

EVALUATION OF THE INTERNATIONAL PROSTATE SYMPTOM SCORE IN MEN WITH LOWER URINARY TRACT SYMPTOM CAUSED BY BENIGN PROSTATE HYPERPLASIA

Hypothesis / aims of study

To evaluate the International Prostate Symptom Score (IPSS) in men with lower urinary tract symptoms (LUTS) caused by benign prostate hyperplasia (BPH) and to investigate the association between total IPSS, storage symptom subscale, the voiding symptom subscale and each of the question items of the IPSS with the quality of life score of the patients.

Study design, materials and methods

All symptomatic BPH men with LUTS who had completed the IPSS within 3 years (January 2006 - December 2009) were retrospectively reviewed. Those who had urinary tract infection, bladder stones, bladder cancer, carcinoma of the prostate, urethral stricture, neurologic disorders and any other conditions or drug consumption that might interfere with bladder function, or voiding habits were excluded from this study. The total IPSS was classified as mild (0-7), moderate (8-19) and severe (20-35). The storage symptoms subscale was derived from question items number 2,4,7 (frequency, urgency and nocturia), and the voiding symptoms subscale was derived from question items number 1,3,5,6 (incomplete emptying, intermittency, weak stream and straining). Spearman correlation test was used for statistical analysis of the associations between the total IPSS, storage symptom subscale, the voiding symptom subscale and each of the question items of the IPSS with the quality of life score of the patients.

Results

326 symptomatic BPH patients with LUTS completed the IPSS with mean age (SD) 63.6 (8.65), mean total IPSS (SD) 16.48 (7.89), mean total storage symptom subscale (SD) 7.54 (3.71) and mean total voiding symptom subscale (SD) 8.93 (5.65). 49 men (15%) were classified as having mild symptoms, 158 (48.5%) moderate symptoms and 119 (36.5%) severe symptoms. 22 men (6.44%) reported as having storage symptoms only, 2(0.61%) reported voiding symptoms only and 302 men (92.64%) reported mixed symptoms. The quality of life score was significantly associated with total IPSS ($r=0.593$, $p=0.000$), total storage symptoms subscale ($r=0.526$, $p=0.000$), total voiding symptoms subscale ($r=0.478$, $p=0.000$), incomplete emptying ($r=0.390$, $p=0.000$), frequency ($r=0.396$, $p=0.000$), intermittency ($r=0.366$, $p=0.000$), urgency ($r=0.361$, $p=0.000$), weak stream ($r=0.331$, $p=0.000$), straining ($r=0.348$, $p=0.000$), and nocturia ($r=0.348$, $p=0.000$).

Interpretation of results

LUTS include storage symptoms, e.g. urgency, frequency, nocturia and voiding symptoms, e.g. slow stream, intermittent stream, hesitancy and straining. In this study both the storage and voiding symptoms were associated with the quality of life score of the patients however, the total IPSS and storage symptoms subscale had a stronger positive association with quality of life compared to the voiding symptoms subscale. Among the IPSS question items, question number 2 which is about frequency had the strongest positive association with the quality of life score.

Concluding message

This study revealed that both storage and voiding symptoms are present and significantly associated with quality of life of BPH patients with LUTS. Although the storage symptoms can be secondary to pathology of the prostate, evidence suggests that storage symptoms can also result from bladder conditions that are independent of prostatic enlargement. While in clinical practice, LUTS in men are commonly treated with medical therapies designed to alleviate prostatic enlargement, the results of this study may provide new insights in treating male LUTS which also include medical therapies designed to relieve the storage symptoms.

Specify source of funding or grant	None
Is this a clinical trial?	No
What were the subjects in the study?	HUMAN
Was this study approved by an ethics committee?	No
This study did not require ethics committee approval because	This is a retrospective study
Was the Declaration of Helsinki followed?	No
This study did not follow the Declaration of Helsinki in the sense that	This is a retrospective study
Was informed consent obtained from the patients?	No