

Original Research

Assessment of urinary tract infections in postmenopausal women

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ABSTRACT:

Background: Urinary tract infection (UTI) is the most common bacterial infection in women in general and in postmenopausal women in particular. The present study was conducted to assess urinary tract disorders occurring due to menopause. **Materials & Methods:** 80 post-menopausal women with urinary symptoms were included. Number of years since menopause and urinary symptoms were recorded. **Results:** Age group 40-45 years had 7, 45-50 years had 10, 50-55 years had 13, 55-60 years had 16 and >60 years had 14 patients. The time since menopause and patients with urinary symptom were 0-2 years had 12, 3-6years had 25, 7-10 years had 16 and >10 years had 7 patients. Urinary symptoms were burning micturition in 72, urgency in 44, frequency in 40, nocturia in 32 and retention in 28. The difference was significant (P< 0.05). **Conclusion:** Urinary tract infections are quite common in post menopausal women. Common urinary symptoms were burning micturition, urgency, frequency, nocturia and retention.

Key words: Burning micturition, Urgency, Urinary tract infections.

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INTRODUCTION

Menopause is defined as the permanent cessation of menses for 1 year. With the advent of modern laboratory testing, menopause may now be more precisely defined as amenorrhea, with signs of hypoestrogenaemia, and an elevated serum follicle stimulating hormone (FSH) level of greater than 40IU/L.¹

Urinary tract infection (UTI) is the most common bacterial infection in women in general and in postmenopausal women in particular. Two groups of elderly women with recurrent UTI should be differentiated regarding age and general status: healthy, young postmenopausal women aged 50 to 70 years who are neither institutionalized or catheterized and elderly institutionalized women with or without a catheter.

Bacteriuria occurs more often in elderly functionally impaired women, but in general it is asymptomatic.²

However, the risk factors associated with recurrent UTI in elderly women are not widely described. In a multivariate analysis it was found that urinary incontinence, a history of UTI before menopause, and nonsecretor status were strongly associated with recurrent UTI in young postmenopausal women.³ Another study described the incidence and risk factors of acute cystitis among non-diabetic and diabetic postmenopausal women. Independent predictors of infection included insulin-treated patients and a lifetime history of urinary infection.⁴ Borderline associations included a history of vaginal estrogen cream use in the past month, kidney stones, and asymptomatic bacteriuria at baseline. Another important factor in

postmenopausal women is the potential role that estrogen deficiency plays in the development of bacteriuria.⁵ The present study was conducted to assess urinary tract disorders occurring due to menopause.

MATERIALS & METHODS

The present study was conducted among 80 postmenopausal women with urinary symptoms. All were informed regarding the study and their written consent was obtained.

Demographic profile such as name, age, gender etc. was recorded. History, clinical examination, investigations such as hemogram, peripheral blood smear, urine routine and microscopy, urine culture and sensitivity, ultrasonography, pap smears, hormonal profile were carried out. Number of years since menopause and urinary symptoms were recorded. Results were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table I Distribution of patient

Age group (Years)	Number	P value
40-45	7	0.04
45-50	10	
50-55	13	
55-60	16	
>60	14	

Table I shows that age group 40-45 years had 7, 45-50 years had 10, 50-55 years had 13, 55-60 years had 16 and >60 years had 14 patients. The difference was significant (P< 0.05).

Table II Time since menopause and appearance of first urinary symptom

Time since menopause	Patients with urinary symptom	P value
0-2	12	0.02
3-6	25	
7-10	16	
>10	7	

Table II, graph I shows that time since menopause and patients with urinary symptom were 0-2 years had 12, 3-6 years had 25, 7-10 years had 16 and >10 years had 7 patients. The difference was significant (P< 0.05).

Graph I Time since menopause and appearance of first urinary symptom

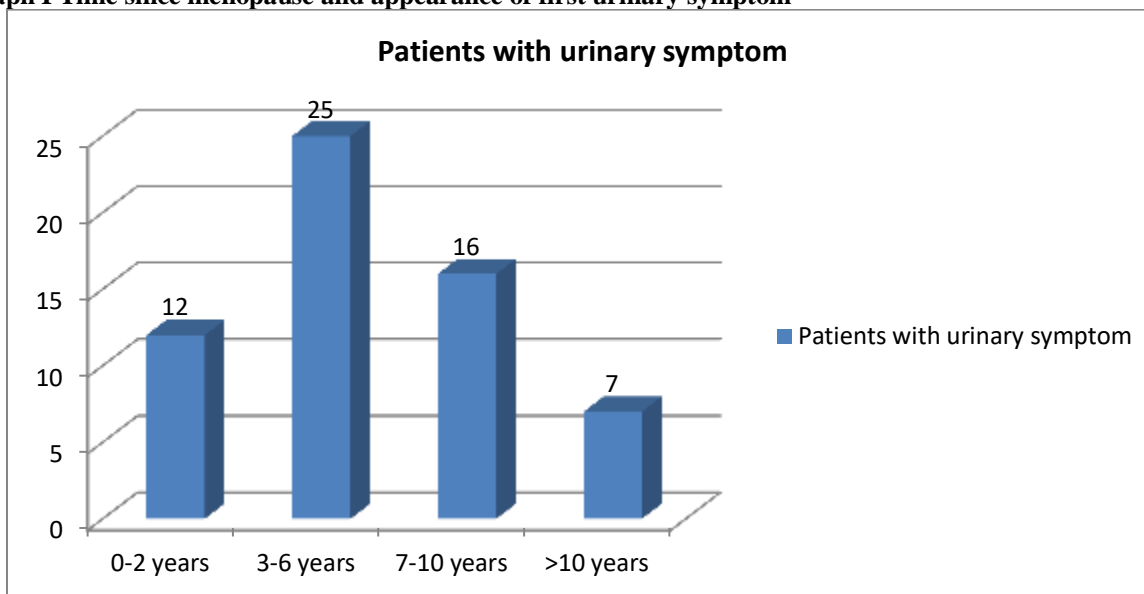


Table III Patients with urinary symptoms

Urinary symptoms	Number	P value
Burning micturition	72	0.05
Urgency	44	
Frequency	40	
Nocturia	32	
Retention	28	

Table III shows that urinary symptoms were burning micturition in 72, urgency in 44, frequency in 40, nocturia in 32 and retention in 28. The difference was significant ($P < 0.05$).

DISCUSSION

Urogenital atrophy and its consequences are also a part of the physiological aging at menopause. Vulval Itching, burning micturition, urinary incontinence and dryness of the vagina are the symptoms most frequently reported by women over 55 years as reasons for visiting a gynaecologist. 25- 30% of women of these have frequent urinary tract infections.⁶ The oestrogen deficiency in menopause leads to urogenital atrophy and thinning of the urogenital epithelium and the reduced immunological defence mechanism makes post- menopausal women more susceptible to urinary tract infections.⁷ Unfortunately very little is known about urogenital complaints in post-menopause in India as Indian women are reluctant to come forward with these complaints because of lack of information, fear and embarrassment, and instead chose to endure them considering it a part of the aging process.⁸ The present study was conducted to assess urinary tract disorders occurring due to menopause.

In present study, age group 40-45 years had 7, 45-50 years had 10, 50-55 years had 13, 55-60 years had 16 and >60 years had 14 patients. Sambharam et al⁹ studied the associated factors for the development of urinary problems in post-menopausal women and the appropriate investigations, management and regular follow up of such cases A total 121 post-menopausal women with urinary symptoms attending the gynaecology OPD. Burning micturition was the most common urinary symptom in the present study, seen in 85.12% post-menopausal women followed by urinary frequency (59.50%), urinary incontinence (28.92%), urinary urgency (27.27%) and mass per vaginum (25.61%). *Escherichia Coli* was the most common organism found in 45 post-menopausal women on urine culture and sensitivity. Local estrogen therapy provided relief of symptoms more than those who did not receive any local estrogen therapy.

We found that time since menopause and patients with urinary symptom were 0-2 years had 12, 3-6years had 25, 7-10 years had 16 and >10 years had 7 patients. Jackson et al¹⁰ described the incidence and risk factors

for acute cystitis among nondiabetic and diabetic postmenopausal women and the possible effect of estrogens on those women. During 1,773 person-years of follow-up, 138 symptomatic UTIs occurred. Independent prediction of infection included insulin-dependent diabetes mellitus and a lifetime history of UTI. However, a borderline association included a history of vaginal estrogen cream use in recent months and a history of kidney stones (hazard ratio, 1.95; 95% CI, 0.9-3.5). However, sexual activity, urinary incontinence, parity, postcoital urination, vaginal dryness, use of cranberry juice, vaginal bacterial flora, and postvoid residual bladder volume were not associated with the incidence of acute cystitis after multivariable adjustment.

We observed that urinary symptoms were burning micturition in 72, urgency in 44, frequency in 40, nocturia in 32 and retention in 28. Moore et al¹¹ found that recent sexual intercourse, as described for younger women, was also strongly associated with incident UTI in other healthy postmenopausal women. In the older, institutionalized women, urine catheterization and functional status deterioration appeared to be the most important risk factors associated with UTI.

Another important factor in postmenopausal women is the potential role that estrogen deficiency plays in the development of bacteriuria. Postmenopausal women frequently present with genitourinary symptoms; half have genitourinary disorders, and 29% have urinary incontinence. Postmenopause is characterized by a significant reduction in ovary estrogen secretion, which is often associated with vaginal atrophy.¹² Clinically, it manifests as a syndrome characterized by vaginal dryness, itching, dyspareunia, and urinary incontinence. This may sometimes imitate a UTI.

CONCLUSION

Authors found that urinary tract infections are quite common in post menopausal women. Common urinary symptoms were burning micturition, urgency, frequency, nocturia and retention.

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