

# Epidemiology, perception and treatment of females presenting with lower urinary tract symptoms at a government hospital in central India

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## Abstract

### Aim:

To study the epidemiological and sociological features, and patient's perception of various lower urinary tract symptoms (LUTS) in females, coming to our institution in central India; thus creating awareness among treating physicians as well as patients.

### Material and method:

This study is a prospective epidemiological study of 51 adult female patients with LUTS, who attended the surgery and gynecology OPD in our institution. The study is based on history and clinical examination of patients in OPD. Complete history of complaints, associated symptoms and obstetric history was taken. General and local examination, including per vaginal and per speculum examination, was done and data were analyzed.

### Results:

More than half of the females with LUTS were middle aged (31-55yrs). The most common symptom was frequency. Education level was very low in three fourth of them. The first consultation was taken after months or even years after appearance of symptoms in about two third of cases. Half of the patients with stress incontinence were elderly (aged 55 years or more), all were multi-para (parity 3 or more), more than half had associated pelvic organ prolapse and 40% had history of hysterectomy.

### Conclusion:

An Indian female with LUTS, usually treated as a case of UTI, needs to be better evaluated by the treating physician. The high prevalence of risk factors for LUTS, such as multi-parity, negligent attitude towards the symptoms and late presentation to seek medical care in most of the Indian females, is due to unawareness, lack of education and motivation.

## INTRODUCTION

The most blunt, outspoken Indian female tends to close her lips while talking about her genito-urinary symptoms.

Though most of the LUTS are frustrating, embarrassing and affect quality of life, the patients do not seek any consultation ...why? The answer is shyness, illiteracy, unawareness, lack of motivation, low socioeconomic status and lack of easily accessible medical care in rural and semi-urban parts of central India.

Some problems, especially incontinence, are considered as normal phenomena with increasing age by some females. Most of the females tolerate LUTS for long and come to take treatment only when they become severe. Prevalence of LUTS including incontinence is higher in females than in males. <sup>1</sup> One reason is the anatomical difference; the female

pelvis has a wider outlet which predisposes for subsequent pelvic floor weakness. <sup>2</sup> Another reason is physiological; with increasing age changes in hormonal status and physiology of the female uro-genital tract predispose to LUTS. <sup>3</sup> Another utmost important and modifiable factor is the silent trauma to the pelvic supports - the important structures for proper functioning of the lower urinary tract - in the form of multiple vaginal deliveries (specially unattended home deliveries) and various obstetric and gynecological surgeries (caesarean section, hysterectomy etc.). <sup>4,5</sup>

In available literature urinary incontinence, especially stress incontinence and all its aspects - prevalence, associations, risk factors, etiologies and treatments - are intensively studied. On the contrary, not much research has been done

on prevalence, risk factors and etio-pathogenesis of other LUTS and their effect on quality of life.

Frequency, urgency, suprapubic pain, dysurea etc. are some other common LUTS which bother middle aged females. Incontinence is common in elderly whereas the others are common in younger women.<sup>6</sup>

## **MATERIAL AND METHOD**

This is a prospective epidemiological study of 51 female patients with LUTS, who attended the surgery and gynecology OPD in our institution. Patients included were of an age above 18yrs. Patients with major co-morbidity like malignancies of the uro-genital tract (cervix, urinary bladder, uterus, vagina, ovary etc.) who needed immediate admission were excluded.

This study is based on history and clinical examination of patients in OPD. Complete history of complaints, including obstetric and gynecologic history was taken. Complete previous history regarding any pelvic surgeries or uro-gynecological procedures, pelvic trauma, catheterization, parity or number of vaginal deliveries, any neuro-psychiatric illness etc. was also taken.

Complete history of associated complaints was taken. General and local examination, including per vaginal and per speculum examination, was done. Empirical treatment was given on the basis of clinical diagnosis, and investigation for further management was advised.

Patients were explained about their complaints, investigations, available treatments, and were motivated to follow up for further management.

## **RESULTS**

Fifty-six percent of the females with LUTS were middle aged (31-55 yrs; Table 1). Education level was very low in 72.5% (37); 16 never joined school and 21 were literate only up to fifth standard. It was noted that patients present late after the appearance of complaints. Sixty-two percent of patients took months or even years to get the first medical consultation for their symptoms. The reason for this delay in almost all cases was ignorance and unawareness about the symptoms; the majority came when symptoms were distressing and hindered routine activities. Before presenting at our institution, many of the patients were being treated empirically for UTI without being properly investigated.

Seventy-eight percent of the patients (40) were multipara (3

or more deliveries), 33 of these had their first delivery at home and unattended by trained professional.

The most common symptom was frequency of micturition; complained by 62.7%, followed by burning micturition in 50% (Table 2). Stress incontinence was diagnosed in 39.2%, half of whom were aged 55 years or more, all were multipara (parity 3 or more), 55% had associated pelvic organ prolapse and 40% had history of hysterectomy.

## **DISCUSSION**

This is a small prospective study done in a government hospital in central India. It directs the attention of physicians towards various lower urinary tract symptoms (LUTS) other than urinary incontinence in females.

Our study shows that more than 50% of females coming with LUTS are middle aged, and the common LUT-symptoms for which an Indian female comes to seek medical care are irritative symptoms. Frequency was the most common presenting symptom (Table 1). These results are similar to the study previously done among Taiwanese females, which also stated frequency and nocturia as the most common LUTS.<sup>7</sup> Another major problem is stress incontinence which is mainly present in the elderly. Out of all patients of incontinence, 29% patients are severely affected (i.e. leak of urine with each episodes of coughing, laughing, sneezing, and urge). Multi-parity (4 or >4 childbirths)<sup>5,8</sup>, vaginal delivery, history of hysterectomy and older age are found to be associated factors with stress incontinence.

We categorized patients into three broad categories on the basis of their symptoms, as follows:

Irritative symptoms (62.7%) i.e. frequency, urgency, dysurea, burning of micturition etc.

Obstructive symptoms (33.33%) i.e. acute and chronic retention, incomplete void etc.

Stress incontinence (39.2%)

Patients with LUTS other than stress incontinence, chronic retention (that may be due to some anatomic obstructive lesion) and symptoms due to some neurological disease; can be labeled as cases of urethritis, cystitis, UTI, urethral syndrome and painful bladder syndrome. In few cases, local examination, ultrasonography, urine culture and cystourethroscopy can be of help in the diagnosis, but many

times the cause of LUTS remains unexplained. In view of frequent normal results of routinely done investigations such as USG, KUB X-ray, urine culture and routine microscopy etc., many of the female patients are wrongly diagnosed as UTI again and again even in the absence of evidence of infection, and given some antibiotics only. Such chronic or recurrent LUTS, e.g. frequency, urgency, dysurea, supra-pubic discomfort, difficulty in starting urination, slow stream, feeling of incomplete voiding etc. without the evidence of infection, are given the term urethral syndrome or urethral pain syndrome or painful bladder syndrome.<sup>9</sup> This is a group of LUTS commonly occurring in females during the reproductive years.<sup>1</sup>

Since long time various etiologies have been put forward for urethral syndrome. In the past, urethral stenosis was considered as the cause, and urethral over-dilatations, aggressive excision of para-urethral tissue and internal urethral cutting procedures as the treatment have been described.<sup>10</sup> Results of such extensive surgical procedures were not satisfactory. The next concept given was external urethral sphincter spasm. Sudden sphincteric spasm leads to pain and acute retention of urine. Recurrent episodes of such retention may predispose to recurrent UTI, thus aggravating the symptoms.<sup>11</sup> Psychological disease, e.g. anxiety, may cause or aggravate the symptoms. In the last few years, this concept has become the basis for treatment of such patients with anxiolytics. The biochemical correlating factor between anxiety and voiding dysfunction is CRF (corticotropin releasing factor), which is expressed in the CNS, and controls voiding and response to stress. It increases during anxiety and leads to voiding dysfunction.<sup>12</sup> Pelvic floor dysfunction or pelvic muscle hyperactivity is also present in some patients of urethral syndrome. These are the patients who are benefited by pelvic muscle exercise and biofeedback.<sup>13</sup>

Female prostatitis is another concept which explains LUTS in females. Availability of specific immunohistochemical staining for prostate-specific antigen (PSA) has favored the view that female paraurethral glands are homologue to the male prostate.<sup>14,15</sup> In some females with urethral syndrome, anterior vaginal wall tenderness and relief of symptoms by treatment with antibiotics against *Chlamydia* sp. (most common organism retrieved from anterior urethra) suggest female prostatitis as the cause for LUTS.<sup>16</sup> Instead of so many proposed etiologies, the definitive cause is yet to be proved.

LUTS are commonly found in females of low socio-economic status, who experience some physical abuse or mental torture, who are worried about someone close to them or who are very poor, having trouble in earning basic needs of life for their family.<sup>17</sup> Some of the LUTS (e.g. frequency, urgency, dysurea etc.) are very frustrating and increase anxiety, which further aggravates the symptoms resulting in a vicious cycle, and they have an adverse effect on quality of life.<sup>18</sup> Such patients with chronic LUTS may be benefited from a multifaceted approach of combining medical, psychological, and supportive treatment.<sup>17</sup>

The present study has been conducted in a large government hospital of central India, which covers a large rural and tribal population with low education level where most of the females coming with LUTS are illiterate (education level is below fifth standard in 72.5% cases in this study) and belong to low or lower middle class of socioeconomic status, living in remote rural and semi-urban areas with big families. They have a negligent attitude towards LUTS and come late to seek medical care (62% of patients took months or even years to take the first consultation after appearance of first symptoms).

Literacy level, social status, cultural background, and accessibility of health care resources are a few factors which affect LUTS-related perception and health care seeking behaviour. Thus, epidemiological data from one country or community are not transferable to another.<sup>19,20</sup>

## **CONCLUSION**

Chronic or recurrent lower urinary tract symptoms are very commonly found in females of low socio-economic status in central India. Most of them are wrongly treated as UTI. But their complaints need to be evaluated properly.

Unfortunately, risk factors for LUTS (e.g. unattended home delivery, multi-parity) are frequent among them, and they are ignorant and unaware of their complaints - a fact that leads to late consultation, loss in follow-up and thus increases morbidity. They need to be better educated or at least motivated.

**Figure 1**

Table 1: Age distribution of females with LUTS

AGE GROUP	NO. OF PATIENTS (TOTAL: 51)
18-30 YRS	11
31-55 YRS	29
>55 YRS	11

**Figure 2**

Table 2: Prevalence of LUTS among Indian women from central India

S. NO.	SYMPTOMS	NO. OF PATIENTS
1	Frequency	32
2	Burning micturition	25
3	Retention (acute or chronic)	14
4	Dysuria	17
5	Lower abd. pain	17
6	Haematuria	0
7	Urgency	19
8	Incomplete voiding	10
9	Constipation	3
10	Urge incontinence	10
11	Stress incontinence	20

**Figure 3**

Table 3: Duration after which first medical advice was taken

No. of patients	Duration after which first medical advice was taken
19 (38%)	DAYS
15 (29%)	MONTHS
17 (33%)	YEARS

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