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# CHANGES OF NOCTURIA IN THE INTERNATIONAL PROSTATE SYMPTOM SCORE FOLLOWING MEDICAL OR SURGICAL TREATMENTS FOR THE PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA

## Aims of Study

The International Prostate Symptom Score (I-PSS) is widely used to quantitate symptoms of the patients with benign prostatic hyperplasia (BPH).<sup>1</sup> Nocturia is related to the changes of bladder function with aging process rather than related to BPH itself.<sup>2</sup> We studied the relationship of nocturia with the I-PSS in men with lower urinary tract symptoms due to BPH and evaluated the changes of nocturia in the I-PSS following medical or surgical treatments to determine whether the nocturia score behaves differently.

### **Methods**

We retrospectively analyzed the records of consecutive men with BPH routinely treated at our institution and evaluated by I-PSS before and after treatment between January 2001 and February 2002. A total of 89 men with BPH were enrolled in our study. Baseline symptom score and the change in the score by treatment were analyzed in the patients, particularly focused on nocturia score.

### **Results**

The age of patients ranged from 50 to 87 years old (mean age, 66.0). We divided the patients into subgroups in a dichotomous pattern. Depending on the age, younger than 70 years were 59 and 70 or older were 30 men. Depending on the pattern of the treatment, medical treatment group were 38 and surgical treatment group were 51 men. The mean prostate volume was  $46.6\pm20.1$  cc. Total I-PSS score was changed from  $20.6\pm6.1$  to  $7.9\pm4.9$ . For each parameter, the changes of score were as follows: for emptying ability, the score was changed from  $3.1\pm1.6$  to  $0.9\pm1.1$ , score for frequency from  $2.8\pm1.8$  to  $1.3\pm1.3$ , score for intermittency from  $2.8\pm1.6$  to  $0.7\pm1.2$ , score for urgency from  $2.3\pm1.9$  to  $0.9\pm1.2$ , score for weak stream from  $4.3\pm1.2$  to  $1.9\pm1.7$  and score for hesitency from  $2.6\pm1.5$  to  $1.8\pm1.2$ . Hence, this change was the smallest. The changes of nocturia score in each age group were from  $3.1\pm1.4$  to  $2.1\pm1.2$  in the older group and from  $2.4\pm1.4$  to  $1.6\pm1.2$  in younger group. The changes of nocturia score in each age group were from  $3.1\pm1.4$  to  $2.1\pm1.2$  in the older group and from  $2.4\pm1.4$  to  $1.6\pm1.2$  in younger group. The changes of nocturia score in each treatment group were from  $3.0\pm1.4$  to  $1.7\pm1.1$  in the surgical treatment group and from  $2.1\pm1.3$  to  $1.7\pm1.3$  in the medical treatment group.

#### **Conclusions**

The change of nocturia score of the I-PSS was the smallest in BPH patients. The nocturia score behaves differently in the symptom complex of BPH, partially because it is most confounded by the aging factor. Therefore we think that nocturia may be caused by the change of bladder function with aging rather than obstruction due to BPH only.

### **References**

1. J Urol 1992; 148: 1549. 2. J Urol 2002; 167: 172.

563