Lower urinary tract symptoms; an undetected cause for morbidity in adults

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Abstract

Introduction Lower urinary tract symptoms (LUTS) have been recognised as a cause of distress among adult men and women. In view of the increasing elderly population in Sri Lanka, the number of individuals with LUTS is likely to increase.

Objectives To determine the prevalence and severity of LUTS in a community sample of older men and women residing in an urban area.

Design Cross-sectional descriptive study.

Setting Field practice area of National Institute of Health Sciences, Kalutara.

Methods Households were selected using probability proportionate to the size (PPS) method. 985 adult men and women (above 40 years of age) were interviewed by Public Health Midwives regarding LUTS using an interviewer-administered questionnaire. The questions were adapted from ICSmale questionnaire and the Bristol Female Lower Urinary Tract questionnaire.

Results 209 (47%) men and 338 (62.6%) women reported at least one urinary symptom. In men, urgency, nocturia, dysuria and frequency were the most prevalent symptoms with stress incontinence being the least prevalent. Majority of the symptoms showed an increase in prevalence with age. In women, dysuria, stress incontinence, urgency and frequency were the most prevalent symptoms. Hesitancy, intermittency, and stress and urge incontinence were the most bothersome symptoms among men, and urge and stress incontinence among women.

Conclusions Prevalence of LUTS was high in our study population.

Introduction

Lower urinary tract symptoms (LUTS) have been recognised as a cause of distress among both adult men and women. In men, LUTS are often attributed to benign prostatic hyperplasia (BPH) and categorised into obstructive and irritative symptoms. Hesitancy, poor stream, intermittent stream and end-stream dribbling are considered as obstructive symptoms, and frequency, nocturia, urgency and urge incontinence as irritative symptoms [1]. Stress and urge incontinence are recognised as common symptoms in women [2, 3].

Prevalence of LUTS was found to be high in adult populations and shown to increase with age [4]. The prevalence figures vary between populations in the world. LUTS are also known to be under-reported, as many sufferers do not seek treatment [5, 6]. Hence the extent of the problem is often underestimated.

In view of the increasing elderly population in Sri Lanka, the number of individuals with LUTS is likely to increase and should be taken into consideration in the planning of future health care strategies. The cost of care for people with incontinence is high. The effect of incontinence on the suffering person can be devastating. It is socially crippling and can lead to marital disharmony. Those who seek help do not always receive the proper attention and treatment due to poor awareness among health care providers. No study has so far been done to identify the extent of the problem in the local population.

We aimed to determine the prevalence and severity of a range of LUTS in a community sample of older men and women residing in an urban area, and to determine how much a problem these symptoms were for those experiencing them.

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Methods

The study was done in the field practice area of National Institute of Health Sciences, Kalutara, between March and August, 2002. There are two Medical Offices of Health (MOH) in the field practice area, at Beruwela and Kalutara. Beruwela has 47 Public Health Midwife (PHM) areas, and Kalutara has 32. Each PHM area has a population of about 3000. A proportional number of PHM areas (a total of 50) were selected from each MOH area using probability proportionate to the size (PPS) method. Thereafter one cluster from each PHM area was selected and the households in each cluster were visited (10 per cluster).

The study used an interviewer-administered questionnaire. Adult men and women (above 40 years of age) were interviewed by the PHMs regarding urinary symptoms. The questions were adapted from ICSmale questionnaire and the Bristol Female Lower Urinary Tract questionnaire (7, 8). They were translated to Sinhala and checked by back-translation. The questions incorporated symptoms of diurnal frequency (frequent daytime urination), nocturia (frequent night-time urination), urgency (sudden and unexpected need to urinate), urge incontinence (leaking of urine before being able to reach the toilet), stress incontinence (leaking during physical activity, coughing or sneezing), and dysuria (pain or burning sensation when passing urine). Additional questions of obstructive urinary symptoms – hesitancy (difficulty in initiation of urination), intermittency (difficulty in maintaining the urinary stream), poor stream (reduction in the strength of urinary stream), post-micturition dribbling and incomplete emptying (feeling of incomplete emptying of the bladder at the end of micturition) – were incorporated for males. Each individual was asked the degree to which he or she was bothered by the symptoms, if they were present. The data were analysed using statistical package SPSS 10.

Results

Among the 1000 individuals interviewed, 15 with missing information were excluded from the analysis. In all, 985 individuals were included in the analysis. There were 445 (45.2%) males. Age range was 40 to 87 years. Demographic characteristics of the study population are shown in Tables 1 and 2. Among the study population, 209 (47%) men and 338 (62.6%) women reported at least one urinary symptom.

In men, urgency, nocturia, dysuria and frequency were the most prevalent symptoms with stress incontinence being the least prevalent (table 3). The prevalence of the urinary symptoms was highest in the oldest age group. For all individual symptoms except nocturia, the prevalence of mild symptoms was higher than the moderate or severe symptoms (table 4).

In women, dysuria, stress incontinence, urgency and frequency were among the most prevalent symptoms

Table 1. Age and sex distribution of individuals participated in the study

Age (years)	Men (%)	Women
	n=445 %	n=540 %
40-49	124 (27.9)	197 (36.5)
50-59	163 (36.6)	179 (33.1)
60-69	93 (20.9)	115 (21.3)
≥70	65 (14.6)	49 (9.1)

Table 2. Other demographic characteristics of study population

	Sample n (%)
Ethnic group	
Sinhalese	864 (86.9)
Tamil	3 (0.3)
Muslim	125 (12.6)
Other	3 (0.2)
Marital status	
Unmarried	35 (3.6)
Married	873 (90.6)
Divorced	2 (0.2)
Widowed	54 (5.6)
Educational status	
None	24 (2.4)
Up to O/L	560 (56.8)
O/L	301 (30.5)
A/L	67 (6.8)
University	10 (1)
Special training	24 (2.4)

(table 5). Increasing prevalence with age was not evident in them. Dysuria, urgency and stress incontinence were more prevalent among younger women whereas nocturia and frequency were mostly noted in the elderly. Urge and stress incontinence were the most distressing symptoms in women.

Discussion

Our results show that there is a high prevalence of LUTS in our study population. Among the study population, 209 (47%) males and 338 (62.6%) females reported at least one urinary symptom. In a study done in Finland, the proportion of men reporting one urinary symptom was 89% and at least one bothersome symptom was present in 55% [1]. A UK study reported even a higher proportion of men (91%) as having at least one urinary symptom [9]. In a Sydney study, LUTS were shown to be present in 50% of men and women aged over 40 years [4]. However, comparisons between these studies is difficult

Table 3. Prevalence of urinary symptoms among men in percentages

Symptom	<50 years	50-59 years	60-69 years	≥70 years	Total	Bothered percentage
Frequency	12.3	14.7	25.8	17.8	17.8	35.4
Nocturia	11.3	17.3	29.0	45.3	22.1	48.0
Urgency	23.0	23.1	29.3	33.8	26.0	43.9
Urge incontinence	2.8	10.6	10.0	20.7	9.8	63.2
Stress incontinence	1.9	2.8	2.5	10.3	3.6	71.4
Dysuria	21.3	20.3	21.3	20.6	20.6	
Hesitancy	8.9	6.8	12.9	18.5	10.4	71.7
Intermittency	6.5	13.0	11.8	17.2	11.5	70.6
Poor stream	5.7	8.1	11.8	17.7	9.6	57.1
Post-micturition dribbling	16.3	15.2	12.9	14.3	14.9	38.5
Incomplete emptying	16.3	12.5	8.6	18.8	13.6	56.7

Table 4. Severity of urinary symptoms in men

	Symptom severity	
	Mild	Moderate/severe
Frequency (n=79)	51	28
Nocturia (n=98)	23	75
Urgency (n=114)	70	44
Urge incontinence (n=38)	20	18
Stress incontinence (n=14)	11	3
Dysuria (n=80)	56	24
Hesitancy (n=46)	27	19
Intermittency (n=51)	31	20
Poor stream (n=42)	23	19
Post-micturition dribbling (n=65)	56	9
Incomplete emptying (n=60)	54	6

due to the differences in methodology, exclusion criteria and definition of symptoms.

LUTS causes an appreciable morbidity not only in the elderly but also in middle aged women. Incontinence is a major problem for health care providers throughout the world. The cost of care is high. However, simple therapeutic procedures such as pelvic floor muscle training exercises are effective in the treatment of women with stress incontinence.

A high prevalence of nocturia was noted in the older age groups. Studies have shown that older subjects excrete more than half of their daily ingested fluid load at night, whereas younger people excrete only 25% during the same period [10]. Nocturia can have other implications in the elderly. With loss of sleep and fatigue, and elderly people moving about in the dark, the likelihood of injury increases, hip fractures being a frequent result [11, 12].

Table 5. Prevalence of urinary symptoms among women in percentages

Symptom	<50 years	50-59 years	60-69 years	≥70 years	Total	Bothered percentage
Frequency	16.8	16.8	20.9	20.4	18.2	28.6
Nocturia	16.3	16.7	15.7	32.7	17.8	49.0
Urgency	23.5	24.6	20.2	14.3	22.3	45.0
Urge incontinence	11.2	14.0	6.2	12.2	11.2	60.0
Stress incontinence	28.4	29.2	23.0	16.3	26.4	56.3
Dysuria	37.2	26.4	18.4	18.4	27.9	

Many who do have LUTS may not seek treatment. The progress of most symptoms is slow (13). Identifying those who need treatment is not straightforward. To use resources efficiently, planning across primary and secondary care, and the use of guidelines developed by the health professionals is needed. Validated questionnaires can be used at the primary care setting to identify patients who need referral for specialist centres [14], and lifestyle and behavioural interventions that are beneficial can be implemented at this setting [15].

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