

## DETRUSOR OVERACTIVITY IS A PREDICTIVE FACTOR FOR NEGATIVE SURGICAL OUTCOME FOLLOWING HOLMIUM LASER ENUCLEATION OF PROSTATE: A PROSPECTIVE SHORT-TERM STUDY

### Hypothesis / aims of study

Predictive factors of the outcome of surgery are important when selecting patients eligible for surgery. There has been debate over predictive factors of prostate surgery. Holmium laser enucleation of prostate (HoLEP) has become a popular surgical treatment for benign prostatic hyperplasia (BPH). It is a relatively new surgical method and predictive factors of postoperative results of HoLEP have not yet been established. We investigated predictive factors for successful outcome for patients following HoLEP.

### Study design, materials and methods

: A total of 154 consecutive patients between February 2010 and March 2012 undergoing HoLEP were identified from the prospective BPH Database Registry of our hospital. The patients were divided into satisfactory and unsatisfactory groups based on the IPSS and uroflowmetry six months postoperatively. Satisfactory outcome was defined as postoperative IPSS of  $\leq 7$ ,  $\geq 50\%$  improvement of IPSS from baseline, a postoperative Qmax of  $\geq 15$  mL/sec, or  $\geq 50\%$  improvement in Qmax from baseline. Baseline demographics and intraoperative parameters were analyzed when comparing the two groups.

### Results

The mean age was 68.2 ( $\pm 6.1$ , SD) years, prostate volume 70.0 ( $\pm 6.1$ ) ml, PSA 4.3 ( $\pm 3.7$ ) mg/dl, total operation time 60.9 ( $\pm 29.4$ ) min, postoperative hospital stay 1.2 ( $\pm 0.5$ ) days, and catheter time of 1.3 ( $\pm 1.2$ ) days. 122 patients (79.8%) met satisfactory criteria. A univariate analysis proved that feelings of incomplete emptying, increased daytime frequency, slow stream, straining, total IPSS symptom score, quality of life score, presence of detrusor overactivity and bladder outlet obstruction (BOO) were significantly different between the two groups ( $p < 0.05$ ). Other parameters including age, BMI, prostate volume or intraoperative parameters were not statistically significant when comparing the two groups ( $p > 0.05$ ). A multivariate analysis showed that presence of detrusor overactivity was the only significant parameter (HR 6.65; CI 1.64–27.0;  $p = 0.008$ ). However, presence of BOO was not a predictive parameter for surgical outcome (HR 1.05; CI 0.40–2.74;  $p = 0.91$ ).

### Interpretation of results

Patients with detrusor overactivity had poorer clinical outcome of success than the others without detrusor overactivity after HoLEP.

### Concluding message

Presence of detrusor overactivity was a negative predictive factor for surgical success at postoperative 6 months following HoLEP. Analysis of long-term follow-up results is necessary based on the IPSS and uroflowmetry in the future.

### Disclosures

**Funding:** none **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** IRB of Seoul National University Hospital **Helsinki:** Yes **Informed Consent:** Yes