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Original Research Article

Study of correlation between symptoms and signs in women with anterior vaginal wall prolapse

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ABSTRACT

Background: Pelvic organ prolapse is a common, distressing and disabling condition affecting up to 30% of the women, 20- 60 years of age, attending Gynaecology outpatient clinics. Objective of present work was to know the effect of Pelvic Organ Prolapse (POP) on micturition symptoms.
Methods: Descriptive study including 64 women presenting with POP symptoms. Subjects were evaluated using POP-Quantification system, Urinary Distress Inventory.
Results: Women were asked to rate the extent to which they were bothered by their urinary function on a scale of 1 to 10, with 1 being not at all and 10 being extremely. Ten women (16%) reported 1 to 4, 23 (37%) reported 5 to 7, and 29 (47%) reported and gt;8.
Conclusions: Strong association does exist between POP and micturition symptoms which are obstructive in nature and those causing urge incontinence.

Keywords: Anterior vaginal wall prolapse, Correlation, Symptoms

INTRODUCTION

Pelvic organ prolapse is a common, distressing and disabling condition affecting up to 30% of the women, 20- 60 years of age, attending Gynaecology outpatient clinics.

Many women with prolapse have lower urinary tract symptoms such as urgency, frequency,urinary incontinence and voiding difficulty. Surgery is the definitive treatment. It is estimated that the lifetime risk of undergoing at least one surgical procedure for prolapse is 11% and the reoperation rate for recurrent prolapse is 30–40%.[1] The surgical indication should be based on the individual's symptoms rather than the degree of urogenital prolapse. Therefore, an accurate assessment of women suffering from urogenital prolapse, requires subjective symptoms and objective findings evaluation for therapeutic management. Since female pelvic organ prolapse is a slowly progressing condition and since it is never life-threatening, it is generally only approached surgically in women who complain of symptoms of prolapse, and symptom relief should be the focus of any surgical intervention.[1]

Richard Bump gives us background information on how the POP-Q was developed 20 years ago.[2] The questions the committees had to deal with are still valid today, as we can see from the articles by Harmanli and Toozs-Hobson and Swift. In 1996 Bump et al. published a popq classification developed by several societies. [3] This POP-Q has been widely adopted and become the de facto standard in clinical medicine and research. Pelvic Organ Prolapse Quantification system (POP–Q) refers to an

objective, site–specific system for describing, quantifying, and staging pelvic support in women. It provides a standardized tool for documenting, comparing, and communicating clinical findings with proven interobserver and intraobserver reliability.

Objectives of present work were to study bladder and bowel symptoms in women with pelvic organ prolapse, to compare the various pelvic symptoms to the severity of pelvic organ prolapse and to study the correlations between bladder and bowel symptoms and POP-Q measurements among women with prolapse.

METHODS

Department of Obstetric and Gynaecology at teaching Hospital over one year duration. It is Descriptive study. Study population is women of all ages attending Gynaecology OPD with Pelvic organ Prolapse, included after taking informed consent. Women with pregnancy and neurological disease are excluded. The urinary symptoms included frequency, urgency, urinary incontinence, intermittent flow, straining to void, feeling of incomplete bladder emptying and post micturition dribble assistance. Other symptoms such as feeling a vaginal bulge, vaginal discomfort which is worse on standing and relieved by lying down, the heaviness or dragging feeling from the vagina and the feeling of a vaginal bulge which gets is also bothersome.

All these symptoms were clearly explained to the woman and no women had difficulty understanding the questionnaire. Prolapse symptoms such as urinary and protrusion symptoms were correlated with anterior and apical compartment prolapse severity. In the POPQ system, hymen acts as the fixed point of reference. There are six defined points for measurement in the POPQ system – Aa, Ba, C, D, Ap, Bp and three others landmarks: GH, TVL, PB. Each is measured in centimeters above or proximal to the hymen (negative number) or centimeters below or distal to the hymen (positive number) with the plane of the hymen being defined as zero (0).

The hymen was selected as the reference point rather the introitus because it is more precisely identified.[3] There are three reference points anteriorly (Aa, Ba, and C) and three posteriorly (Ap, Bp, and D). Points Aa and Ap are 3 cm proximal to or above the hymenal ring anteriorly and posteriorly, respectively. Points Ba and Bp are defined as the lowest points of the prolapse between Aa anteriorly or Ap posteriorly and the vaginal apex. Anteriorly, the apex is point C (cervix), and posteriorly is point D (pouch of Douglas). In women after hysterectomy, point C is the vaginal cuff and point D is omitted. Three other measurements are taken: the vaginal length at rest, the genital hiatus (gh) from the middle of the urethral meatus to the posterior hymenal ring, and the perineal body (pb) from the posterior aspect of the genital hiatus to the midanal opening.

Points and landmarks for POP–Q system examination. Aa, point A anterior, Ap, point A posterior, Ba, point B anterior; Bp, point B posterior; C, cervix or vaginal cuff; D, posterior fornix (if cervix is present); gh, genital hiatus; pb, perineal body.

Severity of symptoms related to bladder function in 62 women with pelvic organ prolape. When asked whether they were bothered by their bowel function, women responded on a scale from 1 (not at all) to 10 (extremely).

RESULTS

Sixty-two women were recruited to participate in the study over a 12-month period. The mean age for the women was 50 years (range18-82 years).

Table 1: Age distribution.

Age Group (years)	N	%
30-40	14	23
40-50	23	37
50-60	14	23
60-70	11	17
Total	62	100

Table 2: Distribution of subjects based on parity.

Parity	N	%
1	4	6.0
2	14	23.0
3	21	34.0
4	13	21.0
5	5	8.0
6	3	4.80
7	1	1.60
8	1	1.60
Total	62	100.0

Thirty eight of 62 women (61%) were postmenopausal. A urogenital prolapse was defined and explained to the women, on the front page of the questionnaire, as a bulge coming down the vagina causing discomfort as the original term something was interpreted by some women as urine leakage.

Table 3: The distribution of pelvic organ support by overall POPQ stage.

Prolapse Staging	N	%
Stage 1	4	6
Stage 2	13	21
Stage 3	31	50
Stage 4	14	23
Total	62	100

The severity of P-QOL was strongly correlated with the vaginal examination findings. Spearman's rank correlation analysis confirmed that the questionnaire

items designed to assess the effect of the prolapse symptoms on quality of life, correlated with the objective vaginal examination findings.

Table 4: Distribution on basis of cystocele, rectocele, enterocele.

Associated signs	N	%
Cystocele	42	67.7
Rectocele	15	24.1
Enterocele	19	30.6

Most of the females were between 40-50 years of age (37%), while patients beyond 60 years were around 17%.

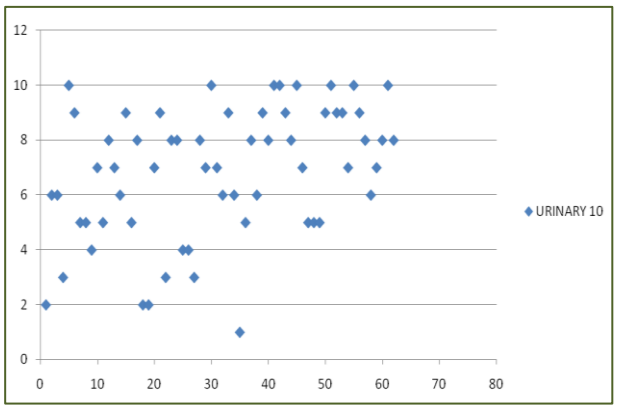

Figure 1: Urinary 1-10 scale.

Women were asked to rate the extent to which they were bothered by their urinary function on a scale of 1 to 10, with 1 being not at all and 10 being extremely. Ten women (16%) reported 1 to 4, 23 (37%) reported 5 to 7, and 29 (47%) reported and gt;8.

Thirty-four (54.8%) reported urinary incontinence. According to the furthest extent of posterior vaginal prolapse at point Bp, 20(32%) patients were in stage I, 13 (21%) were in stage II, 19(31%) were in stage III, and 10 (16%) was in stage IV. When the maximal extent of prolapse at any site was considered, 4 patients (6.5%) were in stage I, 7 (11.3%) were in stage II, 27 (43.5%) were in stage III, and 24 (38.7%%) were in stage IV. For the symptomatic women only, the severity of several urinary symptoms was positively correlated with anterior, apical and posterior wall prolapse (Figure 1). Protrusion symptom severity was also correlated with anterior, apical posterior wall prolapse (Table 6).

DISCUSSION

In our study maximum patients with uterine prolapse i.e.37% were in age group 40-50 years which were similar to the findings of a Jordanian study where 47.2% of cases at the time of presentation were greater than 50 years.[6] However, in studies done in Nepal and Egypt, majority of cases were of age group 20-29 and 30-39 years, respectively, at the time of onset.[6,7] In another study done in US, rates of prolapse were found to be similar between 30-49 years and 50-89 year old women.[8]

Table 5: Urinary symptom responses from pop-q in symptomatic women.

Urinary symptoms	Response	Symptomatic (n=62)	%
Urinary frequency	Not at all	12	19.3
	A little	14	22.6
	Moderately	18	29
	A lot	18	29
Urgency	Not at all	20	32.2
	A little	17	27.4
	Moderately	18	29
	A lot	7	11.3
Urge incontinence	Not at all	28	45.2
	A little	14	22.6
	Moderately	15	24.2
	A lot	6	9.7
Stress incontinence	Not at all	38	61.3
	A little	13	21
	Moderately	9	14.5
	A lot	2	3.2
Poor urinary stream	Not at all	28	45.1
	A little	11	17.7
	Moderately	17	27.4
	A lot	6	9.7
Straining to pass urine	Not at all	33	53.2
	A little	10	16.1
	Moderately	12	19.3
	A lot	7	11.3
Dribbling	Not at all	33	53.2
	A little	19	30.6
	Moderately	4	6.4
	A lot	6	9.6

The mean age at presentation of prolapse in this study was 50 years compared to other studies, where it ranged from 26.2 to 50 years.[7,9,10] From these observations, it is obvious that uterine prolapse can occur in women of any age group. Most prolapse cases in this study were of lower socioeconomic status and were manual laborers by occupation which was similar to findings of a Nigerian study.[12] In studies done in Nepal and Tamil Nadu, India greater proportion of cases was farmers.[7,10,13] These findings infer that women engaged in strenuous occupations get exposed to raised intra-abdominal pressure over prolonged periods and thus are at risk of developing prolapse.[13]

Moreover, risk of uterine prolapse was more among multiparous women in this study. In other studies risk was most after second delivery, after third delivery, after fourth delivery, and after fifth delivery.[6,9,13-15] A study done in Italy also reported that risk was greater even after a single birth.[16] These observations along with age at last pregnancy as a risk factor can be explained by the known fact that process of aging causes loss of collagen and

weakness of fascia and connective tissue and the risk of prolapse gets increased during subsequent child births.

Table 7: Correlation between urinary symptoms and POPQ measurements among symptomatic women.

POP-Q domain symptoms	POPQ Points				
	Aa	Ba	C	Ap	Bp
Urinary frequency	0.02	0.09	0.16	0.30(0.01)*	0.26(0.04)*
Urgency	0.02	0.03	0.05	0.18	0.16
Urge incontinence	0.30(0.01)*	0.27(0.02)*	0.32(0.01)*	0.38(0.001)**	0.25(0.04)*
Stress incontinence	0.11	0.11	0.12	0.06	0.10
Poor urinary stream	0.30(0.01)*	0.32(0.001)**	0.32(0.001)**	0.35(0.005)**	0.19
Straining to empty bladder	0.19	0.34(0.001)**	0.22	0.31(0.01)*	0.21
Urine dribbles after emptying bladder	0.29(0.01)*	0.25(0.04)*	0.06	0.21	0.17

*correlation is significant at 0.05 level, **correlation is significant at 0.01 level, Values are Spearman's correlation coefficient. Significant associations are in boldface with p value in parentheses.

The degree of descent may be related to symptoms with a significant trend of increasing symptoms when the leading edge of the prolapse protrudes beyond the hymenal remnants compared with a low incidence of symptoms when the prolapsed remains at or above the hymen.[17]

Ellerkmann et al noted a weak correlation between advancing anterior wall prolapse and urinary incontinence.[18] Annette observed that stage of POPQ and specific prolapsed symptoms are associated, but strong association does not exist between POPQ and bladder symptoms. Protrusion contributed modestly to obstructive voiding and detrusor overactivity. Gemma et al found that urinary tract symptoms especially voiding difficulty correlated with anterior wall descent.[19] Present study has shown that there was significant correlation between anterior vaginal wall prolapse and urinary symptoms for the urge incontinence whereas poor urinary stream showed a correlation with anterior and/or posterior vaginal wall prolapse as well as uterine descent. This may be explained by the bladder outlet obstruction caused by the uterus or the surrounding pelvic organs (bladder, rectum) prolapsing with the vaginal skin. There was significant correlation between straining to empty bladder and urinary dribbling with anterior and little with posterior vaginal prolapse.

This may also reflect the fact that the aetiology of urinary symptoms is multifactorial, and although some urinary symptoms may improve in some women following uterovaginal repair all urinary symptoms need to be investigated before performing any vaginal surgery to exclude coexistent pathology such as detrusor overactivity.[19]

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