

# Risk Profile of Uterovaginal Prolapse

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## ABSTRACT

**Introduction:** Pelvic Organ Prolapse is a common problem in Nepal. The aim of this study was to assess the magnitude of pelvic organ prolapse and risk factors associated with it.

**Methods:** This hospital based retrospective descriptive study was conducted in gynecological Out Patient Department of College of Medical Sciences Teaching Hospital, Bharatpur, Chitwan from October 2011 and September 2013. The data were retrieved from the records and analyzed. Women who were earlier subjected for surgical correction of prolapses Cases with pregnancy were excluded from study.

**Results:** There were total 375 cases of genital prolapse out of total 2075 cases of total gynecological admission i.e. 18% incidence. The mean age of patients was 56.79 years with the mean parity of 5.67. 72% cases developed prolapse during their post-menopausal years. Majority of them (84%) lived in hilly area and (57.3%) cases were involved with heavy occupational activities. 50.7% of genital prolapse were from the lower socioeconomic status. Proplase was seen with patients with higher BMI (26-30). Risk factors identified were unsupervised home delivery, rapid succession of pregnancies, and no rest after delivery. Most common clinical presentation of Pelvis Organ Prolapse was mass per vagina (60%).

**Conclusions:** Prolapse is common among rural, farmers, multiparous and post-menopausal women where most of them delivered at home with prolonged labor. Age, low socioeconomic status and heavy manual activities were associated with the prolapse.

**Keywords:** *pelvic organ prolapse; risk factors.*

## INTRODUCTION

Pelvic Organ Prolapse is the descent of the pelvic organs from their normal position in the pelvis into the vagina, accompanied by urinary, bowel, sexual or local symptoms.<sup>1</sup> The development of uterovaginal prolapse is multifactorial. The leading process for the utrerovaginal prolapse is the childbirth trauma, which causes weakness of the ligaments, muscular and fascial structures, which were entrusted with the maintenance of anatomical support of pelvic organs. It is commonly due to unsupervised and quick succession of child birth which gives rise to trauma to these vital supports, and in due course of time it gets worsens with the setting of menopause. Some of the additional causes are poor socioeconomic status, malnutrition, early marriage, multiparity, lack of puerperal rehabilitation, etc. This is further complicated by chronic illness like Chronic Obstructive Pulmonary Disease, Chest Tuberculosis, and Obesity etc.

In 2006 study conducted by the Institute of Medicine which reported that Uterovaginal Prolapse was detected in 207 out of 2070 (10%) women .Around 30.9% women suffered from the major degree of Uterovaginal Prolapse and would require operative management, while the second degree and third degree constituted 12.6 and 16.9% respectively, while 1.4% had procidentia. According to WHO estimation, the reproductive ill health accounted for 33% of the total disease burden in the women globally. The global prevalence of uterine prolapse was 2-20%.(4).Prevalence of Genital prolapse is 35 %-50% of all parous women in our community of Nepal.

In Nepal, uterine prolapse appeared to be widespread, but little published evidence exists, because women feel shy to complain of uterovaginal prolapse. If we could identify the most common

risk factors for uterovaginal prolapse, we could plan to advise preventive measures for reduction in this disease. Keeping this in view this study has been taken up to see various risk factors for causation of prolapse .

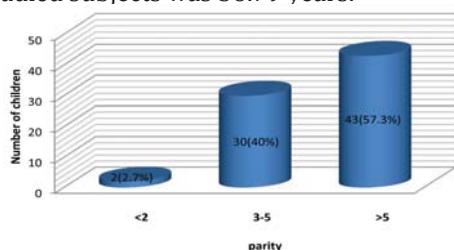
## METHODS

This was a hospital based prospective study conducted at College of Medical Sciences Teaching Hospital, Bara, Chitwan between 1<sup>st</sup> oct 2011 to 1<sup>st</sup> sept 2013 collected at random from the Gynecological OPD, of the Department besides periodical camp cases. Women who were earlier subjected for surgical correction of prolapses and Prolapse with pregnancy were excluded from study. Evaluation of cases was done which included detail history like age, parity, duration of genital prolapse, socioeconomic status, Occupation, smoking habit, alcoholic and drug abuse etc. History was also taken for abnormal childbirth, birth spacing, incontinence of urine, menopause etc. All the collected data were entered in Microsoft Office Excel worksheet and statistical analysis was done using SPSS version 20. The statistical tools used were frequency, percentage, mean, range, chi-square test to calculate p-value. The correlation was observed at the 5% level of significance ( $p < 0.05$ ). Ethical clearance was taken from the hospital.

## RESULTS

S.N.	Age	Frequency	Percentage
1	<30	3	4.0
2	30-49	14	18.7
3	50-70	52	69.3
4	>70	6	8.0
	Total	75	100.0

As shown in table 1, out of 75 subjects diagnosed with UVP, 52 (69.3%) belonged to age group of 50-70 years, 14 (18.7%) in the age group of 30-49 years. and 6 (8%) above 70years. Mean age of the studied subjects was 56.79 years.



In terms of parity, as shown in Fig , 43 out of the 75 subjects studied (57.3%) were found to have parity beyond five and 30 (40%) between 3-5. Parity  $\leq 2$  was found only in 2 (2.7%) cases. Mean parity was 5.67.

S.N.	Occupation	Frequency	Percentage
1	Farmer/manual labour	43	57.3
2	Housewife	23	30.7
3	Sedentary occupation	9	12.0
	Total	75	100.0

Displayed in table and figure are the socioeconomic status and the nature of occupation of the study subjects respectively. Subjects from lower socio-economic strata constituted the bulk i.e, 38 (50.7%) followed by 29 (38.7%) in the middle strata. Only 8 (10.7%) out of 75 subjects fell into the upper socio-economic category.

Farmer and /or manual labour formed the maximum number of the cases in Uterovaginal prolapse. They were 43(57.3%) in number as opposed to housewife only in 23 (30.7%) cases. Cases with sedentary occupation were only in 9(12%) of cases.

S.N.	Geographical distribution	Frequency	Percentage
1	Hilly	63	84.0
2	Terai	12	16.0
	Total	75	100.0

Most of the cases of the Uterovaginal prolapse in the present study were from Hilly terrain of Nepal , which is acknowledged to be one of the significant factor for Genital Prolapse . It was found in 63(84%) of the study case in contrast to cases from plain terrain who formed only 12(16%) of the cases.

Uterovaginal Prolapse in the present study were maximum in Pre-obese women with Body Mass Index ranging between 26-30 .They were found in 32(42.7%) cases as opposed to women with normal Body Mass Index 20(26.7%).Cases with underweight BMI had Uterovaginal Prolapse in 11

(14.7%) of the cases. Mean BMI was 25.56.

S.N.	Smoking habits	Frequency	Percentage
1	Present	46	61.3
2	Absent	29	38.7
	Total	75	100.0

S.N.	Degrees	Frequency	Percentage
1	<10	7	15.2
2	11-20	29	63.0
	>20 sticks/day	10	21.7
	Total	46	100.0

Above tables shows the striking relationship between the Tobacco smoking habits with the Uterovaginal Prolapse. As can be seen from both the table, out of total 75cases, 46(61.3%) of them were chronic smoker. Of this 46 cases, 29(63%) were smoking 11-20 sticks/day. Further 10 (21.7%) of the cases used > 20sticks a day.

S.N.	Diseases	Frequency	Percentage
1	Chronic lung disease	42	53.1
2	Habitual constipation	18	22.78
3	Obesity	12	15.1
4	Chronic HTN	4	5
5	DM	3	3.79

Table 11 shows the associated Medical illness with Uterovaginal Prolapse in the present study. Chronic lung disease formed the major components of association in 42 (53.1%) ,out of total 75 cases. Next to be followed by habitual constipation observed in 18 (22.7%) cases. Obesity (BMI > 30) was associated with prolapse in 12 (15%) cases. Most of the cases i.e. 64(85.3%) had spacing interval between the subsequent pregnancies less than two years, which is a significant cause for inadequate puerperal rehabilitations and weakness of genital supports. In cases where the spacing was more than 2 years, the frequency of genital prolapse was only 11 (14.7%).

Care during delivery(n=75)			
S.N.	Nature of deliveries	Frequency	Percentage
1	Chronic lung disease	59	78.7
2	Unsupervised home delivery	7	9.3

	Institutional delivery	9	12.0
3	Total	75	100.0

In most of the cases i.e. 59(78.7%) cases had home deliveries without any supervision as opposed to only 16(21.3%) cases of uterovaginal prolapse who underwent Institutional deliveries.

S.N.	Nature	Frequency	Percentage
1	Prolonged labour	20	26.6
2	Precipitate labour	5	6.7
3	Obstructed labour	4	5.3
4	Instrumental delivery	3	4

Table analyzing the cases who had preceding abnormal obstetrical events during the childbirth. Prolonged labour was observed in 20(26.6%) of the cases followed by Precipitate labour and Obstructed labour in 5(6.7%) and 4 (5.3%) cases respectively. Instrumental delivery observed in only 3 (4%) case.

S.N.	Puerperal Rehabilitations	Frequency	Percentage
1	Adequate	7	9.3
2	Inadequate <ul style="list-style-type: none"> <li>• Early resumption of manual activity</li> <li>• Load lifting</li> <li>• Field activity</li> <li>• Housemaid activity</li> </ul>	68	90.7
	Total	75	100.0

Analyzing the care received during the puerperium. As can be seen that most of the cases i.e. 68(90.7%) did not receive required care during the puerperium, due to various compulsive reason viz early resumption of manual activity, attending agricultural field activities etc.

S.N.	Status	Frequency	Percentage
1	Childbearing	7	9.3
2	Climacteric	14	18.7
3	Menopause	54	72.0
4	Total	75	100.0

Table 16 analyzing menstrual phases with

Uterovaginal Prolapse among study cases. It can be seen that most of the cases i.e. 54 (72.0%) developed prolapse during the post-menopausal years following menopausal atrophy. However, 21(28%) cases developed UVP during either their active childbearing or climacteric period.

## DISCUSSION

In the present study women were in age group between age group (50-70years) with mean age of 56.79 years and 54 (72%) cases developed prolapse during their post-menopausal years as opposed to only 21(28%) who developed prolapse during their reproductive and perimenopausal period.

Bodner et al (2007) has reported a median age of 50 years in 96 women who were diagnosed and treated for uterine prolapse.<sup>1</sup> As opposed to this Brekken et al (2009) observed a mean age of 47.1 years on their group of 142 women of uterine prolapse. Even Begam et al (2011) observed that most of the cases (36.11%) were in the age group between 51-60 years out of total 72 cases.<sup>2</sup> However Braekken et al (2009), failed to demonstrate any independent association between POP and post-menopausal status.<sup>3</sup>

Similarly in the present study maximum number of cases i.e. 43(57.3%) were in the parity beyond 5. Maximum number of cases i.e. 38 (50.7%) of genital prolapse from the lower socioeconomic status as opposed to only 8 (10.7%) cases from upper class and 43(57.3%) cases were involved with heavy occupational activities like agricultural labour and lifting of heavy objects. Begum et al (2011), reported on their study of uterine prolapse, that most of their 72 cases of uterine prolapsed i.e. 56.9% belong to poor socio economic class as opposed to only 8.33% in upper middle class, 54.1% of cases were parity between 5-9 and an association of genital prolapsed of 77.77% of cases with nature of occupation viz lifting of heavy weight and early resumption of activity after delivery.<sup>5</sup>

Uterovaginal prolapsed was seen with higher BMI (26-30) and above 30 in 58.7% of the cases and mean BMI being 25.56 kg/m<sup>2</sup>. Accordingly, Doshani et al (2007) categorically stated that

Overweight (BMI 25-30; Odds ratio 2.51,95% confidence interval 1.18 to 5.35) or obese (>30; 2.56, 1.23 to 5.35) are at higher risk of developing prolapse<sup>11</sup>

In our study Out of a total of 96, 43 (45%) cases were smoker and there were co-relation of smoking with COPD and prolapse in 35% of cases<sup>1</sup>. However Brekken et al (2009) fail to demonstrate any independent association between POP and current smoking<sup>3</sup>

Short spacing of birth and a number of medical illnesses in women like COPD, obesity, DM etc were directly or indirectly are associated with the causation of genital prolapse. In the present study out of 75 cases, 64 (85.3%) had a spacing of pregnancy below two years. And medical illness observed were 42(53.1%) in chronic lung disease, 18(22.78%) habitual constipation and obesity (BMI > 30) in 12 (15.1%) cases respectively. Bordner et al (2007) also recorded rapid succession of pregnancies as one of the significant risk factor for uterine prolapse in Nepal and 35% of the affected patient had COPD, 17% suffered from Hypertension and 5% had diabetes mellitus. (1). In the present study, 20(26.6%) had prolonged labour besides 5 (6.7%) and 4 (5.3%) cases of precipitate and obstructed labour respectively. Most cases i.e. 59 (78.7%) had unsupervised home delivery without the assistant of any skilled birth Attendant and 68(90.7%) consumed work in early post-natal period viz load lifting, field activity, early resumption of manual activity etc as opposed to only 7(9.3%) who had adequate rest during postpartum period. Begum et al (2011) reported that 52.77% patient had early resumption of household activity during puerperium, 25% lifted heavy weight during their daily activities and 22.22% had history of prolonged labor.<sup>5</sup>

## CONCLUSIONS

The most important risk factors for uterine prolapse seem to be extensive physical labor during pregnancy and immediately after delivery, low availability of skilled birth attendants with short spacing, smoking while having COPD and Obesity. And prolapse was mostly seen in multiparous and postmenopausal lady. Finally, information campaigns, preventive care management and early

treatment of genital prolapse should be initiated to reduce this significant public health problem.

**Conflict of Interest: None**

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