Original Research Article

Analysis of clinical profile of uterovaginal prolapse in a tertiary care centre in northern Kerala, India

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ABSTRACT

Background: Pelvic organ prolapse (POP) is defined as the descent of one or more of the anterior vaginal wall, posterior vaginal wall, the uterus (cervix), or the apex of the vagina (vaginal vault after hysterectomy) Aims and objectives was to describe the clinical profile of utero-vaginal prolapse cases attending a tertiary care institution in North Kerala.

Materials and Methods: This study was conducted in the Department of Obstetrics and Gynecology, KMCT Medical college, Kozhikode from June 1 2021 to May 30 2022 after clearance from ethical committee in which 140 cases of uterovaginal prolapse were included.

Results: Most of the patients (80.7%) were in the age group of above 50. The mean age was found to be 58.33±9.2 years with 93.6% of them with mass descending per vagina as the major complaint. Cystocele was present in 80.9% and rectocele in 52.9% of them predominantly stage 3 and stage 4. The quality of sexual life was affected in all with stage 4.

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1. Introduction

Pelvic organ prolapse (POP) is defined as the descent of one or more of the anterior vaginal wall, posterior vaginal wall, the uterus (cervix), or the apex of the vagina (vaginal vault after hysterectomy), correlated with symptoms, assisted by any relevant imaging.[1] The muscles and tissues surrounding the uterus become fragile, resulting in uterine prolapse.[2] The complex etiology of uterovaginal prolapse makes it a very common disorder.[3] The global prevalence is estimated to be 23.7%. Even though POP is anatomically present in two-thirds of parous women, most of these women are asymptomatic.[4] According to studies, only 12% of women with an objective POP on examination who are between the ages of 45 and 85 in general population are symptomatic.[5] It may have an impact on one's sexual life, physical discomfort, bladder and bowel problems.[6] Physical and mental anguish are experienced by women with symptomatic illnesses. It significantly harms women's physical, psychological, and social well-being.[7] Despite its high prevalence in developing countries, it has not received sufficient medical attention. This study was done to describe the clinical profile of utero-vaginal prolapse cases in a tertiary care center in North Kerala. To know the clinical profile, risk factors and treatment modalities done for pelvic organ prolapse were the primary objectives in this research.

2. Materials and Methods

Ethical clearance was obtained from the institution before the start of the study.

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2.1. Study design

A cross sectional observational study design was done for the evaluation of the clinical profile, risk factors, different treatment modalities with women who complains of pelvic organ prolapse.

2.2. Study setting

This study was conducted in the Department of Obstetrics and Gynecology , KMCT medical college, Kozhikode.

2.3. Study duration

June 1st 2021 – May 30th 2022.

2.4. Sample size calculation

N = 4pq/d2

P = Proportion or prevalence (from previous studies)= 74%

(d = precision = 10% q = 100q)

n= 140, A sample size of 140 was selected for this study.

2.5. Selection criteria

Newly diagnosed cases with complaints of pelvic organ prolapse with or without urinary symptoms in patients who were willing to take part in this study, willing for routine checkups and regular follow up were inclusion criteria.

2.6. Exclusion criteria

Presence of any neurological disorder, patients who underwent hysterectomy, pregnant patients with prolapse.

2.7. Sampling procedure

A hospital based cross sectional study with a sample size of 140 was taken. Patient demographics and the history recorded over 12 months. Study population included patients attending gynecology department at the tertiary center with complaints of mass descending per vagina and related symptoms. Genital prolapse consisted of a herniation of adjacent pelvic organ into the vagina, and uterine prolapse were categorized using the traditional definitions of first-, second- and third-degree prolapse. Baseline questionnaires ascertained information on several factors including age, occupation, chronic illness, time since menopause, parity, hysterectomy status, constipation, and physical activity, occupation. Details of the route of childbirth (vaginal or caesarean) was noted. Weight was measured to the nearest 0.1 kg on an electronic weighing machine with the participant dressed in indoor clothing without shoes. Height measured to the nearest 0.1 cm with a wall-mounted stadiometer. Body mass index calculated as weight/height2. All statistical procedures were performed

using Statistical Package for Social Sciences (SPSS) 20. All quantitative variables were expressed in mean and standard Deviation. Qualitative variables expressed in percentages. Chi square test was used to test the associations. Probability value (p <0.05) was considered statistically significant.

3. Results

The current study had majority of study participants from the age group 51-60 years of age followed by 60-70 age group (Figure 1).
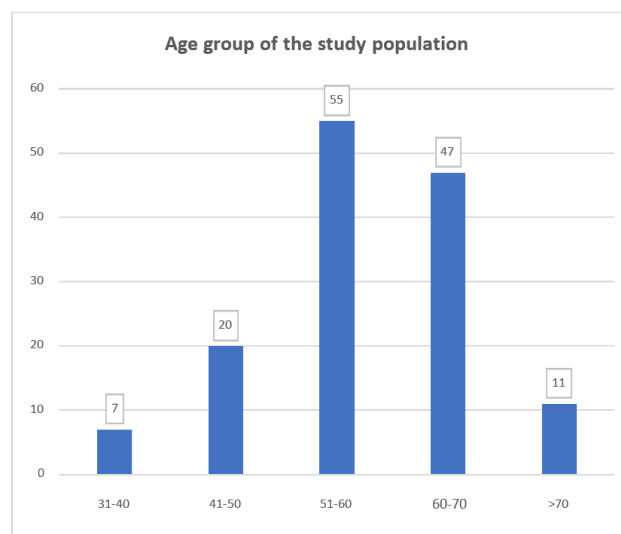
Figure 1: Age group- Bar chart

Table 1: Parity and distribution

Parity	No. of patients	Percent
2	16	11.4%
3	40	28.6%
4	35	25%
5	27	19.3%
6	14	10%
7	6	4.3%
8	2	1.4%
Total	140	100%

The present study had 69.3% study population with non-ideal birth spacing (<36 weeks).

94.3% of the study population had vaginal delivery followed by caesarean and instrumental delivery. (Figure 3)

Table 2: History of prolonged duration of labour

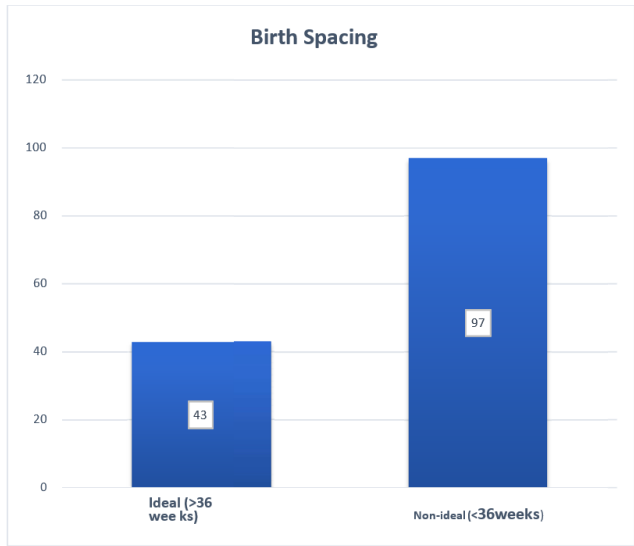| History of prolonged duration of labour	No. of patients	Percent
Yes	54	38.6%
No	86	61.4%
Total	140	100%

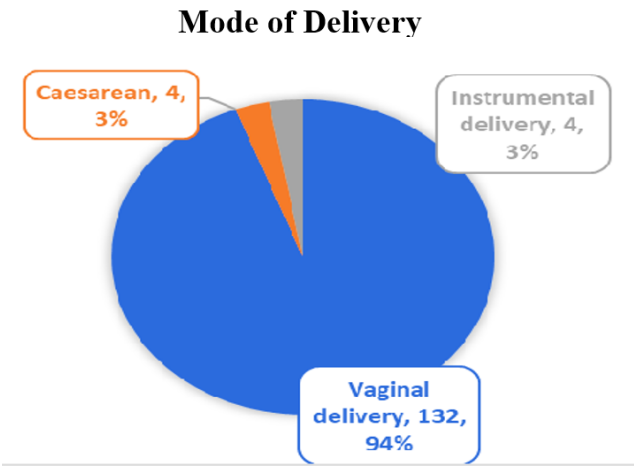**Figure 2:** Bar chart showing birth spacing

Figure 3: Pie chart showing mode of delivery

The current study noted that only 38.6% had history of prolonged duration of labor (Table 2).

Table 3: Age at menopause

Age at Menopause	No. of patients	Percent
36-44 years	32	22.9%
45-49 years	78	55.7%
>/=50 years	14	10%
Total	124	88.6%

Out of the 124 who attained menopausal status 55.7% attained menopause at the age of 45-49 years of age and only 10% (n=14) had not attained menopause after 50 years/ delayed menopause. (Table 3)

According to BMI category based on WHO-Asian guidelines, 52.1% had over weight, 40.7% of the study

Table 4: Chief symptoms and associated symptoms

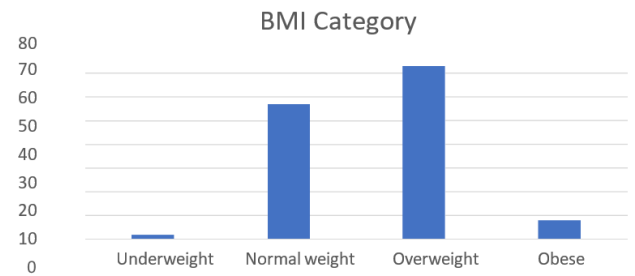| Variable	Yes	No
History of heavy Work load	73	67
Quality of sexual life	84	46
Mass coming down per vaginum / bulge symptoms	131	9
Urinary symptoms	60	80
h/o chronic cough/constipation	48	92
h/o mass abdomen	18	122
Others	58	82

Figure 4: BMI category

population had normal weight, rest were obese or underweight.

Table 5: Associated compartment defects

Associated prolapse	No. of patients	Percent
Cystocele	113	80.7%
Rectocele	74	52.9%
Urethrocele	6	4.3%
Enterocele	7	5%

Most commonly occurring types were cystocele which accounts for 80.7% followed by Rectocele which was found in 52.9% of the study population followed by urethrocele and Enterocele (Table 5).

4. Discussion

The present study was done among 140 women attending the Obstetrics and gynecology department with the complaints suggestive of uterovaginal prolapse in a tertiary care center in North Kerala. The objectives were to study the clinical profile and to identify the risk factors of utero-vaginal prolapse among these patients. Nitin Joseph et al[8] found the mean age at presentation of uterine prolapse to be 52.8 ± 13.2 years in South India. According to them, the most frequent complaints reported among uterine prolapse cases were abdominal discomfort (15.7%), followed by micturition problem. This is not in agreement with the finding of present study with respect to the micturition complaints, as in present study only patients in the advanced

stage had complaints of urinary problems. This difference in finding might have resulted from the difference in the selection criteria of study participants. As per TK Sundari Ravindran, R Savitri and A Bhavani, the average age at which the symptoms of the prolapse first manifested in the women was 26.2 years, and it was also noted that 40% of the women reported developing uterine prolapse after their first or second pregnancies. This reported average age of patients with prolapse is younger when compared to the present study.[9] In a study by U Mishra, et al in 2019, the mean age of study participants was 49.5 years. Something coming out of the vagina was the most frequently reported presenting complaint among their study participants similar to what was reported by the participants in present study.[10]

F Akter et al in a cross-sectional study on the prevalence of, and risk factors for symptomatic pelvic organ prolapse in rural Bangladesh in 2016 revealed that women aged 35 years were less likely to have pelvic organ prolapse than women aged 35–44 years and 45 years.[11] The Odds ratios were 1.96 and 2.95 respectively. According to Zhiyi Li et al,[12] who conducted a study on pelvic organ prolapse in rural Chinese women, the prevalence of pelvic organ prolapse increases steadily with age and this trend was evident in all age groups. They had also observed that women aged 20–29 years were having a lower risk of pelvic organ prolapse than women aged 50– 59 years with an adjusted odds ratio of 1.86.

According to Nurye Sirage et al, being a woman over 40 has nearly three times risk of developing prolapse.[13] In present study, 69.3% of study participants did not found to have an ideal birth spacing. Nitin Joseph et al in their study had found that insufficient birth spacing was present in 57.8% of prolapse cases and 22.3% of them having a parity of five or more. Similar results were reported by other researchers also. Similar observations were made by P Rathod et al also.[14] According to Zhiyi Li, et al, a cesarean section was a significant protective factor for prolapse with an adjusted Odds ratio of 0.34.[12]

Associated compartment defects Cystocele was present in 80.9% and rectocele in 52.9% of the women who presented with the symptoms suggestive of utero vaginal prolapse in present study. Among the cohort studied by Susan L. Hendrix et al,[15] the proportion of cystocele was only one-third which is far lesser compared to that among study participants in present study *Occupation* was not found to be a significant risk factor for prolapse in present study. While occupations involving heavy work and weight lifting are reported to be known risk factors for pelvic organ prolapse. Sundari et al have reported that resuming manual labor in the immediate postpartum period is a risk factor for pelvic organ prolapse. DF Shalom et al found occupation to be a significant factor in predisposing to the prolapse.[16] Likewise, Ramya Gaddam and R Gaddam et al[17] also noted occupation as an important risk factor for pelvic organ prolapse. It was observed that 52.1% were obese in present

study. This proportion of obese women is reflecting the prevalence of obesity among women in Kerala as per the latest National Family Health Survey -5 (NFHS-5) data.[18] But, the body mass index category was not associated with prolapse in present study. But, this finding is in contrary to the results from most of the previous research. Similarly J Awwad et al[19] observed that a BMI greater than 24 kg/m2, rising parity, and older age were discovered to be significant risk factors for pelvic organ prolapse with relative risks of 1.09), 2.31 and 1.62 respectively. R Gaddam et al[17] also reported BMI to be a risk factor for prolapse.· In present study, the quality of sexual life was found to be affected in all stage 4 patients while the same was affecting comparatively lower proportion of patients in stages 2 and 3. In stage 1, the quality of sexual life was not reported to be affected by the prolapse in any of the patients. Ravindran et al had reported a similar finding.[9]

5. Conclusions

Pelvic organ prolapse is more prevalent in the older age group. Mass descending per vagina is the commonest complaint by the patients. Cystocele is commonly seen than rectocele. Many of the factors like occupation, obesity, age at pregnancy, mode of delivery, place of delivery or prolonged labor, trained personnel attendance at birth, birth spacing were associated with increased risk factors for prolapse. But, the quality of sexual life was significantly associated with the stage of the prolapse.

6. Source of Funding

7. Conflict of Interest

None.

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