

Lower urinary tract symptoms in pre-menopausal women and its association with sexual dysfunction



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ABSTRACT

Background: Sexual dysfunction (SD) is one of the common problems observed by premenopausal women and it frequently exists along with other associated lower urinary tract symptoms (LUTS).

Aims and Objective: The present study was planned to evaluate the correlation between SD in pre-menopausal women with LUTS. **Materials and Methods:** This was a prospective observational study conducted between March 2018 to February 2019. All sexually active premenopausal women, who presented with complains of LUTS were enrolled in this study. All included patients were given two types of questionnaires (Bristol female lower urinary tract symptom [BFLUTS] and pelvic organ prolapse-urinary incontinence sexual function [PISQ-12]). These were for the assessment of LUTS and sexual function. Assessment of association between presence of LUTS and sexual dysfunction was done. **Results:** A total of 105 women were enrolled in the study. Their mean age was 43.70 years and BMI was 29.49. The total mean BFLUTS score recorded was 28.12. Their sub-dimension scores recorded for the filling, voiding, incontinence symptoms, sexual function and quality of life were 8.21, 34.32, 12.21, 4.49, and 10.65, respectively. Total mean score of PISQ-12 was 23.72 in all women and the mean values for the sub-dimension scores were 5.21 for the behavioural-emotive state, 11.78 for the physical state, and 6.2 for the partner-related state. There was Negative association observed between the total of PISQ-12 scores and total and sub-dimension of the BFLUTS scores ($p < 0.01$). **Conclusion:** This study observes the presence of LUTS in women with sexual dysfunction. LUTS directly or indirectly increase the sexual problems in premenopausal women. These results highlight the clinical importance of evaluating LUTS in premenopausal women with sexual dysfunction.

Keywords: Coitus; patient satisfaction; surveys and questionnaires; urinary incontinence; urgency

INTRODUCTION

Sexual dysfunction (SD) in women has been defined as a multifactorial condition which includes anatomic, physiologic, medical, psychological, and social components.¹ This condition is usually recognized by disturbances in sexual desire and psycho-physiological changes related to response cycle.² When sexual difficulties cause distress, compared with a normal physiologic response in difficult circumstances, it becomes an SD.³ Sexual dysfunction

mostly affects 30% to 50% of women, and is age related.⁴ According to the more recent reconsideration of the classification criteria suggested by the American Foundation of Urologic Disease, SD has been subdivided into the following: 1) sexual desire and interest disorder, 2) subjective sexual arousal disorder (SAD), 3) genital arousal disorder, 4) combined SAD (i.e., feelings of excitement and pleasure are marked or absent and combined with either reduced or impaired genital sexual arousal, including vulval swelling and lubrication), 5) persistent SAD, which is very

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rare and distressing, 6) orgasmic disorder, 7) vaginismus, and 8) dyspareunia.³ The global study of sexual attitudes and behaviours, a multinational survey which involved 13,882 women in aged between 40 and 80 years, reported that lack of interest in sex with difficulty in reaching orgasm were the most common SDs across the world regions, whose incidence ranging between 26% to 48% and 18% to 41%, respectively.⁵ However, SD is more commonly observed in the premenopausal women and frequently exist along with the lower urinary tract symptoms (LUTS).^{6,7}

Lower urinary tract symptoms usually observed in the form of stress urinary incontinence (SUI), urge urinary incontinence (UII), mixed urinary incontinence (MUI) or overactive bladder (OAB) with or without urinary continence.⁷ Urinary incontinence and SD are associated w

ith each other most of the time. But mostly these remains neglected and untreated.^{6,8,9} Prevalence and the association of SD with LUTS remains uncertain in majority of the population. Therefore, the present study was planned to know about any association between LUTS and sexual problems in pre-menopausal women.

MATERIALS AND METHODS

The present prospective observational study was initiated after obtaining Institutional Ethics Committee approval and was conducted from March 2018 to February 2019 at the Department of Urology, IGIMS, Patna, Bihar India. A total of 105 sexually active premenopausal women who presented with the complain of any of LUTS attending outdoor patient department or admitted in urology department were included in the study. Informed consent was obtained from all the included patients. Proper history helps in identification of various co-morbidities and other medical conditions. Lifestyle habits, any medications intake in the past, emotional and psychological factors also asked. The presence of lifestyle factors like obesity and addiction, medical conditions like diabetes, depression and partner status were also assessed. After proper history taking and physical examination each and every patient were given two questionnaires. One was Bristol Female Lower Urinary Tract Symptom (BFLUTS) questionnaire for the assessment of LUTS and another was the Pelvic Organ Prolapse-Urinary Incontinence Sexual Function Questionnaire (PISQ-12) for the assessment of their sexual function. BFLUTS questionnaire consists of 19 questions on filling symptoms, voiding symptoms and incontinence symptoms and PISQ-12 covers behavioural-emotive, physical and partner-related questions. The filling symptoms of LUTS includes nocturia, rush to toilet (urgency), bladder pain and frequency (≤ 3 h between

voiding). Voiding symptoms are hesitancy (delay to start urinate), strain to urinate and intermittency (stop and start more than once). Incontinence symptoms are leaking before getting to toilet (urge incontinence), frequency of incontinence, stress incontinence (when physically active, cough etc.), unpredictable incontinence (no reason and feeling) and nocturnal incontinence (leaking when asleep). Lack of sexual desire, orgasm, sexual excitement and satisfaction from the sexual activity, pain during sexual intercourse are domains which assessed and recorded. All details regarding the patients' demographics, scoring and results were entered into the patient record form.

STATISTICAL ANALYSIS

All data were recorded in a proforma specially designed for the study. The data collected was stored in Microsoft excel 2007 © Microsoft office. Data collected on 105 cases were scrutinized, coded and entered into IBM SPSS 16.0 statistics, Statistical analysis was done by IBM SPSS 16.0 statistics. Chi-square test of independence and one-way analysis of variance (ANOVA) used as a test of significance for outcome analysis. The cut off value of 'p' for test of significance was taken as <0.05 . Multivariate regression analysis was performed using logistic regression for these variables.

RESULTS

A total of 105 women with LUTS were enrolled in the study. Patient's mean (SD) age was 43.70 (3.88) years and mean BMI was 29.49 (5.37) (Table 1). The SUI was observed in 40% (n=42) of the study population followed by MUI (n=36, 34%) and UII (n=27, 26%) respectively. Total 22% (n=23) of women among totals had the history of prolapse. Almost 70% (n=74) had sexual intercourse once a week or less (Table 1).

Table 1: Demographics and baseline characteristics

Parameter	Mean (n=105)
Age (years), mean (SD)	43.70 (3.88)
BMI kg/m ²	29.49 (5.37)
Urinary incontinence	42 (40.00)
SUI	36 (34.29)
MUI	27 (25.71)
UII	
History of prolapse	23 (21.90)
Weekly frequency of sexual intercourse, mean	1.23
≥ 2	31 (29.52)
≤ 1	74 (70.48)
Parameter	n=105

Data presented as n (%), unless otherwise specified. BMI, body mass index; MUI, mixed urinary incontinence SUI, stress urinary incontinence; UII, urge urinary incontinence.

The LUTS were assessed in 105 women. A total of 68.57% of women had the filling symptoms for nocturia. 67.76% of women rush to toilet (urgency), bladder pain in 59.05% and frequency (≤ 3 h between voidings) in 93.33% were noted. Similarly, 26.67%, 28.57% and 66.67% women had voiding symptoms for hesitancy (delay to start urinate), strain to urinate and intermittency (stop and start more than once), respectively. A total of 79.05%, 98.1%, 93.33%, 49.52% and 21.9% had incontinence symptoms for leaking before getting to toilet (urge incontinence), frequency of incontinence, stress incontinence (when physically active, cough etc.), unpredictable incontinence (no reason and feeling) and nocturnal incontinence (leaking when asleep), respectively. More than 90% of women faced the problem of frequency in filling symptoms, frequency of incontinence and stress incontinence. Figure 1 represents the percentage of BFLUTS symptoms among the women.

Figure 2 represents the distribution of PISQ-12 items among study population. In behavioural emotive the desire, orgasm, sexual excitement, satisfaction from the sexual activity was reported as never in 52.38%, 44.76%, 46.67%, 42.86% respectively, reported as sometimes in 38.10%, 36.19%, 36.19%, 30.48 respectively and always in 9.52%, 19.05%, 17.14%, 26.67% respectively. In majority of women lack of desire, orgasm, sexual excitement and satisfaction from the sexual activity was observed (Figure 1A). Among physical state questions the majority (more than 50% in all except pain during sexual intercourse [47.62%]) of women reported as never demonstrating limited impact (Figure 2B). Among partner related questions, 76% reported no excretion in partner, 47% reported always or sometimes premature ejaculation,

and 55% reported always having intensity of degree of orgasm (Figure 2C).

Figure 3 shows the mean BFLUTS score, PISQ-12 score and sub-dimensions mean scores in women with LUTS. The observed total mean (SD) BFLUTS score was 28.12 (10.23), sub-dimension mean (SD) scores for the filling, voiding, incontinence symptoms, sexual function and quality of life were 8.21 (4.22), 34.32 (3.45), 12.21 (4.88), 4.49 (3.02), and 10.65 (5.39), respectively. The total mean (SD) score of PISQ-12 was found to be 23.72 (4.23) in all women and the mean values for the sub-dimension scores were 5.21 (2.20) for the behavioural-emotive, 11.78 (4.23) for the physical state, and 6.2 (2.20) for the partner-related state.

There was an inverse association observed between the total of PISQ-12 scores and total and sub-dimension of the BFLUTS scores ($p < 0.01$). An analysis of the relationship between sexual functions and LUTS indicated that there was association between the total BFLUTS and all sub-dimension mean scores and PISQ-12 total score. As the severity of the symptoms experienced increased, sexual function scores decreased, which in turn had negative effects on sexual function.

DISCUSSION

The present study was planned for evaluating the association between the sexual dysfunction and the presence of LUTS in Indian pre-menopausal women. It was observed that the SUI (40%) was more common in women followed by

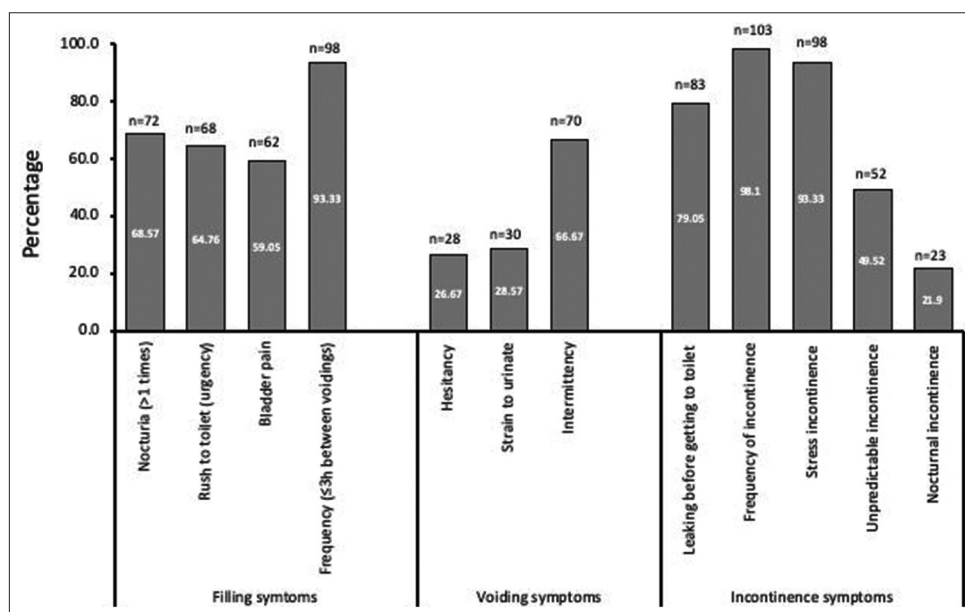


Figure 1: BFLUTS score symptoms with sub-dimensions

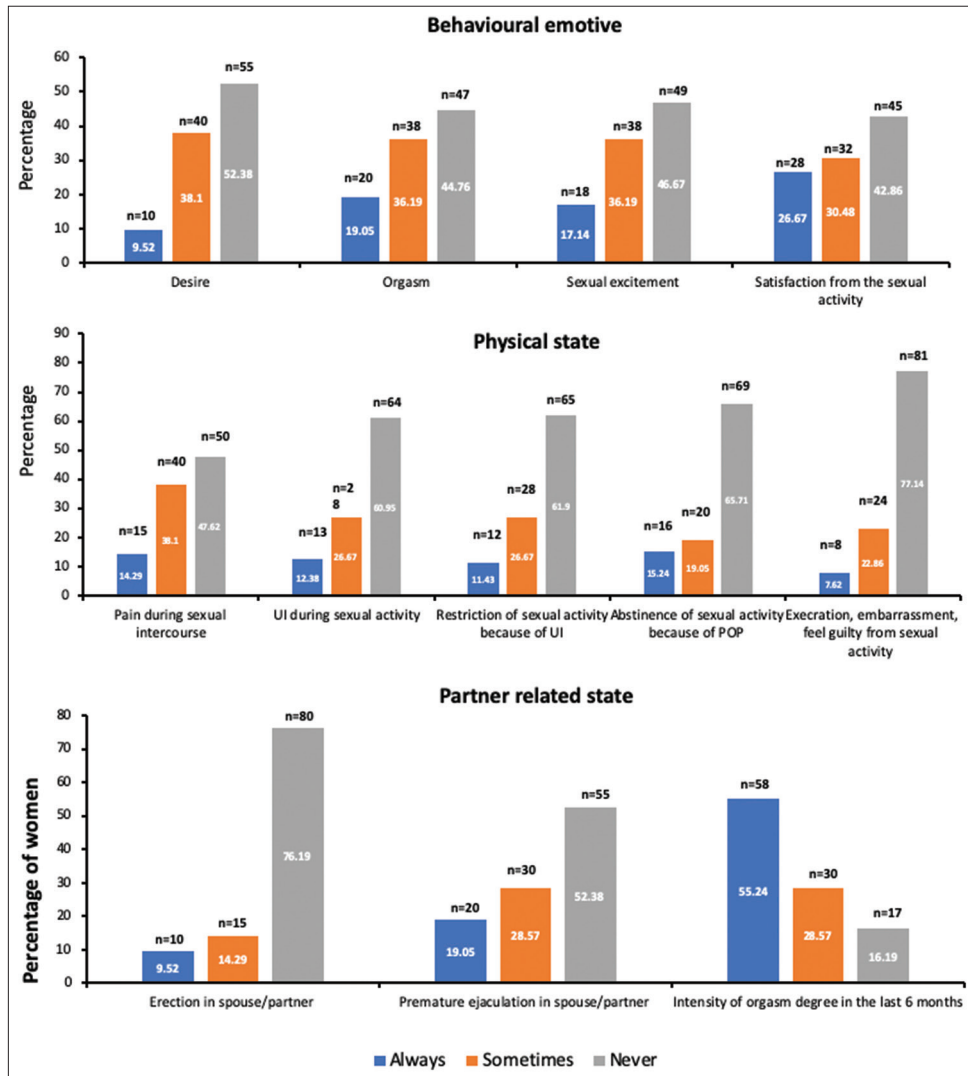


Figure 2: Distribution of PISQ-12 items: (A) Behavioural emotive (B) Physical state and (C) Partner-related state

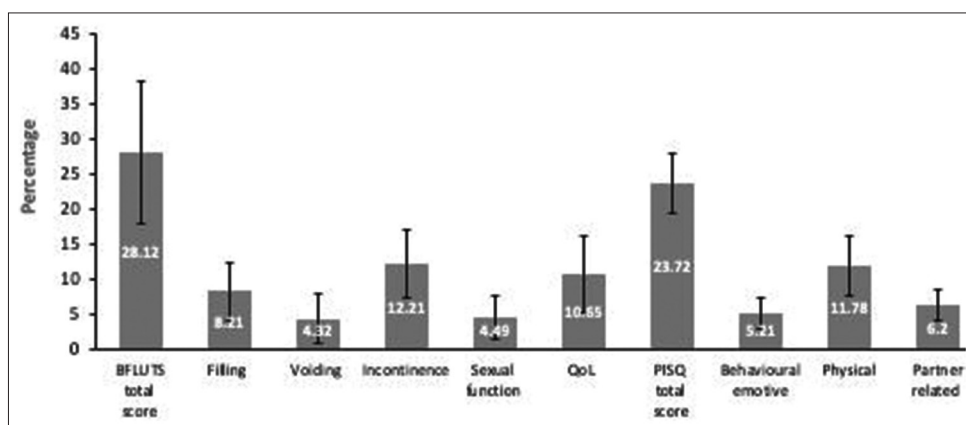


Figure 3: The mean scores BFLUTS and PISQ-12 in women with urinary incontinence complaints

MUI (34%). This observation was similar to the other study carried out in India by Biswas et al.¹⁰ Similar results were observed in the studies done in Turkey.^{11,12} However, the study by Agarwal et al. reported very less prevalence of SUI

(6.5%) and UII (7.9%) compared to the other previous studies.¹³ Zumrutbas et al., observed higher percentage of SUI (21.2 %) and MUI (9 %) as compared to males SUI (3.9%) and MUI (0.8%).¹⁴ Frequency in filling symptom,

stress urinary incontinence and frequency of incontinence were the major problem faced by more than 90% of the women in this study. Other symptoms like filling (nocturia, rush to toilet, bladder pain), voiding symptoms like intermittency and incontinence symptoms like leaking before getting into the toilet was common in the women. Many other studies also observed similar results.^{5,15-18}

In the present study the total mean BFLUTS score was 28.12, which was higher and consistent with other studies.^{12,19} Both the studies reported that the women suffering from UI tend to have the high BFLUTS score. The study in Turkish women observed 64.1% LUTS prevalence while Coyne et al (2009), found the 76.3%.²⁰ The percentage of women with minimum LUTS as Wang et al., observed study that the percentage of women with any one of LUTS was 64.3%.^{14, 20,21} Along with UI the women in this study also experienced the other symptoms like nocturia (>1 times), rush to toilet (urgency), bladder pain, frequency (≤ 3 h between voiding), intermittency (stop and start more than once).

The observed PISQ-12 score in this study was 23.72 (4.23) which indicates that the women with LUTS has a problem with sexual functionality. In the present study women were found to have lack of sexual desire, orgasm problems, lack of sexual excitement and lack of sexual satisfaction, similar results were obtained in the studies by Bilgic et al., and Salonia et al.^{4,12} The sexual dysfunction increases significantly with increase in age.¹ It was observed that the increase in the intensity of the LUTS symptoms in women was inversely proportional to their sexual function. LUTS negatively affects the sexual function of the women.

Limitations of the study

The major limitation of this study was a small sample size. Very few studies have been carried in Indian population. So, this study can be considered as a pilot study in Indian population. Study with large number of sample size is needed to generalize the results. Most frequently cited study by Lawman is the largest study conducted in USA.

CONCLUSION

The presence of LUTS may associated with sexual dysfunction in women. These results demonstrate that LUTS may have significant impact on SD and highlight the clinical importance of evaluating LUTS in premenopausal women. It is important to educate women about LUTS and sexual dysfunction. Awareness programme regarding the LUTS and Sexual dysfunction and its availability should be arranged for all the women especially in rural areas where hygiene is concerned.

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GKM-Concept of study and manuscript preparation; **UM**- Design of study; **AH**- Manuscript preparation, statistical analysis and revision of manuscript; **AA**-Coordination, concept, manuscript preparation and review of literature; **NJ**-Interpretation and design of study; **VKC**-Review of the literature

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