

STUDY OF PREVALENCE AND RISK FACTORS IN A WOMEN WITH PELVIC ORGAN PROLAPSE

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ABSTRACT

Background: Pelvic organ prolapse (POP) is a common gynecological condition that significantly affects the quality of life in women, particularly in the postmenopausal population. Despite its substantial impact, data on risk factors remain limited in several regions, including rural South India.

Objectives: To describe the clinical and demographic profile of women with pelvic organ prolapse and identify associated sociodemographic, obstetric, and lifestyle-related risk factors in patients presenting to a tertiary care center in Siddipet. **Material and Methods:** This retrospective observational study was conducted over a one-year period in the Department of Obstetrics and Gynaecology, Government Medical College, Siddipet. Medical records of 75 women diagnosed with POP were reviewed. Data on age, menopausal status, parity, mode of delivery, inter-conceptional interval, chronic comorbidities, BMI, and lifestyle habits were collected. POP was classified using the POP-Q staging system. Descriptive statistics were used to summarize the findings.

Result: The mean age of participants was 56.2 ± 11.4 years, and 78.7% were postmenopausal. Major contributing factors included multiparity (76%), vaginal delivery (88%), prolonged second stage of labor (34.7%), chronic constipation (38.7%), and heavy physical labor (41.3%). POP-Q staging showed 46.7% of women with Stage II, 37.3% with Stage III, and 16% with Stage IV prolapse.

Conclusion: POP poses a significant health burden among postmenopausal rural women. Early identification of risk factors such as high parity, chronic constipation, and physical strain can aid in timely intervention and reduce disease progression.

INTRODUCTION

Pelvic organ prolapse (POP) is a common and frequently underreported gynecological disorder characterized by the descent of pelvic organs such as the uterus, bladder, or rectum through the vaginal canal due to weakening of pelvic floor muscles and connective tissue support. Although not life-threatening, POP can significantly affect a woman's quality of life, leading to urinary, bowel, sexual, and psychological disturbances.^[1]

The prevalence of POP varies considerably depending on diagnostic criteria and study populations. While symptomatic POP affects

approximately 3–8% of women, clinical assessments have shown a much higher prevalence of 30–50%, particularly in parous women over 50 years of age.^[2]

In India, sociocultural barriers, lack of awareness, and poor access to healthcare contribute to delayed diagnosis and underreporting of the condition.

Several risk factors are associated with POP, including advanced age, menopause, multiparity, vaginal deliveries, prolonged or difficult labor, instrumental delivery, obesity, chronic constipation, respiratory conditions, smoking, and heavy physical labor.^[3,4] The role of obstetric trauma and repeated childbirth, especially in rural regions lacking postpartum pelvic floor rehabilitation, is well documented.^[3] The use of standardized assessment

tools such as the Pelvic Organ Prolapse Quantification (POP-Q) system has enhanced the accuracy of staging and clinical documentation of POP.^[4-6]

Despite the high burden of disease, there is a paucity of hospital-based data from rural South India. This study aims to estimate the prevalence of POP and identify the associated risk factors among women attending a tertiary care hospital in Siddipet. Understanding the burden and associated risk factors of POP is essential for devising preventive, diagnostic, and management strategies. However, data from rural tertiary care centers in India, including Siddipet, are sparse. This study aims to assess the hospital-based prevalence of POP and identify its key risk factors among women attending a tertiary care hospital in South India.

MATERIALS AND METHODS

Study Design and Setting

This was a retrospective observational study conducted in the Department of Obstetrics and Gynaecology at Government Medical College and General Hospital, Siddipet, Telangana. The hospital is a tertiary care referral center serving a predominantly rural population in the region.

Study Period

The study was conducted over a one-year period, from April 2024 to March 2025.

Study Population

The study included **75 women** who were clinically diagnosed with pelvic organ prolapse (POP) and whose complete medical records were available during the study period.

Inclusion Criteria

Women of any age diagnosed with pelvic organ prolapse based on clinical evaluation. Cases classified according to the Pelvic Organ Prolapse Quantification (POP-Q) system.

Exclusion Criteria

Women with a prior history of pelvic reconstructive surgery for prolapse.

Data Collection

Relevant data were collected retrospectively from the Medical Records Department using a pre-designed data collection proforma. The information recorded included:

Sociodemographic variables: age, menopausal status, socioeconomic status, residence (rural/urban), and body mass index (BMI).

Obstetric history: parity, mode of delivery, inter-conceptual interval, prolonged second stage of labor, instrumental deliveries, perineal tears, and macrosomic deliveries (>3.5 kg).

Lifestyle and medical factors: history of chronic constipation, chronic cough or bronchitis, smoking, and heavy physical labor.

Clinical staging: POP severity was documented using the POP-Q system.

Data Analysis

Data were entered in Microsoft Excel and analyzed using **SPSS version 25**. Descriptive statistics such as means, standard deviations, frequencies, and percentages were used to summarize the results.

Ethical Considerations

Approval was obtained from the Institutional Ethics Committee of Government Medical College, Siddipet. All patient data were handled with strict confidentiality, and anonymity was maintained throughout the study.

RESULTS

A total of 75 women diagnosed with pelvic organ prolapse (POP) were included in this retrospective observational study conducted over a one-year period at Government Medical College, Siddipet.

Sociodemographic Profile

The mean age of the study population was 56.2 ± 11.4 years, with a majority being postmenopausal (78.7%). Most participants (72%) belonged to rural areas, and 66.7% were from a low socioeconomic background. The average body mass index (BMI) was 27.4 ± 3.6 kg/m², with 38.7% of women classified as overweight and 21.3% as obese (Table 1).

Obstetric Risk Factors

Multiparity (≥ 3 deliveries) was observed in 76% of the women, with a mean parity of 3.9 ± 1.2 . The majority of women (88%) had undergone vaginal deliveries. Other significant obstetric risk factors included prolonged second stage of labor (34.7%), instrumental deliveries (18.7%), perineal tears (22.7%), macrosomic deliveries (>3.5 kg) in 16%, and short inter-conceptual intervals (<2 years) in 26.7% of cases (Table 2).

Other Contributing Risk Factors

In terms of lifestyle and medical risk factors, chronic constipation was reported in 38.7% of participants, chronic cough or bronchitis in 24%, and heavy physical labor in 41.3%. A history of smoking was noted in 12% of the women (Table 3).

POP-Q Staging

According to the POP-Q (Pelvic Organ Prolapse Quantification) system, Stage II prolapse was observed in 46.7% of cases, Stage III in 37.3%, and Stage IV in 16% (Table 4).

Study Sample Summary

The study analyzed 75 confirmed cases of pelvic organ prolapse over a one-year period as part of a retrospective observational design (Table 5).

Table 1: Sociodemographic Profile of Women with Pelvic Organ Prolapse (n = 75)

Variable	Frequency (n)	Percentage (%)
Age (mean $\pm$ SD)	56.2 ± 11.4	—
Postmenopausal women	59	78.7%

Rural residence	54	72%
Low socioeconomic status	50	66.7%
BMI (mean $\pm$ SD)	27.4 $\pm$ 3.6	—
Overweight (BMI 25–29.9)	29	38.7%
Obese (BMI $\geq$ 30)	16	21.3%

Table 2: Obstetric Risk Factors in Women with POP (n = 75)

Risk Factor	Frequency (n)	Percentage (%)
Multiparity ($\geq$ 3)	57	76%
Mean parity	3.9 $\pm$ 1.2	—
Vaginal delivery	66	88%
Prolonged 2nd stage of labor	26	34.7%
Instrumental delivery (forceps/vacuum)	14	18.7%
Perineal tear	17	22.7%
Macrosomic baby ($>$ 3.5 kg)	12	16%
Short inter-conceptual interval ($<$ 2 years)	20	26.7%

Table 3: Other Contributing Risk Factors (n = 75)

Risk Factor	Frequency (n)	Percentage (%)
Chronic constipation	29	38.7%
Chronic cough/bronchitis	18	24%
Heavy physical labor	31	41.3%
Smoking history	9	12%

Table 4: Distribution of POP-Q Stages (n = 75)

Stage of POP (POP-Q Classification)	Frequency (n)	Percentage (%)
Stage II	35	46.7%
Stage III	28	37.3%
Stage IV	12	16%

Table 5: Summary of Pelvic Organ Prolapse Cases Analyzed (n = 75)

Parameter	Value
Total POP cases analyzed	75
Sample collection period	1 year

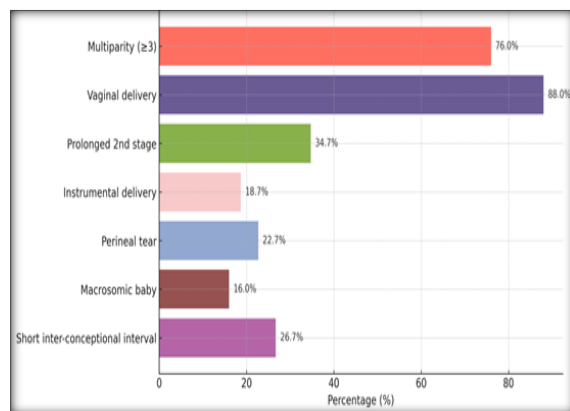


Figure 1: Obstetric Risk Factors in Women with POP

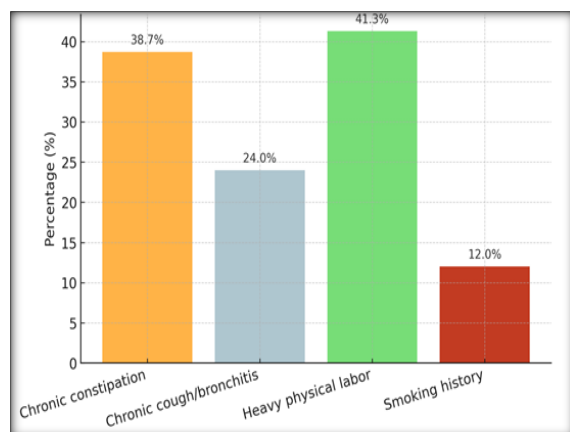


Figure 2: Other Contributing Risk Factors in Women with POP

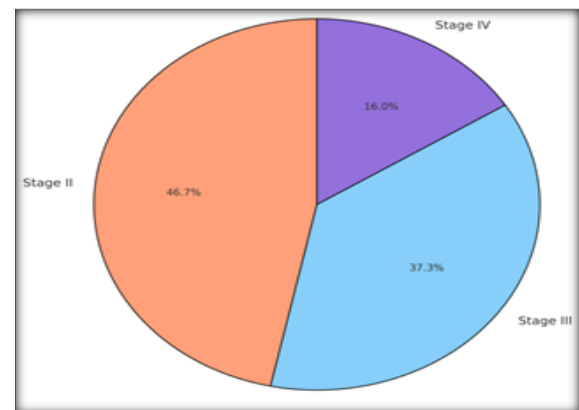


Figure 3: Distribution of POP-Q Stages

DISCUSSION

Pelvic organ prolapse (POP) is a significant reproductive health issue, particularly in low-resource settings where access to comprehensive postnatal care and pelvic floor rehabilitation is limited. This study was undertaken to describe the clinical characteristics and identify contributing risk factors among women with POP attending a tertiary care center in Siddipet, Telangana.

The mean age of participants was 56.2 years, and a high proportion (78.7%) were postmenopausal, supporting the role of age-related collagen loss and hypoestrogenism in the pathophysiology of POP. These findings are consistent with prior reports by Suemitsu et al. and Aimjirakul et al., who identified postmenopausal status as a significant risk factor for pelvic floor disorders.^[10,11]

Obstetric history was a major contributor, with 76% of women being multiparous and 88% having had vaginal deliveries. Prolonged second stage of labor (34.7%), instrumental deliveries (18.7%), and perineal trauma (22.7%) were also prevalent. These findings align with previous literature demonstrating a strong correlation between childbirth-related pelvic floor trauma and the development of POP.^[7,12] Repeated and unaddressed strain during labor may compromise structural support, especially in women who lack access to postpartum rehabilitation.

Additional risk factors identified included chronic constipation (38.7%), chronic cough (24%), and heavy physical labor (41.3%), which contribute to sustained increases in intra-abdominal pressure. These findings are comparable to studies from other developing regions that also highlight the role of preventable lifestyle factors in POP development.^[8,13] POP-Q staging in this study revealed that nearly half of the participants (46.7%) had Stage II prolapse, while 37.3% had Stage III and 16% had Stage IV disease. This distribution reflects delayed healthcare-seeking behavior and potential underreporting of symptoms, particularly in rural populations where awareness and access to care are limited.^[9,13]

In summary, this study reinforces that POP is a multifactorial condition influenced by obstetric, lifestyle, and demographic factors. Interventions focusing on antenatal and postnatal care, early screening, patient education, and lifestyle modifications can play a pivotal role in reducing the burden of pelvic organ prolapse in resource-constrained settings.^[7,12]

CONCLUSION

Pelvic organ prolapse remains a major gynecological concern, especially among postmenopausal, multiparous women from rural and socioeconomically disadvantaged backgrounds. This study identified multiple contributory factors, including advanced age, high parity, vaginal delivery, prolonged second stage of labor, chronic constipation, and heavy physical labor. These findings underscore the importance of recognizing modifiable risk factors and implementing early preventive strategies. Strengthening postpartum pelvic floor rehabilitation, encouraging institutional deliveries, and improving community awareness are critical in mitigating disease progression. Further prospective and population-based studies are warranted to validate these findings and inform

targeted interventions and health policy, particularly in low-resource settings.

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