

THE EFFICACY AND SAFETY OF HOLMIUM LASER ENUCLEATION OF THE PROSTATE IN LARGE PROSTATES EXCEEDING 100 GRAMS.

Hypothesis / aims of study

Holmium laser enucleation of the prostate (HoLEP) can be successfully performed independent to the size of the prostate. The present study aims to evaluate the efficacy and safety of HoLEP in patients with prostate volume exceeding 100 grams.

Study design, materials and methods

The data of 32 patients who had prostate volume exceeding 100 grams and undergone HoLEP at our institution from September 2009 to August 2014 was retrospectively reviewed. Age, prostate volume measured by transrectal ultrasonography, and serum prostate specific antigen (PSA) of the patients were recorded preoperatively. Perioperative parameters such as operation time (enucleation time and morcellation time), total energy used, catheterization time, and hospital stay were also reviewed. International prostate symptom score (IPSS) and quality of life (QoL), peak urinary flow rate (Qmax), and postvoiding residual urine volume (PVR) were compared between pre- and postoperative measures by using Student's T-test.

Results

The mean patients' age was 73.05 ± 8.34 (58–87) years, mean prostate size was 171.08 ± 30.28 (103–288) g, and mean preoperative serum PSA was 11.5 ± 2.5 (2.81–25.18) ng/mL. The mean enucleation and morcellation time was 108.22 ± 30.55 (59–220) and 51.89 ± 12.23 (18–150) minutes, respectively, and the mean catheterization time and hospital stay was 60.89 ± 18.65 (48–144) hours and 5.12 ± 2.1 (3–8) days, respectively. At postoperative follow up, the mean IPSS and QoL was significantly improved from 24.3 ± 8.0 to 9.9 ± 5.5 ($p < 0.001$) and from 5.0 ± 1.0 to 2.4 ± 1.6 ($p < 0.001$), respectively. The mean peak urinary flow rate was significantly increased from 9.7 ± 5.6 mL/s to 20.6 ± 12.4 mL/s ($p < 0.001$) and mean PVR was significantly decreased from 109.4 ± 96.9 mL to 74.7 ± 51.1 mL ($p < 0.05$). Major complications were not encountered in all patients.

Interpretation of results

Significant improvement was noted in the mean values of IPSS, QoL, Qmax, and PVR at postoperative follow-up compared to those measured preoperatively.

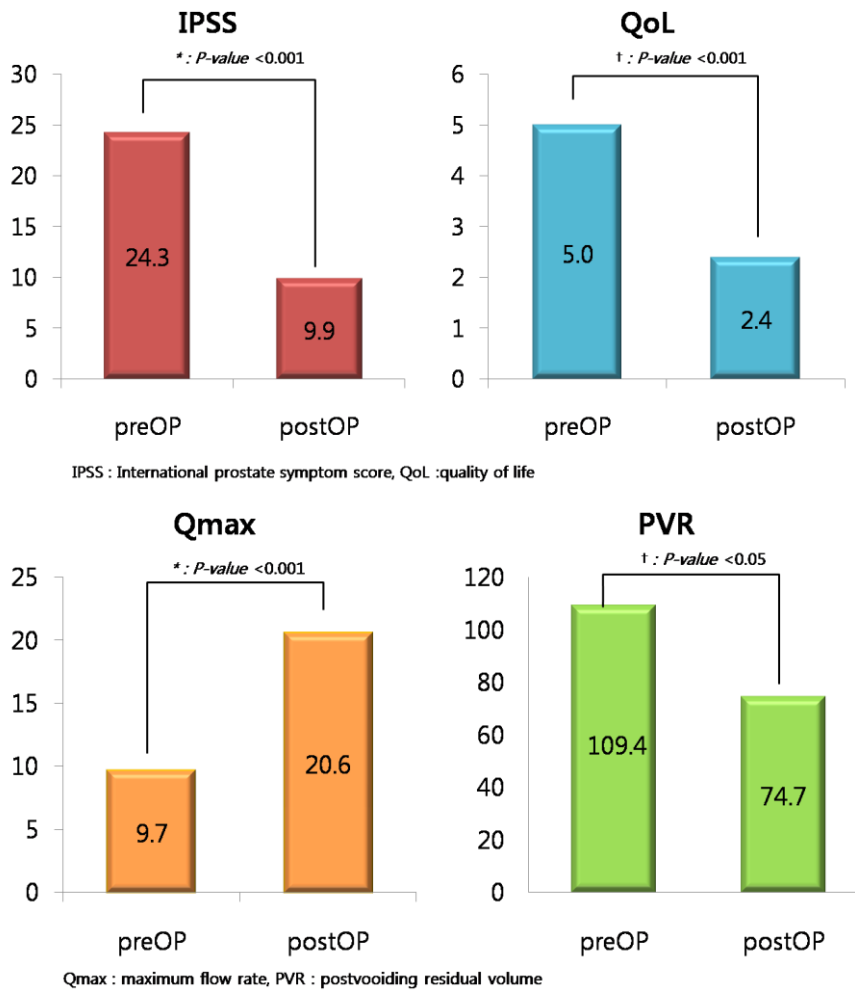
Concluding message

Holmium laser enucleation of the prostate is a safe and effective surgical method to manage large prostates exceeding 100 g.

Table 1. Preoperative and perioperative findings

Findings	Mean \pm SD (range)
Age (yr)	73.05 ± 8.34 (58–87)
TRUS prostate volume (g)	171.08 ± 30.28 (103–288)
PSA (ng/mL)	11.5 ± 2.5 (2.81–25.18)
Enucleation time (min)	108.22 ± 30.55 (59–220)
Morcellation time (min)	51.89 ± 12.23 (18–150)
Resected volume (g)	127.85 ± 29.24 (100–195)
Hospital stay (d)	5.12 ± 2.1 (3–8)
Catheterization time (h)	60.89 ± 18.65 (48–144)

Fig 1. Comparison between pre- and postoperative parameters



Disclosures

Funding: None **Clinical Trial:** Yes **Public Registry:** No **RCT:** No **Subjects:** HUMAN **Ethics Committee:** PNUH-IRB Helsinki: Yes **Informed Consent:** Yes