

## RELATIONSHIP BETWEEN VARIOUS CLINICAL FACTORS AND LUTS SUGGESTIVE OF BENIGN PROSTATE HYPERPLASIA

### Hypothesis / aims of study

To explore the relationship between different clinical factors and lower urinary tract symptoms (LUTS) suggestive of benign prostate hyperplasia (BPH), in order to understand the impact of the risk factors on LUTS caused by BPH .

### Study design, materials and methods

548 patients with BPH were enrolled from July 2006 to October 2011 and their clinical data were studied retrospectively. The impact of various clinical factors such as age, medical history, maximum urinary flow rate ( $Q_{max}$ ), total prostate volume, transition zone volume, transition zone index, total PSA, f/tPSA and prostatic inflammation on IPSS scores were analyzed, and multiple linear regression analysis was also conducted.

### Results

Among all the clinical factors mentioned above, age, transition zone volume,  $Q_{max}$ , PSA and prostatic inflammation had a significant impact on the IPSS score. IPSS scores increased significantly with the increase of age and transitional zone volume, while IPSS scores increased significantly with the reduction in  $Q_{max}$  ( $P<0.05$ ). IPSS scores were significantly higher in the group of  $PSA\geq 4ng/ml$  than that of  $PSA<4ng/ml$  ( $P<0.05$ ), however, there was no difference between the group of PSA range of 4~10ng/ml and that of  $PSA\geq 10ng/ml$  ( $P<0.05$ ). Patients with prostate inflammation had much higher IPSS score than those patients without prostate inflammation ( $P<0.05$ ). Further analysis by multiple linear regression found that  $Q_{max}$  and prostate tissue inflammation were closely correlated with the IPSS score among all the possible risk factors ( $\beta=-0.807, 5.736; P<0.001$ ).

### Interpretation of results

In clinic, there are a lot of factors which may have effect on the LUTS caused by BPH .

Among these various clinical factors, prostate tissue inflammation and  $Q_{max}$  have a remarkable impact on the severity of LUTS, and other clinical factors such as patient's age, course of medical history, prostate volume and PSA value have a limited impact on the severity of LUTS suggestive of BPH as no significance is found after multiple linear regression analysis.

### Concluding message

This study shows that age, course of the disease, PSA level and prostate volume seems to have no significant effect on IPSS score, however,  $Q_{max}$  and prostate tissue inflammation have significant influence on IPSS score. More in-depth research is still needed in order to alleviate the influence of LUTS caused by BPH on QOL of the patients and provide more effective treatment for BPH patients .

### Disclosures

**Funding:** No **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** it is only analysis of clinical data. **Helsinki:** Yes **Informed Consent:** No