

## RELATIONSHIP BETWEEN PREOPERATIVE VARIABLES AND HOLMIUM LASER ENUCLEATION OF THE PROSTATE

### Hypothesis / aims of study

Holmium laser enucleation of the prostate (HoLEP) is a recent step in enabling a true anatomical enucleation of prostatic tissue. To our knowledge, there are no study that have analysed the influence of variables on the outcome of HoLEP. In the present study we retrospectively analysed the influence of preoperative variables on the outcome of HoLEP.

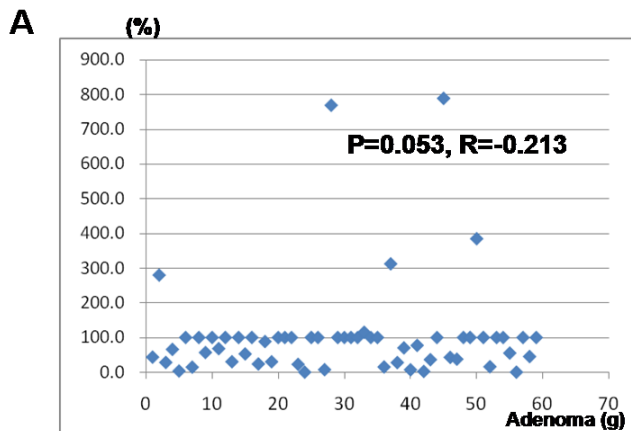
### Study design, materials and methods

We retrospectively reviewed the records of 230 patients who had HoLEP at our institution from April 2009 to July 2010. Patients with associated neurogenic bladder or urethral stricture were excluded from the study. Demographic data and perioperative variables were recorded and analysed.

### Results

Mean age of patients, preoperative prostate-specific antigen level and body mass index was 67.8±6.9 years, 4.8±6.8ng/ml and 23.7±2.6, respectively.

The mean prostate and adenoma size was 55.4±30.7 and 28.5±18.0ml. Mean duration of begin prostate hyperplasia and rate of previous transurethral prostate surgery was 6.4±6.3 years and 15.3% (n=27). Mean enucleation and morcellation time was 67.2±39.5 and 15.5±13.0 minutes. Intraoperative complications were 5 cases (2.8%) which included capsular perforation with (n=3) or without (n=2) blood transfusion. Postoperative complications were 34 cases (19.3%) which were transient incontinence 15 (8.5%), foley re-catheterization 9 (5.1%), urethral stricture 6 (3.4%) and retrograde ejaculation 4 cases (2.2%). The increase in postoperative maximal flow rate was 138.4±152.1% but was not statistically significantly correlated to peoperative variables (p=0.067). Post-voiding residual volume dropped 103.7±145.1% without statistical correlation to preoperative variables (p=0.472), but the larger adenoma was, the more post-voiding residual volume dropped (p=0.053). The mean procedure efficiency was 0.2±0.2g/min, which was statistically significantly correlated to larger prostate and adenoma weight (p<0.001), but had the most statistical correlation to adenoma weight (coefficient of correlation=0.938).



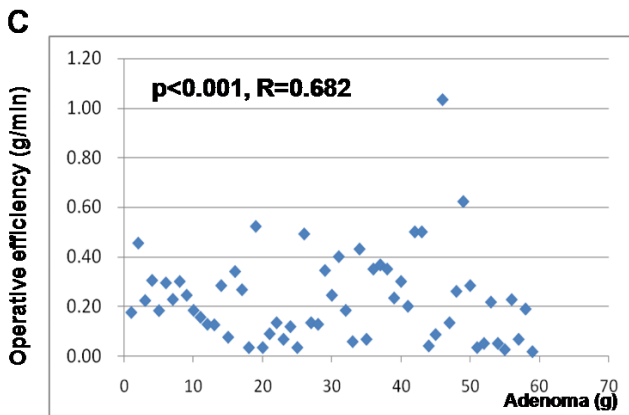
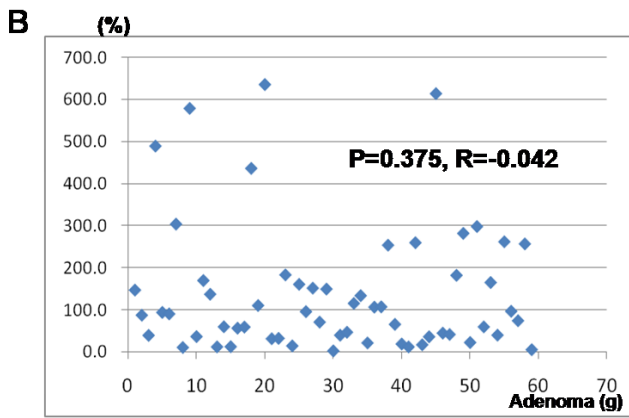


Figure 1. Changes of post void residual volume (A), maximum flow rate (B) and operative efficiency (C) according to the adenoma weight

Interpretation of results

HoLEP is a safe and effective procedure for treating BPH independent of prostate size.

Concluding message

Adenoma weight is the most important preoperative factor associated with decrease in postvoiding residual volume and increases in procedure efficiency.

<b>Specify source of funding or grant</b>	<b>NONE</b>
<b>Is this a clinical trial?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>Yes</b>
<b>Specify Name of Ethics Committee</b>	<b>PNUH IRB (Pusan National University Hospital Institutional Review Board)</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>Yes</b>