

BPH-associated LUTS; Prevalence in Eastern Province of Saudi Arabia



Urology

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ABSTRACT

Benign prostatic hyperplasia (BPH) is most common urological disease among the elderly and it is the main cause of lower urinary tract symptoms (LUTS). This, descriptive, cross sectional study aims to determine the prevalence of BPH-associated LUTS in the eastern province of Saudi Arabia. The well-known international prostate system score (IPSS) was distributed to different hospitals in Dammam, Khobar, Al Qatif, and Al Hasa from the period of August 2016 through January 2017. A total of 88 participants filled the assessment tool questionnaire. All participants were male above 40 years of age. The total score of IPSS was 47.7% in participants who experienced moderate to severe LUTS. According to our result, nocturia seemed to be the most bothersome symptom (18.9%). 40% of all participants reported being either mostly dissatisfied or unhappy based on the quality of life (QOL) question. There was a strong relationship between our IPSS score and QOL question ($r = 0.658, P = 0.001$). Our study reported a relatively high incidence of BPH-associated LUTS in the eastern region of Saudi Arabia. Increased public awareness and a larger number of treatment options are needed to appropriately manage these symptoms and their consequences.

INTRODUCTION

Lower urinary tract symptoms (LUTS) are divided into three groups: storage which includes Increased daytime frequency, urinary incontinence, urgency, and nocturia. Voiding which includes slow stream, splitting or spraying, Intermittency, and straining, finally post micturition symptoms which are: feeling of incomplete emptying and post micturition dribble, these symptoms are commonly seen in men over the age of 40. (1)

Benign prostatic hyperplasia (BPH) is the most common urological disease among men and is the main cause of LUTS. The symptoms of LUTS might cause discomfort to patients and have measurable decrementation in overall quality of life. Although Voiding symptoms were the most prevalent, the most bothersome were predominantly storage symptoms. (2)

This study aimed to describe the prevalence of LUTS and to assess the quality of life among men aged 40 and older in the Eastern Province of Saudi Arabia by using The International Prostate Symptom Score (IPSS) assessment tool.

Materials and methods:

This cross-sectional study was conducted in the eastern province cities of Saudi Arabia, namely Al Khobar, Dammam, Al Qatif and Al Hasa during the period of August 2016 through January 2017. The study was carried out using an online survey uploaded to the internet as a Google document, it was also distributed to different hospitals around the above named cities.

Men over the age of 40 were selected to participate in the study; objectives and rationale of the study were described to them, and a written informed consent was taken from all men who agreed to participate. Participants were asked to fill a linguistically validated Arabic version of the IPSS, whenever necessary assistance was provided.

The severity of LUTS was evaluated by IPSS and QOL. The questionnaire consisted of the Arabic - language translation of the IPSS, which included seven LUTS questions (incomplete emptying, frequency, intermittency, urgency, weak urinary stream, hesitancy, and nocturia) and one QOL question. Each symptom was scored as a

value of 0.5 (0, not at all; 1, less than one time in five; 2, less than half the time; 3, about half the time; 4, more than half the time; and 5, almost always during the preceding month).

A symptom score of 0.35 was calculated by adding the scores the patient gave to each of the seven symptoms. Next, the symptom scores were categorized into three levels of severity from "mild" to "severe" (0.7, mild; 8.19, moderate; and 20.35, severe).

The QOL question was utilized to score the overall discomfort to patients caused by their current urinary symptoms, from 0 to 6 (0, delighted; 1, pleased; 2, mostly satisfied; 3, about equally satisfied and dissatisfied; 4, mostly dissatisfied; 5, unhappy; and 6, terrible).

Also we used questions to exclude from the study Subjects who were known to have prostatic diseases, bladder tumor, bladder stone, urethral stricture or trauma to the lower urinary tract, subjects with neurological disorders.

Data analysis was carried out using SPSS 21.0 (SPSS Inc, Chicago, IL, U.S.A.)

Results

The total number of participants in this study was 88 males. Our data was categorized into four groups, according to age. The first group of individuals aged <50 years accounted for 47 (52.2%), the second group ranged between 50-60 years and accounted for 28 (31.8%), the third group ranged from 61-71 years and accounted for 9 (10%), and the last group for individuals above 70 years of age were only 4 (4.4%). The severity across different age groups is reported in [Table 1].

Depending on the severity of LUTS, our data is subdivided into three groups, resulting in a mild group 46 (52%), a moderate group 25 (28.4%), and a severe group 17 (19.3%). The prevalence of moderate to severe was 42 (47.7%). The distribution of the mean scores of the seven individual symptoms of the IPSS across different age categories was reported in [Figure 1].

According to our results, Nocturia is the highest reported complaint among all participants (18.9%) followed by Urgency, (16.7%) and Intermittency (11.1%). Incomplete emptying and Frequency were

both reported as (10%). While weak stream was (7.8%), and Straining was the lowest reported complaint (3.3%)

The QOL question resulted as follow: 13 (14.4%) were delighted, 23(25.6%) were Pleased, 14(15.6%) were mostly satisfied, 4(4.4%) were mixed, 13(14.4%) were mostly dissatisfied, and 23(25.6%) were unhappy [Figure 2]. There was a strong relationship between our IPSS score and QOL question ($r=0.658, P=0.001$).

Discussion

BPH is a common disease among men above 40 years of age, IPSS has been designed originally to assess patients with BPH. However, now it is considered as a good assessment tool in diagnosing patients with LUTS(3)

Our study reported the prevalence of mild, moderate, and severe LUTS in the eastern provenance of Saudi Arabia as 52%, 28.4%, and 19.3%, respectively. The overall prevalence of moderate to severe stress was 47.7%. Our results are higher than a similar study conducted in Turkey (24.9%) (4) but was lower than other studies conducted in Nigeria (59%) (5) Japan (56%) (6), and Korea (83%) (7). However, a-2015 study in Riyadh, Saudi Arabia showed a reported rate of 31.7%, a score that is relatively lower than ours(8).

To the best of our knowledge, this is the first study to assess the prevalence of LUTS in the eastern provenance of Saudi Arabia.

Table 1: The Severity of LUTS across different age groups according to IPSS

Age (in years)	Group			Total(%)
	Mild(%)	Moderate(%)	Severe(%)	
<50	28(60.9)	13(52.0)	6(35.3)	47(53.4)
50-60y	11(23.9)	10(40.0)	7(41.2)	28(31.8)
61-70	6(13.0)	1(4.0)	2(11.8)	9(10.2)
>70y	1(2.2)	1(4.0)	2(11.8)	4(4.5)
Total	46(100.0)	25(100.0)	17(100.0)	88(100.0)

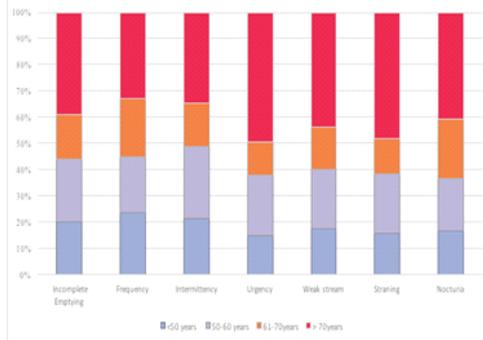


Figure 1: The distribution of the mean scores of the seven individual symptoms of the IPSS across different age categories (n=88)

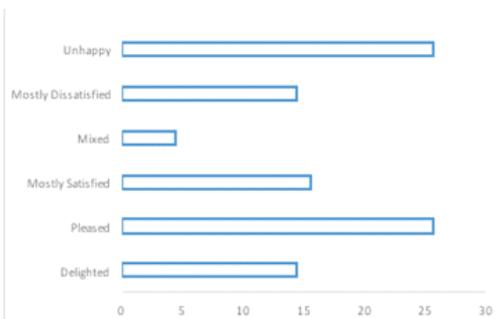


Figure 2: Distribution of QOL question score among all participants (n=88)

CONCLUSIONS

BPH-associated LUTS is common among men in Saudi Arabia. In our study, the reported rate was high and most participants were mainly bothered by Nocturnal. With the aging process, the number of men visiting outpatient clinics for LUTS-associated complaints will increase. Therefore, increased public awareness and a larger number of treatment options are needed to appropriately manage these symptoms and their consequences.

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