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Title: RELATIONSHIPS BETWEEN LOWER URINARY TRACT SYMPTOMS ASSESSED BY ICS-

MALE QUESTIONNAIRE AND BLADDER OUTLET OBSTRUCTION

## Aims of Study:

We investigated the prevalence of symptoms in male lower urinary tract symptom (LUTS) patients and the bothersome of each symptom. And we also evaluated the relationships between symptoms, prostate volume and urodynamic parameters of bladder outlet obstruction (BOO).

## Methods:

The 180 male LUTS patients from 7 urological institutions were enrolled for this study. The ICSmale questionnaire was used for measuring symptom severity and bothersome scale. Transrectal sonogrphy was performed in 100 cases for estimating prostate volume. The urodynamic studies, which includes ICS nomogram and Schaefer linear passive urethral resistance relation (Lin-PURR) were performed in 111 cases among them. Spearman rank correlation, chi-squre test, Newman-Keuls multiple comparison, and linear regression analysis were used as statistical method between a wide range of symptoms and measures of BOO.

## Results:

The mean age of enrolled patients is  $62.4 \pm 7.7$ . The most 5 frequent symptoms are voiding symptoms, such as reduced stream, terminal dribbling, incomplete emptying, intermittency and hesitancy in order. But most 5 bothersome symptoms included 4 storage symptoms, such as dysuria, urge incontinence, pain in bladder, nocturnal incontinence. The 34.4 % of nocturia patients, which occured 2 to 3 times per night felt quite or severe bothersome and only 1.1% of them felt that it was not a problem. In patients of terminal drbbling, which occurred sometimes or occasionally, only 4.7 % of them felt quite or severe bothersome. The mean values of peak-uroflow and post-void residual urines are  $12.38 \pm 6.1$  ml/sec and  $71.52 \pm 76.16$  cc. The mean value of estimated prostate volume by sonography is  $29.8 \pm 14.1$  ml. There were little correlation between the severity of symptoms and the prostate volume, the results of free flowmetry. The symptom severity and bothersome of nocturia are increased with age. There was little or no correlation between a wide range of symptoms and the urodynamic parameters of BOO.

## **Conclusions:**

Although the most frequent symptoms of male LUTS patient are voiding symptoms, they are more bothered from storage symptoms. The severities of symptoms or bothersome are not correlated with prostate volume and urodynamic parameters of BOO. From symptoms alone, it is not possible to diagnose BOO. Pressure-flow studies and symptom profiles measure different aspects of the clinical condition that should be viewed separately in the evaluation and treatment decision of the patients presenting with LUTS. It could be suggested that the relief of BOO may not be a crucial role to relieve symptoms.