



STUDY OF CLINICAL PROFILE AND MANAGEMENT OF PELVIC ORGAN PROLAPSE AT A TERTIARY CARE HOSPITAL

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ABSTRACT

Background: Pelvic organ prolapse is a common gynaecological condition caused by weakening of pelvic floor support. It affects physical, urinary, bowel, sexual, and psychosocial health, particularly among multiparous and postmenopausal women. The present study aimed to evaluate the clinical profile and management of women with pelvic organ prolapse attending a tertiary care hospital. **Methods:** This prospective observational clinical study was conducted in the Department of Obstetrics and Gynaecology, Government Medical College, Chh. Sambhajinagar, Maharashtra from April 2024 to March 2026. **Results:** The 50–59-year age group constituted 48 cases (33.33%), followed by 40–49 years in 44 cases (30.56%). Rural women constituted 108 cases (75%). Postmenopausal women formed 106 cases (73.61%). Parity ≥ 3 was present in 100 women (69.44%). Vaginal delivery was reported in 118 women (81.94%), and home vaginal delivery in 69 women (47.92%). The commonest symptom was something coming out per vaginum in 138 cases (95.83%), followed by backache or pelvic discomfort in 86 cases (59.72%). Uterine prolapse was present in all cases, cystocele in 124 cases (86.11%), and rectocele in 104 cases (72.22%). Third-degree uterine prolapse was seen in 66 cases (45.83%). Vaginal hysterectomy with pelvic floor repair was performed in 118 cases (81.94%). Hemorrhage occurred in 6 cases (4.17%), superficial wound infection in 5 cases (3.47%), and urinary retention in 2 cases (1.39%). Improvement in prolapse-related symptoms was observed in all women at the 6-week follow-up. **Conclusion:** Pelvic organ prolapse predominantly affected rural, multiparous, postmenopausal women and commonly presented at an advanced stage. Individualized surgical management was associated with low perioperative morbidity and favourable short-term symptomatic improvement.

KEYWORDS : Pelvic organ prolapse, uterovaginal prolapse, cystocele, rectocele, vaginal hysterectomy, pelvic floor repair, multiparity

INTRODUCTION

Pelvic organ prolapse (POP) is defined as the symptomatic descent of the anterior vaginal wall, posterior vaginal wall, uterus, vaginal apex, or vault due to failure of pelvic floor support structures.¹ It may involve the bladder, uterus, vaginal vault, rectum, or small bowel, either alone or in combination. POP is not merely an anatomical disorder; it significantly affects quality of life through vaginal bulge symptoms, pelvic pressure, urinary dysfunction, bowel symptoms, sexual dysfunction, and psychosocial distress.^{1,2}

The etiology of POP is multifactorial and includes advancing age, menopause, high parity, vaginal delivery, prolonged labour, instrumental delivery, home delivery, poor obstetric care, obesity, chronic cough, chronic constipation, heavy physical work, connective tissue weakness, and previous pelvic surgery.^{3,4,5,6,7} Obstetric trauma, levator ani injury, pudendal nerve damage, and hypoestrogenism after menopause are important mechanisms contributing to progressive pelvic floor weakness.^{6,7,8}

In India, POP remains an important gynaecological morbidity, particularly among women from rural and low-resource settings, where high parity, home delivery, early return to heavy work, limited awareness, and delayed health-seeking are common. Present study was conducted to assess the demographic profile, risk factors, symptomatology, and treatment options among women with pelvic organ prolapse attending a tertiary care hospital.

MATERIALS AND METHODS

This was a prospective observational clinical study conducted in the Department of Obstetrics and Gynaecology, Government Medical College, Chh. Sambhajinagar, Maharashtra. The study was conducted over a period of 24 months, from April 2024 to March 2026. Institutional Ethics Committee approval was obtained before initiation of the study. Written informed consent was obtained from all participants in the local language.

Consecutive eligible women fulfilling inclusion criteria were enrolled. All eligible women undergoing surgery during the study period were included.

Inclusion criteria

- Women aged ≥ 18 years with clinically diagnosed pelvic organ prolapse who underwent surgical management and provided written informed consent.

Exclusion criteria

- Pregnant women.
- Women with genital malignancy.
- Women with acute pelvic inflammatory disease.
- Women treated by conservative management alone, such as vaginal pessary.
- Women with vault prolapse.
- Women with previous reconstructive pelvic floor surgery.
- Women unwilling to participate.

Each participant was evaluated using a structured proforma. Demographic variables included age, residence, education, occupation, and socioeconomic status. Gynaecological history included menstrual status, menopausal status, duration since menopause, duration of prolapse symptoms, previous pelvic surgery, and prior treatment.

General, abdominal, local, speculum, bimanual, and per rectal examinations were performed where indicated. Pelvic examination assessed uterine descent, cystocele, urethrocele, rectocele, enterocele, vaginal mucosal changes, cervical elongation, hypertrophied cervix, decubitus ulcer, and associated benign cervical or vaginal lesions. Severity of uterine prolapse was graded according to the Baden–Walker Halfway Classification System. Associated anterior and posterior compartment defects were graded clinically.

Preoperative evaluation included complete blood count, blood group, blood sugar, renal function tests, liver function

tests where indicated, urine examination, urine culture if required, chest radiograph, ECG, and 2D echocardiography where clinically indicated. Management was individualized according to age, degree of prolapse, compartment defects, menopausal status, sexual activity, uterine preservation preference, comorbidities, surgical fitness, and patient consent. Conservative measures such as pelvic floor exercises, weight reduction, and pessary use had been attempted in selected women before surgical intervention. Definitive surgical management was planned after clinical evaluation, counselling, and preoperative optimization.

Postoperative monitoring included vital signs, pain, fever, vaginal bleeding, urinary retention, wound condition, catheter requirement, urine output, bowel recovery, infection, hospital stay, and need for readmission. Follow-up was done up to 6 weeks postoperatively to assess symptom relief and immediate postoperative outcome.

Data were analysed using SPSS version 25. Categorical variables were expressed as frequency and percentage. Continuous variables were expressed as mean $\pm$ standard deviation.

RESULTS

A total of 144 women diagnosed with pelvic organ prolapse who underwent surgical management were included in the analysis. Women aged 50–59 years constituted 48 cases (33.33%), followed by 40–49 years in 44 cases (30.56%). Mean age was 50.8 ± 9.6 years. Rural residence was present in 108 cases (75%). Illiteracy was reported in 58 women (40.28%). Upper lower socioeconomic class contributed 58 cases (40.28%), followed by lower middle class in 42 cases (29.17%).

Table 1. Sociodemographic profile of women with pelvic organ prolapse

Variable	Category	Number	Percentage (%)
Age group	<30 years	6	4.17
	30–39 years	20	13.89
	40–49 years	44	30.56
	50–59 years	48	33.33
	≥ 60 years	26	18.06
Residence	Rural	108	75.00
	Urban	36	25.00
Education	Illiterate	58	40.28
	Primary	36	25.00
	Secondary	28	19.44
	Higher secondary	14	9.72
	Graduate and above	8	5.56
Socioeconomic class	Upper	4	2.78
	Upper middle	14	9.72
	Lower middle	42	29.17
	Upper lower	58	40.28
	Lower	26	18.06

Parity ≥ 4 was present in 54 women (37.5 %), while parity 3 was present in 46 women (31.94%). Vaginal delivery was reported in 118 women (81.94%), instrumental delivery in 16 women (11.11%), and caesarean section in 10 women (6.94%). Postmenopausal women constituted 106 cases (73.61%).

Table 2. Obstetric and menopausal profile

Variable	Category	Number	Percentage (%)
Parity	P1	8	5.56
	P2	36	25
	P3	46	31.94
	$\geq P4$	54	37.5
Mode of delivery	Vaginal delivery	118	81.94
	Instrumental delivery	16	11.11
	Caesarean section	10	6.94

Place/mode of delivery	Home vaginal delivery	69	47.92
	Institutional vaginal delivery	49	34.03
	Institutional instrumental delivery	16	11.11
	Institutional caesarean section	10	6.94
Menopausal status	Premenopausal	38	26.39
	Postmenopausal	106	73.61

Postmenopausal status was recorded in 106 women (73.61%). Parity ≥ 3 was present in 100 women (69.44%). Constipation was present in 34 cases (23.61%), chronic cough in 24 cases (16.67%), and obesity in 20 cases (13.89%).

Table 3. Risk factors associated with pelvic organ prolapse

Risk factor	Number	Percentage (%)
Postmenopausal status	106	73.61
Multiparity (para ≥ 3)	100	69.44
Home vaginal delivery	69	47.92
Constipation	34	23.61
Chronic cough	24	16.67
Obesity	20	13.89
Family history	12	8.33

Something coming out per vaginam was reported by 138 women (95.83%). Backache or pelvic discomfort was reported by 86 women (59.72%). Urinary symptoms were present in 44 cases (30.56%), bowel symptoms in 32 cases (22.22%), and dyspareunia in 26 cases (18.06%). Symptoms persisted for 1–5 years in 74 women (51.39%).

Table 4. Presenting symptoms

Symptom / duration	Number	Percentage (%)
Something coming out per vaginam	138	95.83
Backache / pelvic discomfort	86	59.72
Urinary symptoms	44	30.56
Bowel symptoms	32	22.22
Dyspareunia	26	18.06
Symptoms <1 year	20	13.89
Symptoms 1–5 years	74	51.39
Symptoms >5 years	50	34.72

Uterine prolapse was present in all 144 cases (100%). Cystocele was present in 124 cases (86.11%), rectocele in 104 cases (72.22%), urethrocele in 96 cases (66.67%), and enterocele in 22 cases (15.28%). Third-degree uterine prolapse was present in 66 cases (45.83%), followed by procidentia in 34 cases (23.61%).

Table 5. Anatomical type and degree of prolapse

Variable	Category	Number	Percentage (%)
Type of prolapse	Uterine prolapse	144	100.00
	Cystocele	124	86.11
	Rectocele	104	72.22
	Urethrocele	96	66.67
	Enterocele	22	15.28
Degree of uterine prolapse	First degree	8	5.56
	Second degree	36	25.00
	Third degree	66	45.83
	Procidentia	34	23.61
Cervical/ pelvic finding	Cervical elongation	34	23.61
	Hypertrophied cervix	28	19.44
	Decubitus ulcer	16	11.11

Vaginal hysterectomy with pelvic floor repair was performed in 118 women (81.94%). In women undergoing vaginal hysterectomy, anterior and posterior compartment repairs were performed whenever clinically indicated for associated cystocele, urethrocele, rectocele, or enterocele. Fothergill procedure was performed in 18 cases (12.50%), Purandare sling in 5 cases (3.47%), Virkud sling in 2 cases (1.39%), and Shirodkar sling in 1 case (0.69%).

Table 6. Treatment options and operative procedures

Treatment / procedure	Number	Percentage (%)
Vaginal hysterectomy with pelvic floor repair	118	81.94
Fothergill procedure	18	12.50
Purandare sling	5	3.47
Virkud sling	2	1.39
Shirodkar sling	1	0.69

Intraoperative hemorrhage occurred in 6 women (4.17%). No bladder, ureteric, rectal, bowel, anaesthesia-related complication, or conversion/change in planned procedure was reported. Superficial wound infection occurred in 5 women (3.47%), and urinary retention occurred in 2 women (1.39%). Hospital stay was 7–10 days in 92 cases (63.89%). Improvement in prolapse-related symptoms was observed in all women during the six-week follow-up period.

Table 7. Complications, hospital stay, and final outcome

Parameter	Category	Number	Percentage (%)
Intraoperative complication	Hemorrhage	6	4.17
	Superficial wound infection	5	3.47
	Urinary retention	2	1.39
Hospital stay	<7 days	22	15.28
	7–10 days	92	63.89
	>10 days	30	20.83
Final outcome	Improvement in prolapse related symptoms at 6 weeks	144	100.00

DISCUSSION

The present prospective observational study included 144 women with pelvic organ prolapse who underwent surgical management at a tertiary care teaching hospital. The majority of women were in the 50–59-year age group (33.33%), followed by 40–49 years (30.56%), with a mean age of 50.8 ± 9.6 years. This pattern is comparable with Parulekar and Parulekar¹⁰ from Maharashtra, who reported a mean age of 52.38 ± 11.35 years among women with pelvic floor defects. Joseph et al.,¹⁶ reported a mean age of 52.8 ± 13.2 years in South India, while Kulkarni et al.,¹¹ reported that 53% of women with uterovaginal prolapse were in the 31–50-year age group. These findings may be related to age-associated connective tissue changes and hypoestrogenic status after menopause.

Postmenopausal women constituted 73.61% of cases in the present study. This was close to Rohini et al.,¹³ who reported postmenopausal status in 75.4%, and Mishra et al.,¹² who reported 78.57%. Parulekar and Parulekar¹⁰ reported postmenopausal status in 61%. The findings are consistent with the proposed role of hypoestrogenism, tissue atrophy, and age-related collagen changes in the development of pelvic organ prolapse.

Obstetric risk factors were prominent in the present study. Parity ≥ 3 was present in 100 women (69.44%), and vaginal delivery was reported in 81.94%. Kulkarni et al.,¹¹ reported parity ≥ 3 in 76%, while Rohini et al.,¹³ reported multiparity in 66.3%. Vaginal delivery was reported in 97.7% by Parulekar and Parulekar¹⁰, 94.54% by Devnikar et al.,¹⁴ and 91.1% by Mishra et al.¹² The present study also recorded home vaginal delivery in 47.92% of women. Joseph et al.,¹⁶ reported home delivery in 58.3%, Parvathavarthini and Vanusha¹⁷ in 86.1%, and Mishra et al.¹² in 85.7%. These findings suggest an association between repeated childbirth, vaginal delivery, home delivery, and progressive pelvic floor injury.

The commonest presenting symptom in the present study was something coming out per vaginum, reported by 95.83% of women. Similar observations were reported by Parvathavarthini and Vanusha¹⁷ (93.6%), Parulekar and Parulekar¹⁰ (87%), Devnikar et al.,¹⁴ (84.9%), and Puthuprakkat

et al.¹⁵ (93.6%). Backache or pelvic discomfort was present in 59.72%, urinary symptoms in 30.56%, bowel symptoms in 22.22%, and dyspareunia in 18.06%. Symptom duration was 1–5 years in 51.39% and more than 5 years in 34.72%, indicating delayed health-seeking behaviour. Similar delay was reported by Verma¹⁸, Parvathavarthini and Vanusha¹⁷, Devnikar et al.,¹⁴ and Puthuprakkat et al.¹⁵. Social embarrassment, normalization of symptoms after childbirth or menopause, financial dependence, and limited access to specialty care may contribute to delayed presentation.

Uterine prolapse was present in all cases in the present study, with cystocele in 86.11% and rectocele in 72.22%. Verma¹⁸ reported uterine prolapse in 96%, cystocele in 87%, and rectocele in 64%, while Rohini et al.,¹³ reported uterine prolapse in 96%, cystocele in 91.2%, and rectocele in 75.6%. Puthuprakkat et al.,¹⁵ reported uterine prolapse in 98%, cystocele in 80%, and rectocele in 52%. These similarities indicate that multicompartiment prolapse is common and that adequate surgical correction should address anterior, apical, and posterior defects.

Third-degree uterine prolapse was observed in 45.83% of women and procidentia in 23.61%. Similar findings were reported by Kulkarni et al.,¹¹ and Devnikar et al.¹⁴ Vaginal hysterectomy with pelvic floor repair was the principal surgery in the present study, performed in 81.94% of cases. This is comparable with Joseph et al.,¹⁶ who reported vaginal hysterectomy with pelvic floor repair in 88.41%, Bhalerao and Duddalwar¹⁹ in 91%, Rajan et al.,²⁰ in 84.35%, and Rohini et al.¹³ in 86.62%. Uterus-preserving procedures were performed in selected women in the present study, including Fothergill procedure and sling surgeries. This reflects individualized surgical planning based on age, uterine preservation preference, severity, and compartment involvement.

Intraoperative and postoperative complications were low. Hemorrhage occurred in 4.17%, superficial wound infection in 3.47%, and urinary retention in 1.39%, with no bladder, ureteric, bowel, or rectal injury. Jatawani et al.,²¹ reported postoperative complications following vaginal surgery for prolapse, while Rohini et al.,¹³ reported transfusion in 13.6%, febrile morbidity in 7%, pelvic abscess in 3%, and vault prolapse in 2%. Rajan et al.,²⁰ reported recurrence of 7.47% after vaginal hysterectomy with pelvic floor repair with or without sacrospinous fixation. In the present study, all women reported symptom relief at 6-week follow-up, although longer follow-up is required to assess recurrence.

Overall, the present study confirms that POP in this region is closely associated with rural background, lower socioeconomic status, postmenopausal status, multiparity, vaginal delivery, home delivery, and delayed presentation. Most women presented with advanced uterovaginal prolapse and associated cystocele or rectocele. Surgical management, particularly vaginal hysterectomy with pelvic floor repair, was safe and effective in the short term when performed after appropriate evaluation, optimization, and individualized surgical planning.

The strengths of the present study include its prospective observational design, hospital-based evaluation of clinically diagnosed POP, assessment of demographic profile, obstetric risk factors, symptomatology, anatomical defects, surgical procedures, complications, and short-term follow-up outcome. However, the study has limitations, including its single-centre design, hospital-based surgical sample, and exclusion of women managed conservatively alone, which limits generalizability to the community burden of POP. Quality-of-life scores, formal urodynamic evaluation, long-term sexual function, and recurrence beyond short-term follow-up were not assessed in detail.

CONCLUSION

Pelvic organ prolapse was observed predominantly among multiparous, postmenopausal women from rural backgrounds. Uterovaginal prolapse with associated cystocele and rectocele were the frequently observed anatomical defects. Vaginal hysterectomy with pelvic floor repair was the most frequently performed procedure. Surgical management was associated with low perioperative morbidity and favourable short-term symptomatic improvement.

Early identification of prolapse, improved obstetric care, pelvic floor health awareness, and timely referral may contribute to reducing disease burden and improving quality of life.

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