

FACTORS CONTRIBUTING TO THE AVOIDANCE OF RETROGRADE EJACULATION AFTER HOLMIUM LASER ENUCLEATION OF THE PROSTATE IN BENIGN PROSTATIC HYPERPLASIA PATIENTS

Hypothesis / aims of study

Certain demographic or perioperative factors may contribute to avoid retrograde ejaculation after Holmium Laser Enucleation of Prostate (HoLEP) in patients with benign prostatic hyperplasia (BPH). The present study aims to identify the factors that contribute to avoid retrograde ejaculation following HoLEP in BPH patients.

Study design, materials and methods

A total of 93 consecutive BPH patients who underwent HoLEP between October 2014 and September 2016 were included in the study. HoLEP was performed by preserving verumontal hood, bladder neck, and apex of the adenoma. Demographic data of the patients such as age, International Prostate Symptom Score (IPSS), quality of life (QoL) score, prostate volume, and serum prostate specific antigen (PSA) along with perioperative parameters such as hospitalization time, time to catheter removal, enucleation time, morcellation time and weight of resected prostate were collected and compared between the patients with or without retrograde ejaculation. Logistic regression analysis and receiver operating characteristic analysis were conducted by using the collected data to identify the factors that contribute to avoid retrograde ejaculation following HoLEP.

Results

Among the 93 patients, 36 and 57 patients presented orthostatic ejaculation and retrograde ejaculation after HoLEP, respectively. The Demographic data and perioperative parameters of the patients are summarized in Table 1 and 2, respectively. Univariable analysis presented that PSA ($p = 0.04$) and resected volume ($p = 0.03$) were associated with retrograde ejaculation avoidance (Tables 1 and 2). In multivariable analysis, resected volume was the only variable which was able to predict the avoidance of retrograde ejaculation after HoLEP (Table 3, $p = 0.02$; OR: 0.88; 95%CI: 0.80–0.98). Additionally, the principal cut-off value of resected volume (area under the ROC curve = 0.655) was 5.5g with a sensitivity of 0.63 and a specificity of 0.65 for the avoidance of retrograde ejaculation after HoLEP (Fig 1).

Interpretation of results

Resected adenoma volume after HoLEP is a significant perioperative factor in the avoidance of retrograde ejaculation after HoLEP. Patients with smaller resected adenoma volume after HoLEP is expected to have lesser chance of retrograde ejaculation.

Concluding message

Smaller resected volume during HoLEP is significantly correlated to the avoidance of retrograde ejaculation.

Table 1. Patient characteristics

Parameters	No retrograde ejaculation (n = 36)	Retrograde ejaculation (n = 57)	P value
Age (yr)	64.81 ± 4.98	66.21 ± 7.13	0.34
IPSS	21.29 ± 8.80	19.89 ± 9.75	0.65
QoL	3.28 ± 1.42	3.65 ± 1.55	0.42
Prostate volume (g)	38.87 ± 16.26	47.47 ± 17.90	0.06
PSA (ng/mL)	4.25 ± 5.9	3.20 ± 2.15	0.04
Qmax (mL/s)	11.62 ± 7.28	14.02 ± 8.57	0.07
PVR (mL)	76.22 ± 65.53	68.15 ± 62.57	0.29

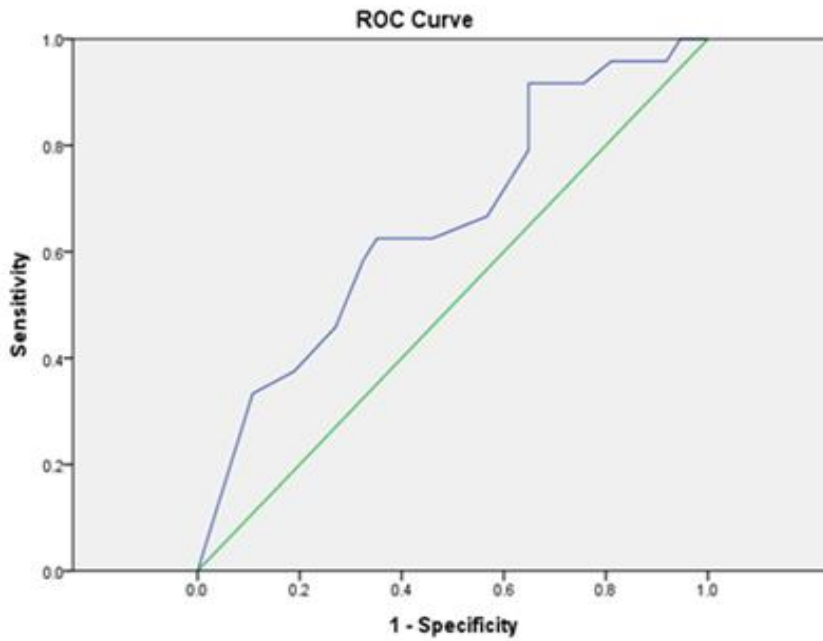
Table 2. Perioperative parameters in each group

Parameters	No retrograde ejaculation (n = 24)	Retrograde ejaculation (n = 37)	P value
Hospitalization time (d)	3.12 ± 1.01	3.52 ± 1.10	0.30
Time to catheter removal (h)	58.11 ± 14.85	62.97 ± 24.15	0.15
Enucleation time (min)	30.91 ± 25.24	35.10 ± 22.04	0.29
Morcellation time (min)	2.54 ± 2.12	3.47 ± 3.58	0.10
Resected volume (g)	6.29 ± 8.24	12.13 ± 10.41	0.03

Table 3. Multiple logistic regression analysis of the factors affecting the avoidance of retrograde ejaculation after HoLEP

Parameters	OR (95% CI)	p value
Serum PSA (ng/mL)	1.08 (0.89–1.19)	0.10
Resected volume (g)	0.88(0.80–0.98)	0.02

Fig 1. ROC curves of resected volume related to the avoidance of retrograde ejaculation after HoLEP.



Disclosures

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