Original Article

Uterovaginal Prolapse

Proportion of Urinary Symptoms in Pre and Post-Menopausal Women with Uterovaginal Prolapse

1. Samina 2. Deeba Kalim 3. Amjad Zahoor 4. Israr Ahmed Akhund 5. Muhammad Ishaq

1. Asstt. Prof. of Obst. & Gynae 2. Asstt. Prof. of Obst. & Gynae 3. Assoc. Prof. of Pediatrics 4. Prof. of Physiology 5. Prof. of Surgery, Jinnah Medical College, Peshawar

ABSTRACT

Objective: To compare the proportion of urinary symptoms in pre and postmenopausal women with uterovaginal prolapse.

Study Design: Comparative Study.

Place and Duration of Study: The study was carried out at the Department of Obstetrics & Gynecology Unit II, Dow University of Health Sciences and Civil Hospital Karachi from July 2005 to January 2006.

Materials and Methods: Sixty consecutive patients (30 premenopausal and 30 postmenopausal) were included in the study through structured Proforma from the out patient ward or emergency. Informed consent was obtained. A detailed history and related examinations and investigations were done. These include urine DR, Urine C/S and Urodynamic like Cystometry in selected patients.

Results: In this study the difference of urinary symptoms in pre and postmenopausal women of Uterovaginal prolapse were statistically found insignificant like frequency of urine (26.7% versus 33.3%), Urgency (20% vs 26.7%), Nocturia (26.7% vs 13.3%), Dysuria (40% vs 26.7%), Voiding problems (40% vs 46.7%), Urge incontinence (40%vs 20%). Stress incontinence was slightly higher in postmenopausal group than premenopausal (53.3%vs 46.7%) but this difference was found insignificant, while parity status between these two groups had significant difference like parity 2-5 was higher in pre-menopause group than postmenopause (66.7% vs 36.7%) and parity 6-10 was higher in postmenopause group than pre-menopause (63.3% vs 26.7%).

Conclusion: Significant difference in parity was found between pre and post-menopausal women with uterovaginal prolapse but the difference of urinary symptoms in pre and postmenopausal group was found significant. Uterovaginal prolapse associated with different urinary symptoms especially incontinence and voiding problems. These urinary symptoms effect over quality of life of women. This warrants greater attention for Gynecological health needs in our country by safe family planning practices.

Key Word: Uterovaginal Prolapse, Pre–Menopausal, Post-Menopausal

INTRODUCTION

Uterovaginal prolapse is the descent of vagina and uterus due to the loss of integrity of structures that support the contents of female pelvis[1]. The exact incidence of uterovaginal prolapse is difficult to determine. It has been estimated that a 50% of parous women lose pelvic floor support, resulting in prolapse and about 10-20% of them seek medical care[2]. A WHO multicentre collaborative study carried out in Pakistan identified at least 22% women with uterovaginal prolapse who attended health care facility[3]. The chance of a woman having a prolapse increases with age. Therefore the incidence of prolapse will rise as life expectancy increases[4]. Uterovaginal prolapse is usually the result of childbirth, menopause (due to deficiency of estrogen), increase intra abdominal pressure, injury to sacral nerves S1-S4 or diabetic neuropathy. Congenital weakness of pelvic support causes prolapse in young nulliparous women, prolapse of vagina may occur after hysterectomy[5]. Prolapse is often asymptomatic. The usual presenting symptoms in patients with uterovaginal prolapse are something coming down of vagina, lump in vagina and backache which is aggravated by standing and eased by lying down[6]. Prolapse is frequently associated with urinary complains like increase frequency, urgency, nocturia, hesitancy, urinary incontinence or incomplete emptying. In severe cases of incomplete bladder emptying, retention of urine may occur. Voiding dysfunction may result in increase frequency of urinary tract infections and occasionally, overflow incontinence. Due to the kinking of the urethra, stress incontinence and even intrinsic sphincter deficiency may be over looked[7]. The world wide prevalence of urinary symptoms in association with prolapse varies ranging from 5 to 39%. In Pakistan, hospital based study on urinary incontinence reported the frequency of urinary incontinence as 20.5%. According to one study conducted by community health centre of Agha khan University Hospital (AKUH) from November 1stto30th, 2002 stress incontinence was the highest reported complaint (38.4%) followed by burning (34.4%), frequency (26%), painful micturition (20.4%), urge incontinence (18.8%), incomplete empting of bladder (14.4%) and poor stream (8.4%) [8].

Urogynecology as a subspecialty has not been introduced in Pakistan and we believe the extent of significant lower urinary tract symptoms has been hugely underestimated [9]. The severity of these symptoms is more in postmenopausal women[10]. The rationale for conducting this study is based on the hypothesis that the proportion of urinary symptoms will be significantly different in the pre and postmenopausal women with uterovaginal prolapse. The aim of our study is to compare the proportion of urinary symptoms in pre and postmenopausal women with uterovaginal prolapse.

MATERIALS AND METHODS

The study was carried out in the department of Obstetrics & Gynecology unit II, Dow University of Health Sciences and Civil Hospital Karachi, Pakistan. This was a cross sectional comparative study from July 2005 to January 2006. Sixty consecutive patients (30 premenopausal and 30 postmenopausal) were included in the study through structured Proforma by purposive sampling technique from the outpatient, ward or emergency. Informed consent was obtained. The inclusion criteria were patients with all degree of uterovaginal prolapse, both pre and postmenopausal and married and unmarried women. Exclusion criteria were women who were pregnant with uterovaginal prolapse, patients with diagnosed renal pathology, recurrent urinary tract infection, and medical disorder such as diabetes mellitus or sclerosis. A detailed history and related examination and investigations were done. These include urine D/R, Urine C/S and urodynamic like Cystometry in selected patients. Frequency was defined as the passage of urine every 2 hrs or more than seven times a day. Nocturia was defined as interruption of sleep more than once each night of need to micturate. Urgency was a strong sudden desire to void while Dysuria defined as urethral pain during micturition. Retention of urine means failure to empty the bladder totally, bladder pressure being unable to overcome urethral resistance. Voiding problems include hesitancy, a poor stream, straining to void, incomplete bladder emptying and also frequency, urgency and dysuria. Stress incontinence was defined as the involuntary loss of urine when the intravesical pressure exceeds the maximum urethral closing pressure. While urge incontinence was defined as urinary leakage associated with the sensation of urgency. Data analysis was performed through SPSS Version 10. Age was presented by Mean ∀ standard deviation and its histogram was also presented in premenopause and postmenopause group because Means were not comparable. Frequencies and percentages were computed to present all categorical variables including .menstrual status, parity status, urinary complains and symptoms. Chi-square test was applied to compare parity status, urinary symptoms including frequent urine passing, urgent urine passing, dysuria urine passing, incontinence and retention urine passing while Fisher's exact test was applied to compare nocturia urine passing, retention urine passing between two groups. Statistical significance was taken at $P<0.05$.

RESULTS

Average age of premenopause group was computed (35.57±5.04 years, range=25-40) and postmenopause group was (58.77+_9.97 years, range 40-80). There were only two patients were either nulliparous or single parous and both these patients were found in premenopause group. Parity 2-5 was significantly higher in premenopause than postmenopause group (66.7%vs36.7%), while parity 6-10 was significantly higher in postmenopause group than premenopause group (63.3%vs26.7%).This data revealed a significant difference (X2=9.09, P=0.011) of parity status between two groups. (Table1). A symptom of frequent urine passing was reported by 8 (26.7%) patients of premenopause group and 10(33.3%) patients of postmenopause group. There was insignificant difference(X2=0.317, P=0.573) of proportion of frequency of urine between two groups. Urgency in passing urine was reported by 6 (20%) patients of premenopause group and 8(26.7%) patients of postmenopause group and had insignificant difference(x2=0.373, P=0.542) between two groups (fig 1).8(26.7%) patients of pre and 4(13.3%) patients of postmenopause group complained nocturia.

Table No. 1: Comparison of Parity Status between Pre & Most Menopausal Patients

Parity Status	Pre-Menopause (N=30)	Post-Menopause (N=30)	Total
Para 0 – 1	2 (6.7%)	0 (0%)	2
Para 2 – 5	20 (66.7%)	11 (36.7%)	31
Para 6 – 10	8 (26.7%)	19 (63.3%)*	27

***Significantly high proportion (X2 = 9.09, p=0.011) at p <0.05**

Table No. 2: Comparison of Incontinence Symptom between two Groups

Incontinence	Pre-Menopause (N=30)	Post-Menopause (N=30)	Total
Urge			
Yes	12 (40%)	06 (20%)	X^2 = 2.86 P= 0.091
No	18 (60%)	24(80%)	
Stress			
Yes	14 (46.7%)	16 (53.3%)	X^2 = 0.27 P= 0.606
No	16 (53.3%)	14 (46.7%)	

An insignificant difference (P=0.333) of proportion was observed in 4 (13.3%) of pre and 6 (20%) patients of postmenopause group. Statistically insignificant difference (P=0.731) of proportion was observed

between two groups (fig 6).Greater number of patients of premenopause than postmenopause group were found with dysuria (40%vs 26.7%, P=0.273), However this difference of proportion was insignificant statistically (fig7).Urge type incontinence was reported by 12(40%) patients of pre and 6(20%) patients of postmenopause group, however this difference of proportion was insignificant (P=0.091). Stress incontinence was slightly higher in postmenopause than premenopause group (53.35vs.46.7%,P=0.606) but this difference was insignificant(table2).Proportion of voiding problem in premenopause group was 40% and postmenopause group was 46.7%, this difference of proportion was statistically insignificant(x2= 0.271,P=0.602) (Table 2).

DISCUSSION

Women with uterovaginal prolapse may present with a plethora of lower urinary tract symptoms including urine frequency, urgency, nocturia, hesitancy, incomplete emptying and incontinence. These symptoms may or may not be related to the uterovaginal prolapse, but with careful clinical and urodynamic investigations it is usually possible to determine the underlying pathophysiology[11]. There is study conducted by weber AM, Waltar MD Schova LR, Mitchinson A, they found that women with prolapse were older than those without prolapse.(mean age 58.2 vs 49.2 years respectively)[12]. In this study we used a comparison group of pre and postmenopausal women with uterovaginal prolapse to determine the frequency and proportion of associated urinary symptoms. In this study we found that the average age of premenopausal group was 35.57yrs(range 25-40yrs) while the average age of postmenopausal women was 58.77 (range 40-61yrs). A multi country collaborative study in Pakistan found that women with multiparty were more likely to have prolapse[1]. In our study only two patients in premenopause group were either nulliparous or single parous. Other patients in premenopause group had parity 2-5 which was significantly higher than postmenopausal group (66.7%vs, 36.7%), while parity 6-10 was significantly higher in postmenopause group than premenopause (63.3%vs,26.7%). So the parity status between these two groups had significant difference (x2=9.09, P=0.001). As this study was carried out on the basis of hypothesis that there is a likely to be significant difference in urinary symptoms between pre and postmenopausal group with uterovaginal prolapse, the result of our study was found against this hypothesis that differences were insignificant. In our study urge incontinence was reported by 40% patients of premenopause and 20% patients of postmenopause group, however this difference of proportion was insignificant (P=0.091) while stress incontinence was slightly higher in postmenopause group (53.3%vs.46.7%, P=0.606) but this difference was insignificant and was not support the hypothesis on which our study based. (Risk factors for urge and stress incontinence were different). The major predictors of urge incontinence were increasing age, UTI and diabetes. Other large population based studies have reported age as an important risk factor for urge incontinence[13]. According to one study the major predictors of stress urinary incontinence were white race, higher basal metabolic index and higher waist to hip ratio[14]. In our study the urinary frequency, urgency and voiding difficulties were found more in postmenopausal group as compare to premenopausal group (33.3%vs26.7%, 26.7%vs20% and 46.7%vs 40% respectively) but statistically these differences were insignificant. There is one study conducted by Bun gay et al who reported that frequency and urgency are 20% and 15% respectively and these figures increases only slightly with age[15]. In our study greater number of patients of premenopause group than postmenopause were found with dysuria (40%vs 26.7%, P=0.273) but this difference is insignificant. According to survey conducted in Chinese population in Hong Kong the prevalence of dysuria reported by 166 of 819 women (20%). According to one study conducted by Schatzl and colleagues in 2000 only 3.1% of women younger than 80 experienced nocturia greater than twice per night, where as 26.7% of those aged 60 and older did. But in our study group nocturia found to be higher in premenopause group than postmenopause (26.7%vs 13.3%). However this difference was found to be insignificant (P=0.333).Similarly retention of urine was observed higher in postmenopause group (20%) than premenopause (13.3%) but again this difference was found insignificant. Despite thorough evaluation, the source of voiding dysfunction will not be discovered in many women with lower urinary tract symptoms. Age alone correlates with its development; regardless of existing risk factor. This may be caused by a number of processes such as occult Supratentorial central nervous system lesion, neurogenic or myogenic dysfunction at the level of the bladder and changes in extracellular matrix composition at the level of the bladder and urethra[16].

CONCLUSION

Uterovaginal prolapse is associated with different urinary symptoms commonly incontinence and voiding problems. These symptoms are usually affected with age and parity. In our study significant difference in parity was found between pre and postmenopausal group but the difference of proportion of urinary symptoms was found insignificant. All urinary symptoms need to be investigated before performing any vaginal surgery to exclude coexistent pathology such as detrusor instability. These urinary symptoms effect over quality of life of women. This warrants greater attention for gynecological health needs in our

country by safe family planning practices, strengthened with health education of women for delayed age at marriage, to reduce the risk of uterovaginal prolapse and associated urinary symptoms. Further studies are required in the community to study the natural history of the development of urinary symptoms and the relationship to prolapse.

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Address for Corresponding Author:
Prof. Dr. Muhammad Ishaq
Chairman & Founder
Jinnah Medical College
Warsak Road Peshawar
Cell: +92-333-9152060
Email: Ishaq@Jmcp.Edu.Pk
Faizimrd@Gmail.Com