

## EDITORIAL

### EVALUATION OF APPLICATION OF INTERNATIONAL PROSTATE SYMPTOMS SCORE IN SUDANESE PATIENTS WITH BENIGN PROSTATIC HYPERPLASIA

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#### ABSTRACT

**Objectives:** The purpose of the present study is to assess the reliability and validity of IPSS in pre- and treatment of Sudanese patients with BPH.

**Material and methods:** In a descriptive prospective study, 350 Sudanese patients with LUTS attended the Urology department of Gezira Hospital for Renal Diseases and Surgery from September 2003 to April 2006. They were interviewed by urologists and answered the International Prostate Symptom Score (IPSS) questionnaire. Clinical work up was done for all only patients with benign hyperplasia were included in the analysis .Europeans guideline was adopted in the management and the out come was also subjected to IPSS evaluation.

**Results:** The most common voiding symptoms was a weak stream (93% of subjects), followed by intermittency (57%) and hesitancy (54%). The most prevalence of storage symptoms was nocturia (87% of subjects), followed by frequency (73%) and urgency (64%).

64% of the study subjects presented with severe IPSS, 33% with moderate IPSS, while only 3% of the patients presented with mild IPSS. Digital rectal examination (DRE) was done to all study subjects. There was no significant correlation between DRE and IPSS reported.

The postoperative IPSS post treatment follow up was mild in 87%, moderate in 4% and sever in 9% of the patients.

**Conclusion:** Our study indicates that IPSS is informative and reproducible in assessment of patients with BPH.

**Key words:** IPSS, BPH, Sudanese

#### INTRODUCTION

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### **Introduction:**

Lower urinary tract symptoms (LUTS) caused by benign prostatic hyperplasia (BPH) is a common condition, and age-specific prevalence rates range between 50 and 85% among men >50 years of age (1). The International Prostate Symptom Score (IPSS) is a clinical parameter that has been commonly used in the multicenter, international clinical trials to assess this medical problem.

The IPSS has become the international standard. It is derived from the American Urological Association (AUA) 7 score derived by Barry and his colleagues in the early 1990s (2). By adding the scores (with equal weighting) to its constituent questions, a summary of index score is generated which has been shown to be an accurate reflection of a man's overall symptoms over the preceding month (3). The extent to which the self-reported scores reflect actual events has been questioned. Men report nocturia with accuracy but tend to overstate daytime frequency. Correlation of self-reported score to intermittency or to the strength of stream was poor (4). IPSS developed by the World Health Organization (WHO) has been widely used in assessing LUTS in many countries both in community-based and in clinical-based studies.

The seven-item IPSS (along with one question relating to disease-specific quality of life) is easy to administer, simple, short and only requires 10–15 min for completion by respondents (5). In addition, evaluating symptom severity with a symptom score is an important part of the initial assessment of a man.

The aim of this study is to assess the reliability and validity of IPSS in pre- and post-treatment Sudanese patients with BPH.

### **Materials and Methods:**

This was an analytic, prospective study. Patients who attended the Urology department of Gezira Hospital for Renal Diseases and Surgery from September 2003 to April 2006 were included in this study. It is worth noting that this is the only fully specialized hospital dealing solely with urology and nephrology and therefore it shoulders the largest serve from various catchments areas. Adult patients presenting with Lower Urinary Tract Infection (LUTI) and who are being investigated for lower urinary tract symptoms (LUTS) secondary to Benign Prostate Hyperplasia (BPH) were included in the study. Patients with prostate cancer, with urethral stricture, with spinal cord injury and those who underwent surgical operation or hormonal therapies were excluded. A total of 350 men with symptomatic BPH their age between 55 - 97 years (mean age 67.3 years) gave their written informed consent to participate in the study after the nature and the purpose of the study were explained to them, the study was approved by the ethical committee. The following data were recorded: age at recruitment, geographical localization, residence, marital status, and main complaints (voiding symptoms, storage symptoms).

The urinary symptoms studied were frequency, nocturia, urgency, intermittency, weak stream, incomplete emptying and straining. Each subject was assessed by a trained registrar, medical officer and supervised by a consultant urologist to evaluate the severity of urinary symptoms using the International Prostate Symptoms Score (IPSS) for BPH (6). A score of 1 or more defined a subject to have that particular symptom except for nocturia, which was scored as 2 or more. Based on correlations between the symptom index and other scores, three subclasses of patients were categorized according to the total score results: those with mild (IPSS 0–7), moderate (IPSS 8–19), and severe (IPSS 20–35) symptoms. BPH was diagnosed

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when the prostate specific antigen was normal and/or the biopsy result was normal, maximum flow less than 15 ml/s and prostate size was greater than 30 g. The following the criteria of the EAU road map for management of BPH was adopted. All patients with mild IPSS were classified for watchful waiting including advisory planet of fluid intake and abandoning decongestants and regular screening for transient urinary infection which may necessitate early management. Patients with moderate IPSS without absolute indication for surgery were categorized for drugs therapy including Doxasocin alpha blockers (Cardura) and\or 5 alpha reductase inhibitor finaestrade generally we combined them both to have the best results. Patients with severe IPSS or recurrent UTI, hydroureter, hydronephrosis, renal impairment, and haematuria or stone disease with consideration of patient consent were scheduled for surgical intervention. The selection of TURP was chosen depending upon the size limit of 45gm, fibrous prostate, medial lobe disease and \or just tunneling in post open surgery recurrence .All postoperative complications were diagnosed and dealt with them appropriately and all patients were followed for 6 months. The association between the IPSS, BPH index and other clinical investigation were assessed using spearman rank correlation.

### **Results:**

A total of 350 respondents were participated in this study. The demographic data for the study subjects were reported in (Table 1). Concerning the age of our patients, most of them (more than 70% were at the age between 60 – 80 years), with slight rarity at age less than 50 years. The most common voiding symptoms was weak stream (93% of subjects), followed by intermittency (57%), hesitancy (54%), incomplete evacuation (44%), straining (44%), dribbling of urine (43%) (Figure 1). The most prevalent storage symptoms was nocturia (87% of subjects), followed by frequency (73%), urgency (64%), dysuria (54%), strangury (35%), urge incontinence (28%) (Figure 2).

Overflow incontinence were found in(19%), and haematuria in (13%) . On applying the symptoms 64% of the study subjects presented with severe IPSS, 33% with moderate IPSS, while only 3% of the patients presented with mild IPSS. DRE was done to all study subjects. Around 68% were with prostate weighed more than 50 gram. There was no significant correlation between DRE and IPSS (Table 2). Urthrocystoscopy was done to the patients when indicated according to the European guide line and we categorized the patients three groups; moderate sign of BOO (37%), mild (11%) and severe (52%) depending on the patterns of mucosa, muscles and residual volume (Table 3). U/S was done for all patients to evaluate the prostate parameters and upper urinary tract and other abdominal pathology.

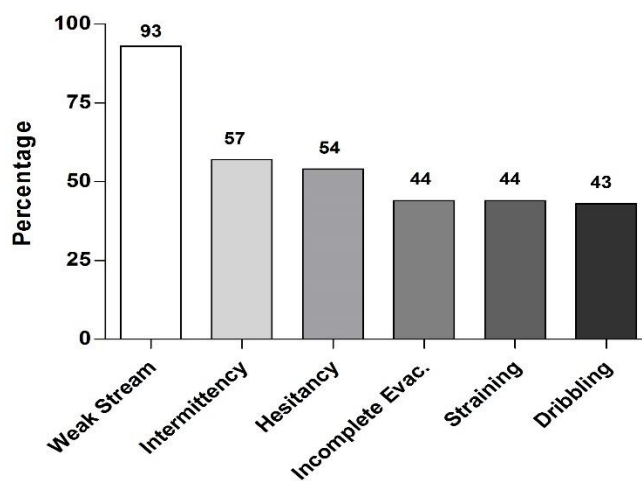
As shown in table 1, the postoperative IPSS in late follow up was mild in 87%, moderate in 4% and sever in 9% of the patients. Surgery was done for 79 patients, who included almost all the patients with severe IPSS, the postoperative complication were shown in (Table 3).

Table 1. Characteristics of study subjects admitted to the clinic

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Characteristic	Persons at risk (n=350)
Age (yr)	
40-49	1.4 %
50-59	11.1 %
60-69	38.5 %
70-79	36.2 %
80-89	8.8 %
90-99	4.0 %
Residence	
Central Sudan	229 pts
Eastern Sudan	67 pts
Western Sudan	54 pts
Marital status	
Single	7 pts
Married	343 pts
Pre-operative IPSS	
Mild (0-7)	3%
Moderate (8-19)	33%
Severe (20-35)	64%
Post-operative IPSS	
Mild (0-7)	87%
Moderate (8-19)	4%
Severe (20-35)	9%
Types of management	
Watch full	4%
Drugs	17%
Surgery	79%

**Figure 1. Voiding Symptoms**



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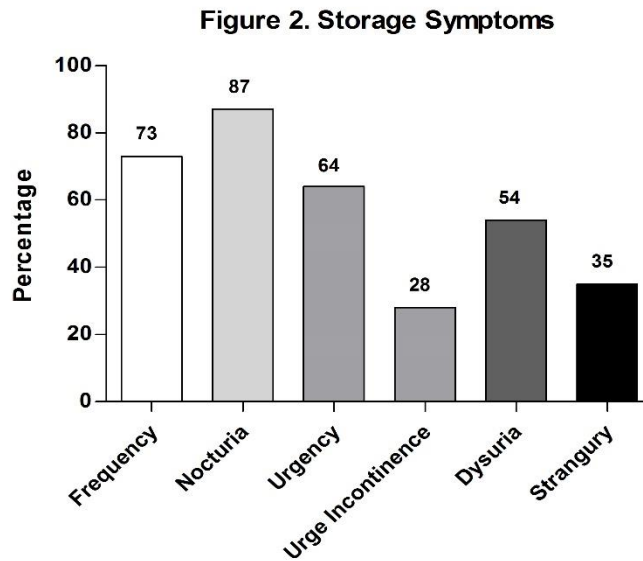


Table 2. Correlation between DRE and IPSS in Sudanese patients with BPH

Weight	IPSS			Correlation
	Mild	Moderate	Severe	
Weight <50g (count)	2%	11%	19%	0.07 (NS)
Weight >50g (count)	1%	22%	45%	0.02 (NS)
<b>TOTAL</b>	3%	33%	64%	100%

NS = not significant

Table 3. Cytoscopic finding and pos-operative complication in study subjects.

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Findings	Frequency
Cytoscopic finding:	
Mild BOO	37%
Moderate BOO	11%
Severe BOO	52%
Urethral stricture & Vesical stone	12%
Post-operative complications:	
Wound infection	6.5%
Dribbling of urine	5.5%
Incontinence	2.8%
Retention	0.7%
Leakage	2.0%
Retrograde ejaculation	13.5%
Impotence	13.0 %
Bleeding	2.0%
Death	0.5%

**Discussion:**

BPH is the most common disease affecting men of all ethnicities who are older than 40 years of age. Increasing evidence has shown that the prevalence and natural history of BPH may differ in ethnic groups. The large variation in existing prevalence depends on BPH definitions, assessments and geographic region. Prostatectomy is the most common form of major surgery in men >55 years of age in the United States (7, 8). In this study, we observed a linear association with age. It is currently estimated that a 40-years-old man who lived to the age of 80 would have one chance in three of having a prostatectomy for BPH if current surgery rates prevailed (7, 8)

Because there is not yet sufficient consensus on the definition of BPH, epidemiological studies attempting to define the prevalence of the disease must include data on symptoms, urinary flow, and prostate size of all study subjects. In this study we attempted to evaluate the questionnaire-based IPSS in Sudanese patients with BPH. Their age ranged between 60-80 years. We found that, the prevalence of moderate (33%) to severe (64%) symptoms of BPH according to IPSS was higher than most of the previous studies (9-11). Possible reasons for the different prevalence for BPH are the sample size, the cultural factors such as acceptance or non-acceptance of urinary symptoms as a natural part of aging, the active or inactive life styles of the elderly men. The problem of Arabic version of IPSS translation was not really a problem, since we tried to introduce it in the nearest meaning akin to the patients' knowledge and accent. The other possible explanation is that, Sudanese people might falsely believe that agreeing with a doctor offer them

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good services or at the other hand they were not usually in strict concentration to answer specific question.

In this study, nocturia, frequency and urgency were the common storage symptoms, which were found to be the most bothersome BPH related symptoms (12). Urgency and urge incontinence were found in 64% and 28% respectively. These two symptoms were annoying our patients because they considered it as social stigma, most of them would never volunteer to tell it spontaneously. It is well established that patients with BPH and renal insufficiency have an increase risk of postoperative complication being 25% for patients with renal condition (13).

In this study, 70% of the study subjects underwent surgical operation. Post-operative IPSS dramatically changed to very low percentage of severity compared with the data before operation. However, the post operative complications reported was 6.5% as wound infection all treated with dressing and they did well, urinary incontinence or dribbling of urine after surgery in 5.5% cases. most of pts with this symptoms treated in the first month, 0.7% pts re admitted as a result of post open surgery retention, underwent other session of TURP and they did well, 7 cases of urinary leakage due to either catheter blockage or early stricture treated accordingly. Yet the complications were within the endorsed literature.

### **Conclusion,**

IPSS was found to be informative, reproducible in assessment of patients with BPH. However there are certain limitations like the lack of IPSS Arabic version, communicability of Sudanese patients is not peculiarly distinctive to estimate the answer of the questions precisely, and the poor compliance of patients to treatment makes the assessment more difficult. Despite all the difficulties and sample size as well, IPSS was found to be easy for classification of patients and it yielded gratifying results and post treatment improvement.

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