

THE RELATIONSHIP BETWEEN INTRAVESICAL PROSTATIC PROTRUSION AND POSTOPERATIVE OUTCOMES IN PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA

Hypothesis / aims of study

Intravesical prostatic protrusion (IPP) has been reported to represent non-invasive method to estimate bladder outlet obstruction. However, there is no report on the relationship between IPP and postoperative outcomes. We evaluated significance of IPP to predict postoperative outcomes in patients with benign prostatic hyperplasia.

Study design, materials and methods

The records of 92 patients who underwent transurethral prostatectomy were reviewed. We divided patients into two groups based on the degree of IPP: the significant IPP group (n=23, greater than 10 mm) and the no significant IPP group (n=69, 10 mm or less). We analyzed preoperative and postoperative parameters, such as international prostatic symptoms score (IPSS), maximum urinary flow rate (Qmax), postvoid residual urine (PVR), IPP and prostate volume (PV). IPSS was subdivided into storage (IPSS-s) and voiding (IPSS-v) symptoms. Logistic regression analysis was performed to identify parameters which could predict outcomes of transurethral prostatectomies.

Results

Mean patients; age was 71 years old. Preoperative parameters were not different between 2 groups except PV(51.3±35cc vs 71.7±29.3cc) and IPP. Postoperative changes in IPSS, IPSS-v and QoL were higher in the significant group compared to the no significant group (Table 2). Changes in IPSS-s, Qmax and PVR were not different between 2 groups.

Table 1. Postoperative changes in parameters

Change in parameters	IPP ≤ 10mm (n=69)	IPP >10mm (n=23)	p-value
IPSS (% change)	9.5±7.4 (41±26)	11.1±6.6 (55±25)	0.025
IPSS-v (% change)	6.2±5.1 (45±32)	7.6±4.6 (65±30)	0.010
IPSS-s (% change)	3.5±3.1 (34±24)	3.6±2.8 (40±30)	0.376
QoL (% change)	2.1±1.4 (41±36)	2.7±1.4 (58±29)	0.043
Qmax	6.1±8.2	8.0±5.6	0.310
PVR	53.8±112.1	59.6±161.7	0.849

Logistic regression analysis revealed that IPP was not an independent factor to predict outcomes of transurethral prostatectomy.

Interpretation of results

Patients with significant IPP achieved more profound improvement of total IPSS and voiding symptom score. QoL improvement was also better in significant IPP group. Improvement of Qmax was also better in this group, but without statistical significance. Though we couldn't show that IPP is an independent prognostic factor predicting the outcome of transurethral prostatectomy, we could find some tendency of better results in severe IPP group. Relatively small number of cases can explain the negative result of logistic regression analysis in some extent.

Concluding message

Intravesical prostatic protrusion is not an independent parameter for predicting postoperative outcomes in patients with benign prostate hyperplasia. But, surgeons can expect better postoperative outcomes of IPSS and QoL changes in patients with significant IPP.

References

- Keqin Z, Zhishun X, Jing Z, Haixin W, Dongqing Z, Benkang S. Clinical significance of intravesical prostatic protrusion in patients with benign prostatic enlargement. *Urology*. 2007;70(6):1096-9
- Chia SJ, Heng CT, Chan SP, Foo KT. Correlation of intravesical prostatic protrusion with bladder outlet obstruction. *BJU Int*. 2003;91(4):371-4

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Is this a clinical trial?	Yes
Is this study registered in a public clinical trials registry?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	No
This study did not require ethics committee approval because	It is retrospective chart review study
Was the Declaration of Helsinki followed?	Yes
Was informed consent obtained from the patients?	No