Bother and quality of life among symptomatic versus asymptomatic women with stage I – III pelvic organ prolapse

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ABSTRACT

Objective: To compare the bother and quality of life in symptomatic and asymptomatic patients with stage I–III pelvic organ prolapse (POP). **Methods:** A descriptive study was conducted between August 2010 and October 2011, among women with stage I– III POP who attended the Gynaecology outpatient department at the Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India. Parous women aged 20–70 years who were diagnosed as POP stage I – III based upon POP – Q staging were included in the present study. Assessment of symptoms, bother and impact on the quality of life was done. Comparative analysis of various parameters was done after categorization into two groups (Symptomatic; Group A, Asymptomatic; Group B). **Results:** The mean age was 45.2 ± 12.0 years in Group A and 50.3 ± 10.5 years in Group B (p=0.026). Assessment of bother suffered by the patients showed mean VAS score of $21.45 (\pm 26.0)$ in symptomatic patients and $11.10 (\pm 22.1)$ in asymptomatic patients (p = 0.03). However, no correlation was established between the severity of symptoms with increase in the stage of POP ($r^2 = 0.087$). Women in both the groups experienced difficulty in performing day to day activities and also faced feeling of frustration and significant impact on emotional health. **Conclusion:** Pelvic organ prolapse has significant impact on suffering and quality of life. Functional symptoms cannot consistently be attributed to the stage of pelvic organ prolapse.

Keywords: Pelvic organ prolapse, Quality of life

Pelvic organ prolapse (POP) includes a broad range of debilitating conditions predominantly affecting middle-aged and elderly women. Pelvic organ prolapse is defined anatomically as the descent of a pelvic organ or organs into or beyond the vaginal canal [1]. Approximately 50% of parous women have some degree of POP but only 10-20% are symptomatic [2]. The lower prevalence of POP based on symptoms

suggest that asymptomatic anatomic pelvic changes keep on occurring and there is a lack of correlation between prolapse symptoms and measured pelvic prolapse. Pelvic organ prolapse is one of the most common causes of gynaecological morbidity in India and constitutes a major public health problem [3]. The principal causes of prolapse are obstetric trauma and post-menopausal atrophy [4, 5, 6].

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Kashyap R, Singh A, Jain V. Bother and quality of life among symptomatic versus asymptomatic women with stage I – III pelvic organ prolapse. The New Indian Journal of OBGYN. 2016; 3(1): 29-36. doi:10.21276/obgyn.2016.3.1.6 The symptoms of pelvic organ prolapse include a sensation of vaginal fullness or dragging sensation in the lower abdomen, the feeling of firm mass within or coming out of vagina, low backache and urinary symptoms including urgency, frequency, dysuria, stress incontinence, a feeling of incomplete emptying of the bladder and difficulty in the evacuation of the bowel. The symptoms of POP have a significant impact on the bother and quality of life of the women.

Risk factors for prolapse include increasing age, higher gravidity and parity (especially the number of vaginal births), delayed and neglected labour, improper episiotomies and history of hysterectomy, especially hysterectomy for prolapse or incontinence operation [7,8]. In the Women's Health Initiative, almost one fifth of nulliparous women had some degree of prolapse [9]. Higher degree of thoracic kyphosis, smaller angel of lumbar lordosis and a more vertical orientation of pelvic inlet are associated with increased risk of pelvic organ prolapse [10,11]. Chronic pulmonary diseases e.g. asthma, chronic cough are significant to cause POP due to increased intra abdominal pressure. Few studies show that there is association between heavy works and weight lifting and POP [12]. Chronic constipation has been shown to contribute to pelvic floor dysfunction and prolapse. There are indications of a heritable or intrinsic connective tissue abnormality in the etiology of POP. There is a higher risk of prolapse in women with a mother or a sister reporting prolapse [13]. Women with joint hypermobility have a higher risk of POP as compared to women with normal joint mobility [14].

The aim of the present study was to compare risk factors, bother and quality of life in women with symptomatic and asymptomatic stage I–III pelvic organ prolapse.

Material and methods

A descriptive study was conducted between August 2010 - October 2011, among women with stage I–III POP who attended the Gynaecology outpatient department at the Postgraduate Institute of Medical Education and Research (PGIMER), Chandigarh, India.

The cases were recruited taking into consideration the inclusion criteria. Ethical approval was obtained from the institutional ethical committee. Written informed consent was taken from all the participants.

A sample size of 140 women was determined using the following formula

$$n = t^2 P*Q/d^2$$

- n = desired sample size
- t^2 = standard normal deviate = 1.96^2 = 4
- P = reported prevalence of symptomatic pelvic organ prolapse = 10% =0.10
- Q = 1 P = 0.90
- d^2 = degree of accuracy desired (5% =0.05)

Parous women aged 20 -70 years who were diagnosed as pelvic organ prolapse stage I – III based upon POP-Q staging were included in the present study. Operational definition of POP was used. Stage – I POP; when the leading edge of the prolapse does not descend below 1 cm above the hymen ring, Stage 2; when the leading edge of the prolapse extends from 1 cm above to 1 cm below the hymen ring, Stage 3; when the leading edge extends beyond 1cm of the hymen ring but without complete vaginal eversion [1]. Pregnant women were excluded from the study. Standardized history was taken regarding symptoms, risk factors, severity of bother and impact on the quality of life. The record was noted down in a standardized questionnaire. Pelvic Organ Prolapse Symptom Scale Score (POP-ss) was used for the assessment of symptoms [15]. Seven parameters were included in the POP-ss questionnaire. These included feeling of something coming out of vagina, uncomfortable feeling or pain in vagina which is worse when standing, heaviness or dragging feeling in lower abdomen, heaviness or dragging feeling in lower back, need to strain (push) to empty bladder, feeling that bladder has not emptied completely, feeling that bowel has not emptied completely. A total score (range 0-28) was calculated by summing the seven individual symptom responses to derive the net POP-ss score. The presence of even one symptom was considered for labeling the patient as symptomatic (Group A) and asymptomatic (Group B). The Visual Analogue Scale (VAS) score was assessed through the subjective responses of the participants regarding severity of bother [16]. Responses were marked by the patients on a 100 mm long scale ranging from 0 (no bother) to 100 (extremely severe bother). As per the VAS score bother was graded as mild if the score was 10-40, moderate for VAS score of 40 to 70 and severe if VAS score was more than 70. The assessment of the quality of life was done using the PFIQ-7 questionnaire that included 7 parameters [17]. The parameters evaluated included the ability to perform household chores (e.g. cleaning or cooking), physical activities (e.g. walking), social activities in the home, and social activities outside the home. The ability to travel distances of more than 30 minutes duration, emotional health, and feelings of frustration. A total score was calculated from the sum of the individual responses (range 7–28).

Data was entered and analyzed using SPSS version 22 and expressed as percentage, range, mean, or standard deviation. Comparison of the risk factors between symptomatic and asymptomatic group was done using chi-square test and mean scores of visual analogue scale (VAS) and pelvic floor impact questionnaire (PFIQ-7) was assessed using Mann–Whitney U test. P value less than 0.05 was considered statistically significant.

Results

The mean age was 47 ± 12 years. Sixty (43%) patients were postmenopausal. Most (90.7%) women reported normal vaginal deliveries, 4 (2.8%) had undergone lower segment caesarean section, 3 (2.1%) women had at least one forceps delivery and 6 (4.2%) had both caesarean section and normal vaginal delivery. Seventy seven (55%) women had undergone hospital conducted delivery, 44 (31%) women reported deliveries at home, and 19 (13.5%) of women had deliveries both at home and hospital. Eighty Nine (63.5%) women were classified as POP stage – I, 36 (26%) as stage – II and 15 (10.7%) as stage – III. Comorbidities were present in 38 (27.1%) patients. The various co-morbidities included hypertension in 15 (11%), diabetes in 11 (8%), hypothyroidism in 6 (4%)

and hypertension and diabetes both 6 (4%) patients. About 36 (26%) of patients had history of constipation, 21 (15%) chronic cough and 15 (11%) patients reported ever heavy weight lifting. Incontinence was present in 17 (12%) patients. Family history of prolapse was present in 16 (11%) patients. [Table 1]

Table 1: Comparison of risk factors between groups			
Variable	Group A	Group B	P
	(n=101)	(n=39)	value
Socio-economic			
status			
Upper	1(0.9)	0	0.381
Upper middle	21(20.7)	12(30.7)	
Lower middle	59(58.4)	23(58.9)	
Lower	20(19.8)	4(10.2)	
Postmenopausal	42(41.5)	24(61.5)	0.095
Parity, mean(SD)	$3.3(\pm 1.4)$	$3.0(\pm 1.1)$	0.315
Place of delivery			
Home	28(27.7)	17(43.5)	0.224
Hospital	60(59.4)	16(41.0)	
Home & Hospital	13(12.8)	6(15.3)	
Mode of delivery			
Normal vaginal			
delivery	95(94.0)	32(82.0)	
Lower segment			0.054
caesarean section	2(1.9)	2(5.1)	
Forceps	2(1.9)	0	
Normal vaginal			
delivery and lower			
segment caesarean			
section	2(1.9)	4(10.2)	
Normal vaginal			
delivery and forceps	0	1(2.5)	
Any medical problem	15(14.8)	6(15.3)	0.483
Hypertension	8(53.3)	3(50.0)	
Diabetes	3(20.0)	2(33.3)	
Hypothyroidism	3(20.0)	1(16.6)	
Hypertension &			
Diabetes	1(6.6)	0	
H/O Surgery for	12(11.8)	5(12.8)	0.879
incontinence			
H/O Hysterectomy	10(9.9)	3(7.6)	0.686
H/O Constipation	31(30.6)	13(33.3)	0.763
H/O Cough	16(15.8)	5(13.1)	0.654
H/O Weight lifting	12(11.8)	3(7.6)	0.473
Family H/O prolapse	11(10.8)	5(12.8)	0.253

Table 2: Type of pelvic organ prolapse (Group A & B)			
Type	Group A	Group B	
	(n=101) n(%)	(n=39) n(%)	
Uterovaginal prolapse	33(32.6)	15(38.4)	
Cystocele	22(21.7)	13(33.3)	
Rectocele	9(8.9)	1(2.5)	
Cystocele and Uterovaginal	7(6.9)	2(5.1)	
prolapse			
Cystocele and Rectocele	18(17.8)	6(15.3)	
Cystocele , Rectocele and	6(5.9)	1(2.5)	
Uterovaginal prolapse			
Vault prolapse	2(1.9)	-	
Cervical descent	4(3.9)	-	
Urethrocele	-	1(2.5)	

The most common type of POP was uterovaginal prolapse seen in 48 (34%), followed by cystocele in 35 (25%). Other types of POP were rectocele in 10 (7%) and cervical descent in 4 (3%). The most common combination of prolapse was cystocele and rectocele seen in 25 (18%) women followed by cystocele and

Table 3: Age distribution of patients in Symptomatic (Group A) and Asymptomatic (Group B)			
Age group	Group A(n=101)	Group B(n=39)	P value
20-30 yrs	13(12.8)	2(5.1)	
31-40 yrs	34(33.6)	4(10.2)	
41-50 yrs	21(20.7)	18(46.1)	
51-60 yrs	19(18.8)	9(23.0)	0.007
61-70 yrs	14(13.8)	6(15.3)	

uterovaginal prolapse in 9 (6%) and cystocele, rectocele and uterovaginal prolapse in 7(5%) of patients. [Table 2]

The symptoms were present in 101 (72.1%) patients. The mean age of the patients in Group A was 45.2 ± 12 years and 50.3 ± 10.5 years in Group B. The majority 34 (33.6%) of women with symptoms of POP were in the age group of 31- 40 years, whereas, those without symptoms were in the age group of 41-50 years 18 (46.1%). [Table 3] Based on pelvic organ prolapse

quantification (POP-Q) staging, 67 (66.3%) patients with symptoms of POP were diagnosed with stage - I POP, 25 (24.7%) with stage - II and 9 (8.9%) with stage - III. No correlation was established between the presence of symptoms with increasing stage of POP $(r^2 =$ 0.087). In group B, 24 (61.5%) patients were diagnosed with stage – I POP, 10 (25.6%) with stage - II and 5 (12.8%) with stage III. The comparison of POP-Q staging in both the groups was insignificant (p=0.464). The most common type of prolapse in both the groups A and B was uterovaginal prolapse seen in 33 (32.6%) and 15 (38.4%) respectively. The most common combination of prolapse in both the groups was cystocoele and rectocele seen in 18

(17.8%) patients in group A and 6(15.3%) in group B respectively. The comparison of both the groups for the type of prolapse showed insignificant difference (p=0.838). Comparison of various risk factors like age, mode of delivery, place of delivery, menopause, h/o constipation, h/o cough, h/o weight lifting, previous gynaecological surgery, family h/o pelvic organ prolapse was statistically insignificant. [Table 1]

The mean POP-ss score among symptomatic patients was 7.89 ± 5.1 . The most common symptom was heaviness or feeling of something coming out of vagina present in all the symptomatic patients. The terminologies mostly used by women to express their symptoms of prolapse were "Neeche bojh padta he "(pelvic heaviness')," Shreer bahar aa raha he (uterine prolapse),"Bachadani bahar aa rahi he" (uterine prolapse), Bachadani khisak gayi he (slipped uterus),"Neeche se kuch bahar ata he (something coming out from below),"Peshab ke raste hava bahar ati he"(wind comes out through urethra). The symptom of uncomfortable feeling or pain in vagina which is worse when standing was present in 82/101(81.1%) of patients, heaviness or dragging sensation in lower abdomen was present in 52/101(51.4%) patients, heaviness or dragging feeling in lower back was present in 38/101 (37.6%) patients, need to strain (push) to empty bladder was present in

Table 4: Comparison of Visual Analogue scale score between group A & B				
Group	Mild bother	Moderate bother	Severe bother	P value
	VAS=10-40	VAS = > 40 - 70	VAS = >70	
	n(%)	n(%)	n(%)	
Group A (n=101)	61(60.3)	29(28.7)	11(10.8)	
Group B(n=39)	10(25.6)	7(17.9)	3(7.6)	0.023

patients. It was observed that all the patients reported bother in symptomatic group as compared to 20 (51.2%) patients in asymptomatic

16 (15.8%) patients, feeling that bladder has not emptied completely in 59 (58.4%) patients, feeling that bowel has not emptied completely was present in 40 (39.6%) of symptomatic patients. Presence of more than one symptom was observed in 82 (81.1%) patients.

Results of the assessment of bother suffered by the

Table 5: Comparison of parameters of PFIQ-7 between group A and B			
	Group	Group	P
PFIQ-7	A(n=101)	B(n=39)	value
	n(%)	n(%)	
Ability to perform	76(75.2)	13(33.3)	0.002
household chores			
Ability to do physical	76(75.2)	24(61.5)	0.000
activities			
Activities such as social	77(76.2)	24(61.5)	0.601
gatherings at home			
Activities such as social	58(57.4)	13(33.3)	0.179
gatherings outside			
home			
Ability to travel	74(73.2)	21(53.8)	0.580
distances of more than			
30 minutes' duration			
Emotional health	78(77.2)	23(58.9)	0.096
Feeling frustrated	64(65.3)	13(33)	0.005

patients showed mean VAS score of (21.45 ± 26.0) in symptomatic patients and mean VAS score of (11.10 ± 22.1) in asymptomatic patients; (p=0.03). In group A, subjective response for mild bother was noticed in 61 (60.3%) patients, moderate bother in 29 (28.7%) patients and severe bother in 11(10.8%) patients. Extent of bother was also determined in asymptomatic patients in whom subjective response of mild bother was reported in 10 (25.6%) patients, moderate bother in 7 (17.9%) patients and severe bother in 3 (7.6%)

group. The difference in bother was significant (p=0.023). [Table 4]

The quality of life was affected in both the groups. Some experiences of women having prolapse were reflected in the study as: One patient said: "I have feeling of something coming out (neeche se kuch bahar nikal raha he) and increased frequency of micturition with urgent desire to evacuate the bladder (urine me bhi pressure padta hei aur mujhe bhag kar peshab jana padta hei). I can't even stand for one hour, as it leads to increased displacement of uterus. I can't do any work in squatting posture (Peron ke bal to me bilkul nahi beth pati hoon). This problem has made my life stressful". Another patient said; "I started having feeling of something coming out (niche bhaar padne ki takleef) after menopause and at present I have this problem all the time. When I stand the uterus (bachedani) comes out, which irritates the adjacent skin and cause infection (saath ki chamri me ragar karti he, jis se jakham ban jate hein). I feel ashamed for disclosing my problem to anyone. This problem has made my life miserable".

Comparison of various parameters of PFIQ-7 between groups showed that in group A, emotional health was affected to the maximum in 78 (77.2%) women which was followed by activities such as social gatherings at home in 77 (76.2), ability to perform household chores like washing utensils, washing clothes etc in 76 (75.2%), ability to do physical activities like walking in 76 (75.2%), ability to travel distances of more than 30 minutes' duration in 74 (73.2%), feeling frustrated in 64 (65.3%) and activities such as social gatherings outside home in 58 (57.4%). In group B, ability to do physical activities like walking etc were affected in 24 (61.5%) women, activities such as social gathering at home were affected in 24 (61.5%) women, emotional health was affected in 23 (58.9%),

ability to travel distances of more than 30 minutes' duration in 21 (53.8%) women, ability to perform household chores in 13 (33.3%) women and feeling of frustration also in 13 (33.3%). [Table 5]

Discussion

Comparison of the risk factors among symptomatic and asymptomatic groups showed no significant difference with respect to the association with various risk factors except for mean age in symptomatic group as 45.2 ± 12.0 and 50.3 ± 10.5 years in asymptomatic group (p=0.026). Assessment of bother suffered by the patients in group A showed a mean VAS score of 21.45 \pm 26.0 and 11.10 \pm 22.1 in group B; (p=0.03). No correlation was established between the presence of symptoms with increase in the stage of pelvic organ prolapse $(r^2 = 0.087)$ suggesting no association of aggravation of symptoms with the increase in the anatomical defect of pelvic organ prolapse. Women in both the groups experienced difficulty in performing day to day activities and also faced feeling of frustration and significant impact on emotional health.

Research on reproductive health in India and other countries has shown that gynaecological problems are often considered a usual part of a women's lives with which they must suffer in silence. They internalize suffering as part of their ethic and keep on tolerating the pain and discomfort emanating from their reproductive and sexual roles [3]. Women often consider the reproductive morbidities as normal and do not report their symptoms to health workers or seek any treatment. Women seek health care only when their gynaecological problems become severe. A study conducted by Kumari et al showed that 77% of women with pelvic organ prolapse consider it a normal phenomenon and hence do not seek consultation [18]. The findings of our study are consistent with earlier studies which showed that the risk factors for prolapse include increasing age, lower socio-economic status, higher parity (especially the number of vaginal births), improper episiotomies and history of hysterectomy, especially hysterectomy for prolapse or incontinence operation [7,8]. Comparison of the risk factors among

symptomatic and asymptomatic groups showed no significant difference with respect to the association with various risk factors except with mean age in symptomatic group as 45.2 ± 12.0 years and 50.3 ± 0.5 years in asymptomatic group; (p=0.026). Young women predominated in the age group of 31-40 years in the symptomatic group as compared to asymptomatic group in which age group of 41-50 years predominated; (p=0.007).

Chronic pulmonary diseases presenting with chronic cough are significant to cause POP due to increased intra abdominal pressure. Few studies show that there is association between heavy works and weight lifting and POP [12]. Chronic constipation has been shown to contribute to pelvic floor dysfunction and prolapse. There are indications of a heritable or intrinsic connective tissue abnormality in the etiology of POP. There is a higher risk of prolapse in women with a mother or a sister reporting prolapse [13]. Our study could also explain the association of risk factors like constipation, chronic cough, weight lifting and family history of prolapse; however, no significant difference was established between groups. The findings of our study are contrast to study by Bai et al [19] which concluded that there is coexistence of prolapse and stress urinary incontinence in 15 to 80 percent of women with pelvic floor dysfunction. The results of our study showed presence of stress incontinence in 12 (11.8%) women in symptomatic group and 5 (12.8%) women in asymptomatic group (p=0.879).

Evaluation of patients referred with POP is done on the basis of symptoms. These include mechanical/local symptoms and functional symptoms from the lower urinary tract, bowels and their effect on quality of life [20]. The results of our study showed that functional symptoms cannot consistently be attributed to the stage of POP. Impact on the quality of life showed a significant difference between groups as women in group A complained more of difficulty in performing household chores and physical activity; (p < 0.05). Women in both the groups experienced difficulty in performing day to day activities and also faced feeling of frustration and significant impact on emotional

health. Subjective response on VAS showed that women on both the groups suffered bother because of pelvic organ prolapse, though women with symptoms suffered more (p < 0.023).

Conclusion

In countries like India, where genital problems in women are not given due importance and women continue to suffer for long before seeking treatment, early identification of pelvic organ prolapse organ prolapse on routine checkup of the women at even primary health care level can be beneficial so as to reduce the morbidity associated with it. It is necessary to impart knowledge regarding pelvic organ prolapse, its associated morbidities. Identification of the risk factors and counseling as well as the behavioral training of the suffering women can be useful for alleviation of symptoms and prevention of progression of prolapse.

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