

## CORRELATION OF PROSTATIC URETHRAL LENGTH WITH THE SEVERITY OF URINARY SYMPTOM AND PEAK FLOW RATE IN MEN WITH BENIGN PROSTATIC HYPERPLASIA

### Hypothesis / aims of study

To evaluate the effects of prostatic anatomical factors on male lower urinary tract symptoms (LUTS) and the peak flow rate (Qmax) in patients with benign prostatic hyperplasia (BPH).

### Study design, materials and methods

Records were obtained from a prospectively maintained database of first-visit men with LUTS/BPH. Patients whose total prostate volume (TPV) was greater than 40 mL were excluded; 156 patients were enrolled in the study. The TPV, intra-vesical prostatic protrusion (IPP), prostatic urethral angle (PUA) and prostatic urethral length (PUL) were measured by trans-rectal ultrasonography. LUTS were evaluated using the International Prostate Symptom Score (IPSS). Uroflowmetric measurements were also made.

### Results

In univariate analysis using Pearson correlation analysis, PUA ( $r=0.046$ ,  $P=0.571$ ), TPV ( $r=0.043$ ,  $P=0.597$ ), IPP ( $r=-0.108$ ,  $P=0.181$ ) and PUL ( $r=0.104$ ,  $p=0.198$ ) was not significantly correlated with the IPSS. In multivariate analysis using multiple linear regression analysis, PUL was significantly associated with IPSS (Standardized Coefficient =0.525,  $t$  value= 2.644,  $p=0.009$ ) and with Qmax (Standardized Coefficient =0.554,  $t$  value= 2.399,  $p=0.018$ ). For IPSS of 20 or greater, the area under the ROC curve (AUC) of PUL was 0.557 and the cut-off value was 3.8 cm. When Qmax was 10 mL/s or less, the AUC of PUL was 0.554 and the cut-off value was 4.1 cm.

### Interpretation of results

PUL has a significant association with symptom severity and Qmax among prostatic anatomical factors analyzed in men with LUTS and BPH.

### Concluding message

PUL might be considered as an important clinical factor in male LUTS management. Further study may be needed.

### References

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### Disclosures

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