

URGENCY IS ASSOCIATED WITH BENIGN PROSTATIC ENLARGEMENT OF JAPANESE MALE OVER 50 YEARS

Aims of Study

Lower urinary tract symptoms (LUTS) have been thought of as being weakly or not correlated with benign prostatic enlargement (BPE). However, LUTS of the old male are the symptomatic complex brought about by BPE, bladder outlet obstruction (BOO), abnormal detrusor activity related to aging, and so on. As for the old male that has no obvious pathology other than BPE, LUTS can be considered as being developed along with the enlargement of the prostate. The aim of this study is to identify the symptom that is associated with prostate volume. The symptom associated with BPE will become a clinical clue not only for understanding the way of the development of LUTS related to BPE but also for predicting the presence of BPE in old men without any obvious pathology other than possible BPE. We correlated the score of each symptoms of international prostate symptom score (IPSS) and the total score of IPSS with prostate volume, age, maximum flow rate (Qmax), voided volume (VV) and post void residual (PVR).

Methods

All male patients, over 50 years old, who visited our hospital for the treatment of LUTS from June, 1996 to June, 2002 were selected from the patients' data file of our hospital. The patients were excluded from the study if they had neurogenic bladder dysfunction, prostate cancer, urinary tract infection, bladder stone, previous prostatic surgery, previous antiandrogen therapy, and the other prostate medication (plant extracts, alpha adrenoceptor blocker) within a month before visiting our hospital. Finally, 167 patients were included into the analysis. All patients were evaluated with IPSS, prostate volume, free uroflowmetry (Q max and VV) and PVR. The significance of correlation was determined using the Pearson test, and multivariate regression analysis was done using commercially available software.

Results

Total score of IPSS was weakly correlated with prostate volume ($p=0.04$) and Q max ($p=0.02$). When correlation was tested for each symptom of IPSS, urgency was the only symptom with significant correlation with prostate volume ($p=0.01$). The score of urgency was also correlated with VV ($p=0.03$) and age ($p=0.04$). The score of nocturia was correlated with VV ($p=0.02$) and age ($p=0.001$). The other symptoms listed on IPSS had no significant correlation with prostate volume, age, Q max, VV and PVR.

Stepwise multivariate regression was performed to evaluate which a combination of the parameters other than symptoms could better predict the severity of urgency. The combination of prostate volume ($p=0.02$) and VV ($p=0.002$) was the best for the prediction of the severity of urgency.

The probability of BPE (prostate volume of 30 ml or more) was 35% in the patients without urgency (score point of 0), 54% with urgency of slight degree (1 or 2), and 71% with urgency of moderate to severe degree (3 to 5).

Conclusions

Urgency estimated with IPSS questionnaire was correlated positively with prostate volume and also negatively with VV, which indicates the close association of the development of urgency and BPE in Japanese male. Urgency is likely to be one of the clinical clues indicative of BPE in patients who do not have any causes other than possible BPE and aging for LUTS .