27) cc, the period of bladder draining was 33 (25-42) hours. TURP was performed on 31 patients and 13 patients underwent HoLEP.

The total score according to the ICIQ-UI scale was 17 (12-21). The duration of UI- 3 (1-18) months. All patients practiced biofeedback –assisted pelvic floor muscle training exercises for urinary incontinence.

### Results

There were no differences in patients with urinary incontinence after TURP and HoLEP by age ( $p=0.061$ )<sup>2</sup>, by initial size of the prostate ( $p=0.724$ ), by PSA level ( $p=0.625$ ), by the volume of resected tissue ( $p=0.578$ ). There were no appreciable differences in the time it took to drain the bladder after surgery in patient groups ( $p=0.578$ ). The total ICIQ-UI score showed no significant differences among patient groups ( $p=0.88$ ). The duration of UI in patient groups also did not vary significantly ( $p=0.06$ ).

The median time to recover urinary continence secondary to pelvic floor muscle training with biofeedback after TURP was 3.3 months. The median time to recover urinary continence given pelvic muscle training after HoLEP was 5.2 months. There were no significant differences among the groups ( $p=0.238$ )<sup>3</sup>

### Interpretation of results

There were no significant differences with respect to the severity of symptoms of urinary incontinence after TURP and HoLEP in the comparable periods of observation. The urinary continence recovery time after HoLEP is much longer in comparison with patients following TURP, but showed no statistically significant disparities.

### Concluding message

The type of transurethral surgery used for benign prostatic hyperplasia did not impact on the severity of urinary incontinence symptoms. Pelvic floor muscle training through biofeedback speeds up recovery of urinary continence in patients after TURP and HoLEP. The speed of urinary continence recovery shows no significant difference after TURP and HoLEP.

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<sup>1</sup>The median, 5<sup>th</sup> and 95<sup>th</sup> percentiles are shown

<sup>2</sup> The Mann-Whitney test is used

<sup>3</sup> The log-rank test is used

### Disclosures

**Funding:** No **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Ethics Committee of Sechenov First Moscow State Medical University **Helsinki:** Yes **Informed Consent:** Yes