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Research Article

An observational study of effect on quality of life in perimenopausal females suffering from urinary incontinence

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ABSTRACT

Background: Urinary incontinence (UI) affects many older adults. Some of its deleterious consequences include stress, major depression, diminished quality of life, sexual dysfunction, and familial discord. Despite a wealth of research contributions on this topic, the available literature is under representative of ethnic minority older women.

Methods: A cross-sectional observational study was conducted by taking a group of 225 females of perimenopausal age group. Patients were assessed clinically for the diagnosis of urinary incontinence and effect on quality of life was assessed. Further testing was done depending on the storage symptoms & voiding symptoms and included residual volume assessment by ultrasound, cystometry, complex urodynamic test and cystoscopy. The data obtained and the socio-demographic data recorded in a structured proforma. The data obtained was assessed, analysed and results were drawn thereafter.

Results: In our study the prevalence of UI was found to be 18%. Maximum prevalence was seen in the age group of 61-70 years. Highest numbers were found to have stress incontinence 60.44%, followed by 23.55% of urge, overflow 5.33% and 10.66% mixed symptoms. The impact was equitable over all dimensions measured for QOL, namely activity limitation (28.44%), social interaction limitation (35.11%), sexual activity limitation (16%), financial burden increased (3.55%), emotional upset and distress (16.88%).

Conclusions: In the present study, we determined the prevalence of UI among 200 community-dwelling, ethnically diverse older women, discovered that our new UI screener is reliable, and did not find the UI-depression link to be significant.

Keywords: Urinary incontinence, Stress incontinence

INTRODUCTION

Urinary incontinence (UI) is defined by the International Continence Society (ICS) as the complaint of involuntary loss of urine, with three primary subtypes of UI identified: urgency UI (UUI), stress UI (SUI), and mixed UI (MUI; both UUI and SUI).^{1,2} Urinary incontinence almost always results from an underlying treatable medical condition but is under-reported to medical practitioners.⁷ The most common types of urinary incontinence in women are stress urinary incontinence

and urge urinary incontinence. Women with both problems have mixed urinary incontinence. UI can have detrimental effects on an individual's physical, mental, and social well-being and are associated with increased morbidity and mortality.³⁻⁶ The prevalence rates are an important factor in models used to calculate the economic costs associated with UI and as they vary from one study to the other, the economic data also vary across studies. The purpose of this study was to provide health care providers with a current overview of the data and to

increase awareness of the toll that UI extracts from patients and the society.

Globally, up to 35% of the population over the age of 60 years is estimated to be incontinent.⁸ In 2014, urinary leakage affected between 30% and 40% of people over 65 years of age living in their own homes or apartments in the U.S. Twenty-four percent of older adults in the U.S.⁹ have moderate or severe urinary incontinence that should be treated medically.⁹ Bladder control problems have been found to be associated with higher incidence of many other health problems such as obesity and diabetes. Difficulty with bladder control results in higher rates of depression and limited activity levels.¹⁰ Incontinence is expensive both to individuals in the form of bladder control products and to the health care system and nursing home industry. Injury related to incontinence is a leading cause of admission to assisted living and nursing care facilities. More than 50% of nursing facility admissions is related to incontinence in US.¹¹

The psychosocial impact of urinary incontinence in women of perimenopause age groups can be massive. About 25-50% of women with urinary incontinence experience sexual dysfunction. Urinary incontinence commonly leaves the sufferer with psychological morbidity. Women with an overactive bladder are likely to suffer greater psychological distress than those with stress incontinence. Up to 23% of women take time off work because of their incontinence. People with incontinence are less likely to be employed than those in the general population. Urinary incontinence can affect social, work and personal and sexual relationships.

METHODS

This cross-sectional observational study was conducted by taking a group of 225 females of perimenopausal age group at the obstetrics and gynecology department of a tertiary care hospital at Indore (M.P.) in year 2014-15. A semi-structured questionnaire was taken after explaining the procedure and taking informed consent. Assessment included age, parity, menopausal status, socio-demographic factors, severity and type of incontinence, and obstetrical and other risk factors, mode of delivery, general and gynecological examinations etc. along with impact on quality of life. The physical examination was focused on clinical diagnosis of incontinence which was supported by bladder diary & uroflow dynamics in each patient. Further testing was done depending on the storage symptoms & voiding symptoms and included residual volume assessment by ultrasound, cystometry, complex urodynamic test and cystoscopy. The essential criteria for case selection were females of age group 40-80 years, females having two or more children. Criteria for exclusion were females having Urinary tract Infection in last 6 months and females having any fistulae.

RESULTS

In our cross-sectional study, diagnosis of urinary incontinence was based on answers to leading questions about symptoms of urinary incontinence. Our study provides an opportunity to analyze the prevalence and determinants of different types of urinary incontinence separately in a group of 225 subjects using a questionnaire for recording symptoms. The questionnaire was filled according to the verbal responses by the subjects of our study group.

In our study the prevalence of UI was found to be 18%. The age group of 40-80 years was studied and it was seen that the prevalence ranged from 5.33% to 36.88% with maximum prevalence in the age group of 61-70 years of age. Of the total women having incontinence, highest numbers were found to have stress incontinence 60.44%, followed by 23.55% of urge, overflow 5.33% and 10.66% mixed symptoms (Table 1).

Table 1: Prevalence of different types of incontinence in the study population.

Type	Proportion of individual types (%)
Stress Incontinence	60.44
Urge Incontinence	23.55
Overflow Incontinence	5.33
Mixed	10.66

In our study out of all the parous women the prevalence of urinary incontinence was found to be 83.55% in vaginal delivery and 16.44% in caesarian deliveries. Women with stress incontinence had the severest perceived impact on QOL. The impact was equitable over all dimensions measured for QOL, namely activity limitation (28.44%), social interaction limitation (35.11%), sexual activity limitation (16%), financial burden increased (3.55%), emotional upset and distress (16.88%) (Table 2).

Table 2: The impact of urinary incontinence on various dimensions of QOL.

Dimensions of QOL	Impact Percentage (%)
Activity limitation	28.44
Social interaction limitation	35.11
Sexual activity limitation	16
Financial burden increased	3.55
Emotional upset and distress	16.88

DISCUSSION

In our study the prevalence of UI was found to be 18%. In other similar study, the reported prevalence was 21.87%.¹³⁻¹⁵

Prevalence of various types of incontinence in our studies, were similar to the study conducted by Kumari et al., who reported the overall prevalence of UI as 12%, among whom 46% had stress incontinence, 26% had urge, and 28% had mixed type.¹⁴ In another study, the prevalence of stress, mixed, and urge type was 16.13%, 3.67%, and 2.07%, respectively. This was similar to most of the other studies.^{16,17} Urinary incontinence is a significant health problem in the community, leads to embarrassment, curtailment of daily, social and sexual activities and is a considerable economic burden on the individual as well as the healthcare system.¹⁸ Identification of risk factors of UI and altering them can reduce this burden. Prevalence of UI increases with advancing age, and the etiology of this association are unclear. This is partly explained by progressive loss of muscle tone, decreased contractility, changes in the hormonal stimulation, and repeated injuries during parturition.^{18,19}

Incontinence was found to be positively associated with increasing parity. A definite trend of increasing prevalence in all types of urinary incontinence with increased parity suggests cumulative effect. Comparable results were obtained by Swash¹⁹ who concluded that injury to the innervations of pelvic floor is worsened by successive deliveries. The prevalence of all types of urinary incontinence was significantly higher in postmenopausal women and women who have had hysterectomy. Mode of vaginal delivery had a significant impact on prevalence of overall and stress incontinence, prevalence being higher in women having even one vaginal delivery.

The findings in our study of mode of delivery in relation to the prevalence of urinary incontinence are in agreement with many studies²⁰ that showed increased prevalence of urinary incontinence after vaginal deliveries. Urge and mixed incontinence showed least significant association with vaginal delivery. Parazzini²¹ also did not find increased risk of urge incontinence after vaginal delivery. The prevalence of overall and stress incontinence was significantly higher for persons with habit of tea intake/coffee, females having chronic cough constipation. The association between constipation, chronic cough, and UI can be explained by increased abdominal pressure.

In our study out of all the parous women the prevalence of urinary incontinence was found to be 83.55% in vaginal delivery and 16.44% in caesarian deliveries. In other study, prevalence of urinary incontinence is maximum among group with vaginal delivery (26.84%) which was significantly higher than nulliparous women (9.42%) and caesarean deliveries (8.59%).

CONCLUSIONS

Urinary Incontinence (UI) affects many older adults. Some of its deleterious consequences include stress,

major depression, diminished quality of life, sexual dysfunction, and familial discord. Of the various mental health problems identified in the literature as being comorbid with UI, the most notable one continues to be depression. Despite a wealth of research contributions on this topic, the available literature is under representative of ethnic minority older women. Culture has been shown to have a significant impact on a woman's perception of her own UI symptoms; this demonstrates the necessity for the recruitment of ethnically and culturally diverse samples when studying UI. In the present study, we determined the prevalence of UI among 200 community-dwelling, ethnically diverse older women, discovered that our new UI screener is reliable, and did not find the UI-depression link to be significant. The clinical and research implications of our findings are discussed.

In the present study, we observed that a sizable percentage of community-dwelling, ethnically diverse older women are living with UI symptoms. This is a clinical problem that needs to be addressed and further studied, as it has ramifications for the clinical practice of medical doctors and psychologists/clinicians dealing with older adult populations. More research is needed on whether UI is underdiagnosed and undertreated and, if this is indeed found to be the case, on reasons why it is occurring. Potential answers to this question include exploring cultural/ethnic issues and the related reluctance of many minority individuals to confide in health providers. It is possible that older women-from all ethnic backgrounds-feel too embarrassed about their UI symptoms to discuss them with a health provider and face living with UI without receiving treatment. On the other hand, cultural factors may play a role in shaping whether and how older women report and address UI symptoms. Our data analyses showed that the new UI tool proposed herein is a reliable UI screener. We recommend that interested scholars and clinicians consider testing the validity of this promising tool within community samples by using it in conjunction with other UI tools. Given that the UI-depression link was not significant in the present study, more research is needed to further elucidate the mechanisms linking depressive symptomatology and UI, especially when considering that prior research focusing on specific ethnic groups has shown that culture may affect how older women perceive UI.

Aging was associated with reduced quality of life only in physical functioning dimension. Although in univariate analysis, quality of life was significantly lower among illiterate participants and those with more children and longer duration of menopause at least in one dimension, the differences were not found to be significant in linear regression analysis.

Chronic diseases, vasomotor symptoms and insufficient income were strong predictors of all the 4 dimensions of quality of life of postmenopausal women. Therefore, interventions are necessary to improve quality of life and health among this group of individuals.

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