



LOWER URINARY TRACT SYMPTOMS; FREQUENCY IN MEN AGED 40 OR ABOVE

netygeulis749@hotmail.com

Dr. Mumtaz Rasool¹, Dr. Muhammad Shahzad Saleem², Dr. Muhammad Waqas³, Dr. Mudassar Saeed Pansota⁴, Prof. Dr. Shafqat Ali Tabassum⁵

1. FCPS
Assistant Professor,
Department of Urology and Renal
Transplantation,
2. FCPS
Senior Registrar,
Department of Urology and Renal
Transplantation,
3. FCPS
Senior Registrar,
Department of Urology and Renal
Transplantation,
4. Medical Officer,
Department of Urology and Renal
Transplantation,
5. FCPS
Head of Department of Urology and
Renal Transplantation,

Correspondence Address:

Dr. Mudassar Saeed Pansota
Medical Officer,
Department of Urology and
Renal Transplantation,
Bahawal Victoria Hospital/Quaid-e-
Azam
Medical College, Bahawalpur.
House # 95/A, Muhammadia Colony,
Noor Mahal Road, Bahawalpur.
netygeulis749@hotmail.com

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INTRODUCTION

Lower urinary tract symptoms (LUTS) are one of the commonest presentation in urology clinics.¹ Lower Urinary tract symptoms include storage symptoms (frequency, urgency, urge incontinence and nocturia), voiding symptoms (hesitancy, dysuria, intermittency, poor stream of urine, terminal dribbling and residual urine sensation). Frequency of lower urinary tract symptoms is very high in men and women and directly related with age.² LUTS are common among elderly people, but etiology of LUTS varies.³ In men, it is usually considered a symptom of benign prostatic hyperplasia (BPH). Although BPH is common in elderly people but it is estimated that only 25% to 50% of men with BPH will have LUTS.⁴

ABSTRACT... Introduction: Lower urinary tract symptoms are one of the commonest presentation in urology clinics. Lower Urinary tract symptoms include storage symptoms (frequency, urgency, urge incontinence and nocturia), voiding symptoms (hesitancy, dysuria, intermittency, poor stream of urine, terminal dribbling and residual urine sensation). Correct determination of prevalence of LUTS might help the health service provider to plan appropriate management strategies. So this study was designed to determine frequency of LUTS in men aged 40 or above. **Study Design:** Descriptive, cross sectional study. **Period:** January 2015 to December 2015. **Setting:** Urology Department of Bahawal Victoria Hospital, Bahawalpur. **Materials & Methods:** Total 228 patients of 40-80 years of age with lower urinary tract symptoms were included. Patients with foleys in situ, previously operated for urinary tract disease, urinary tract stones and urinary bladder mass were excluded. These patients were assessed to determine frequency of lower urinary tract symptoms. **Results:** Mean age was 65.69 ± 7.91 years. Mean duration of disease was 5.36 ± 2.19 months. Frequency of LUTS was seen in 138 (60.53%) men with urgency in 22.81%, nocturia in 57.89%, frequency in 19.30%, poor stream in 15.79%, incomplete emptying of bladder in 33.33%, urge incontinence in 22.81%, terminal dribbling in 55.26% and hesitancy in 15.16% men. **Conclusion:** This study concluded that the frequency of lower urinary tract symptoms were urgency in 22.81%, nocturia in 57.89%, frequency in 19.30%, poor stream in 15.79%, incomplete emptying of bladder in 33.33%, urge incontinence in 22.81%, terminal dribbling in 55.26% and hesitancy in 15.16% patients of age ≥ 40 years with nocturia being the most common symptom and frequency of all symptoms increases with age.

Key words: Nocturia, frequency, urgency, hesitancy, urge incontinence, old age.

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The reported prevalence of lower urinary tract symptoms varies widely among different age groups and ethnic population. The reported prevalence of LUTS in men by different authors from different countries is; 19.2% (France),⁶ 16.2% (Korea),⁶ 20.7% (Netherlands),⁶ 38% (USA),⁷ 25.1% (UK),⁶ 56% (Japan),⁷ and 62.5% (USA, UK and Sweden).⁵ In Pakistan prevalence of LUTS is 53.7%.⁸

These Urinary symptoms are becoming an important health issue because they can cause physical and mental discomfort and have negative effect on quality of life. It has substantial economic burden on health care system. Symptoms leading to LUST have been reported as; urgency 13.1%,¹⁰ nocturia 48.6%,¹¹ frequency

12%,¹² poor stream 8.5%,¹² incomplete emptying of bladder 27%,¹³ urge incontinence 25.8%,¹⁴ terminal dribbling 58.1%,¹⁵ and hesitancy is 8%.¹⁶

LUTS are assessed by International Prostate Symptom score (IPSS).⁹ Correct determination of prevalence of lower urinary tract symptoms may help the health service provider to plan appropriate management strategies. So this study was designed to determine frequency of LUTS in men aged 40 or above. This may help us to formulate guidelines for management of such patients.

MATERIALS AND METHODS

After taking permission from ethical review committee, this descriptive, cross sectional study was done from January 2015 to December 2015. Total 228 male population of age 40–80 years old coming as attendants of the patients in Urology Department of Bahawal Victoria Hospital, Bahawalpur were selected. Patients with foley-catheter in situ, urinary bladder mass, urinary bladder stones and previously operated for urinary tract disease were excluded. After informed, written consent, all selected cases were evaluated by detailed history and physical examination (including digital rectal examination for prostate). We assessed these patients to determine frequency of lower urinary tract symptoms i.e. urgency, nocturia, frequency, poor stream, incomplete emptying of bladder, urge incontinence, terminal dribbling and hesitancy. Presence of any one of the following symptoms was labeled as LUTS.

Data was analyzed by using computer programme SPSS 20. Descriptive statistics were used to calculate mean ± SD for age of the patients and duration of symptoms. Frequencies and percentages were calculated for LUTS symptoms i.e. urgency, nocturia, frequency, poor stream, incomplete emptying of bladder, urge incontinence, terminal dribbling and hesitancy.

RESULTS

Age range in this study was from 40 to 80 years with mean age of 65.69 ± 7.91 years. Majority of the patients i.e. 82 (35.96%) were between 61 to 70 years of age. Mean duration of disease was 5.36

± 2.19 months with majority of patients i.e. 138 (60.53%), presented with ≤6 months of duration.

Frequency of lower urinary tract symptoms found were urgency in 22.81%, nocturia in 57.89%, frequency in 19.30%, poor stream in 15.79%, incomplete emptying of bladder in 33.33%, urge incontinence in 22.81%, terminal dribbling in 55.26% and hesitancy in 15.16% patients (Table-I). Frequency of LUTS was seen in 138 (60.53%) patients (Figure-1).

LUTS	Frequency (%)	
	yes	no
Frequency	44 (19.30%)	184 (80.70%)
Urgency	52 (22.81%)	176 (77.19%)
Urge Incontinence	58 (25.44%)	170 (74.56%)
Nocturia	132 (57.89%)	96 (42.11%)
Hesitancy	30 (13.16%)	198 (86.84%)
Poor Stream	36 (15.79%)	192 (84.21%)
Terminal Dribbling	126 (55.26%)	102 (44.74%)
Incomplete emptying of bladder	76 (33.33%)	152 (66.67%)

Table-I. Lower Urinary Tract Symptoms



Figure-1. %age of patients with LUTS

DISCUSSION

Lower urinary tract symptoms (LUTS) are very common problem in old age. It is seen that aged 50 to 80 years men have shown 90% prevalence of bothersome lower urinary tract symptoms. Its prevalence seems to be directly proportional to age.^{3,4} Age range in our study was from 40 to 80 years with mean age of 65.69 ± 7.91 years. Majority of the patients i.e. 41 (35.96%) were between 61 to 70 years of age. Its prevalence seems to be less likely in younger age but increases in middle to elderly aged men as shown in previous studies.¹⁷ In a study, Homma et al¹⁸ had shown direct association between lower urinary tract symptoms and age of individuals.

It is also seen that although lower urinary tract symptoms increases with age but many diseases also contributed to increase in the frequency of urinary symptoms.¹⁹

Frequency of LUTS was seen in 138 (60.53%) patients in our study. The reported prevalence of lower urinary tract symptoms varies widely among different age groups and ethnic population. The reported prevalence of LUTS in men by different authors from different countries is; 19.2% (France),⁶ 16.2% (Korea),⁶ 20.7% (Netherlands),⁶ 38% (USA),⁷ 25.1% (UK),⁶ 56% (Japan),⁷ and 62.5% (USA, UK and Sweden).⁵ In Pakistan prevalence of LUTS is 53.7%.⁸ In Pakistan prevalence of LUTS is 53.7%.¹¹ Prasad VK et al¹⁹ in his study has shown the prevalence of LUTS in men aged 40 years or above as 56.2% while Rao CN et al²⁰ has shown this prevalence as 40.9%. Bock-Oruma AA et al²¹ has found the prevalence of lower urinary tract symptoms suggestive of benign prostatic hyperplasia was 72.2% using the international prostate symptom score.

In our study, frequency of LUTS found were urgency in 22.81%, nocturia in 57.89%, frequency in 19.30%, poor stream in 15.79%, incomplete emptying of bladder in 33.33%, urge incontinence in 22.81%, terminal dribbling in 55.26% and hesitancy in 15.16% patients. In a study done by Prasad VK et al¹⁹, the most common lower urinary tract symptom seen was nocturia (31%) and the least was straining (11%). He had found prevalence of frequency as 27.0%, urgency as 20.0%, intermittency as 17.0%, incomplete emptying as 23.0% and weak stream as 16.0%. A previous study has shown the bladder storage symptoms as the common presentation of lower urinary tract symptoms.²⁰ These findings are very much similar to the results of our study.²⁰

Bock-Oruma AA et al²¹ in his study has found 59.3% patients with a sense of incomplete emptying, intermittency, poor stream and hesitancy in 40.7%, 58.4% and 56.6% patients respectively. The author reported frequency, urgency and nocturia in 73.5%, 67.3% and 97.3% subjects respectively. Other studies have reported symptoms leading to LUTS as; urgency 13.1%,¹⁵

nocturia 48.6%, 16 frequency 12%, 22 poor stream 8.5%, 22 incomplete emptying of bladder 27%,¹³ urge incontinence 25.8%,²³ terminal dribbling 58.1%,²⁴ and hesitancy is 8%.²⁵ In the study of Sunter AT et al²⁶, nocturia (71.7%) was also found to be the most prevalent lower urinary tract symptom, followed by urination frequency as 50.8%, incomplete emptying of the bladder as 44.3%, hesitancy of urination as 41.7%, poor urine flow as 41.6%, intermittency of urination as 37.5% and urgency of urination as 27.8%.

Perrin P et al²⁷ has shown the most common lower urinary tract symptoms as follows; weak urinary stream, frequency and nocturia. Eckhardt MD et al²⁸ reported weak urinary stream, frequency and urgency as the most common lower urinary tract symptoms. On the other hand, Aki FT et al²⁹ has also shown similar findings to our study for nocturia being the most frequent symptom of LUTS. In a recent study by Agarwal A et al³⁰, the LUTS with the greatest population-level burden were urgency (7.9% with at least moderate bother), stress urinary incontinence (SUI) (6.5%), nocturia (6.0%), post-micturition dribble (5.8%), and urgency urinary incontinence (UUI) (5.0%). In another study, the most frequency storage symptom was found to be nocturia (65.0%) with frequency (23.4%) being the 2nd one.³¹ Terminal dribble (49.4%) was the most common voiding symptom and incomplete emptying as 27.2%.³¹

CONCLUSION

This study concluded that the frequency of lower urinary tract symptoms was 60.53% in men aged 40 years or above with urgency in 22.81%, nocturia in 57.89%, frequency in 19.30%, poor stream in 15.79%, incomplete emptying of bladder in 33.33%, urge incontinence in 22.81%, terminal dribbling in 55.26% and hesitancy in 15.16% patients of age ≥ 40 years with nocturia being the most common symptom and frequency of all symptoms increases with age.

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AUTHORSHIP AND CONTRIBUTION DECLARATION

Sr. #	Author-s Full Name	Contribution to the paper	Author=s Signature
1	Dr. Mumtaz Rasool	Conception and Design, Acquisition of data, analysis and interpretation of data drafting and critical revision, final approval of the version to be published.	
2	Dr. M. Shahzad Saleem	Acquisition of data, drafting and final approval of the manuscript.	
3	Dr. Muhammad Waqas	Conception and design, Acquisition of data, analysis and interpretation of data, drafting and critical revision, final approval of the version to be published	
4	Dr. Mudassar Saeed Pansota	Conception, acquisition of data, critical revision of the manuscript and final approval of the version to be published.	
5	Prof. Dr. Shafqat Ali Tabassum		