Original Research Article　　　　　　　　　　　　　　　　　**Obstetrics and Gynaecology**

Risk Factors of Uterovaginal Prolapse

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Abstract

Background*:** Pelvic organ prolapse refers to protrusions of the pelvic organs into or out of the vaginal canal. Vaginal prolapse can occur without uterine prolapse but uterus cannot descend without carrying the upper vagina with it. Therefore, genital prolapse is divided into two broad categories; one is uterine prolapse the other is vaginal prolapse. They are again divided into different subgroups. ***Objective*:** To find out risk factors that will help to reduce the incidence of uterovaginal prolapse. ***Method*:** It is a retrospective case control study conducted in the department of Obst & Gynae, BSMMU, Dhaka during the period of October 2009 to June 2010. We included 50 uterovaginal prolapse women as a case and 50 reasonably healthy women as a control. Vault prolapse after abdominal hysterectomy, vaginal hysterectomy, only cystocele, only rectocele, was excluded from study. ***Results: In this study, 62% women were 45-65 years of age and in control group this was 46%, P value was .001. In case group most of the women were multiparous, 84% were > 5, in control group this was 20%. P value was .001. Most of the patients had history of repeated childbirth, <3yrs, in control group it was >5yrs, p value is 0.001 which is highly sigficant. Most of the patients were coming from low socio-economic condition. In case group it was 56% and control group 34%, P value was 0.191. In this study, most of the patient had history of prolong labour (14.6%). Instrumental delivery 0.4% In case group, 80% patients showed easy vaginal delivery, 4.2% had obstructed labour. Almost 100% patients had history of something coming down per vagina. 42% complaining of frequency, 58% incomplete voiding, 10% retention of urine, 4% had stress incontinence, P value of incomplete voiding .001. 74% patients had history of constipation and 30% patients had history of difficulty in defecation. P value .001. 68% in case group complaining watery per vaginal discharge, 12% in control group. P Value .001. 22% in case group complaining of chronic cough, P value .001. 74% cases significent history of heavy physical work. P value .001. 72% cases were 2nd degree uterine prolapse, 18% 1st degree and 10% 3rd degree prolapse. ***Conclusion*:** Early marriage, difficult childbirth, low socio-economic condition, poor nutrition status, delivery conducted by untrained dais, no rest in puerperium and complication of delivery are found to be recommended risk factors of utero-vaginal prolapse. In our socio-economic condition, it is need of ours to strengthen the existing maternal services at the basic level of community and build up the awareness to overcome & remove the risk factors of prolapse.
Keywords: Pelvic organ, vaginal prolapse, genitourinary prolapse, uterovaginal prolapse.

INTRODUCTION

Genital prolapse is a common gynaecological problem both in developed and developing countries. Pelvic organ prolapse is descent of the pelvic organ into vagina, often accompanied by urinary, bowel, sexual or local pelvic symptoms [1].

Genital prolapsed possibly the 3rd or 4th commonest gynaecological condition encountered women in Bangladesh. It is associated with significant adverse reproductive sequalae. In our set up 90% of the deliveries are conducted by untrained traditional birth attendant, 96% delivered at home and 40% of women are grand multiparous with early marriage, estimated by WHO (World Health Organisation) and country report [2].

Uterovagmal prolapse is highly prevalent chronic or residual maternal morbidity in the Southeast

Asian region. It occurs very frequently amongst Bangladeshi women. It constitutes about 15% maternal morbidity.

It is very much difficult to find out actual incidents, prevalence in our country. Because most patient harbouring this disease do not seek medical service due to lack of consciousness, health education, also due to shyness. It has been estimated that a half of parous women. Loose pelvic floor support, resulting in some degree of prolapse and death of these women 10% to 20% seek medical care [3].

Prolapse usually occurs as an end result of weakness in endopelvic fascia and its condensation (uterosacral and cardinal ligaments) and pelvic musculature that are injured and overstretched during mismanaged vaginal delivery. The cause of pelvic organ prolapse is most assuredly caused by multiple factors , proven risk factors include age , increasing parity , obesity and history of pelvic surgery especially hysterectomy [4].

Uterine & genital prolapse may rarely be caused by congenital (inherent) weakness of the pelvic floor. More commonly, genital prolapse is caused by damage to the pelvic floor during vaginal deliveries (especially those with protracted labour) instrumental deliveries (forceps, vacuum extaction) and the vaginal delivery of large babies. All these causes stretching & tearing of the endopelvic fascia and the levator muscles and perineal body. Partial pudendal and perineal neuropathies are also associated with labour [5].

Clinical presentation of genital prolapse varies patient to patient, from periods of life of same patient. Some along with utero vaginal prolapse, blader, urethra and rectum are involved in this process to varing state. Symtoms also depends on the part of prolapse.

Prolapse.is often asymptomatic and or incidental findings and clinical examination may not necessarily correlate with symptoms [6].

Prolapse of the uterus is one of the most common sequalae of difficult child birth. This condition is caused by the weakening of the pelvic muscle and ligaments that support the uterus, usually following damage after a difficult delivery, but sometimes also following gynaecological surgery. The uterus sags down into vagina and may even protrude out between the vaginal lips. However, the symptoms may not appear till after menopause, when the damaged muscle loses tone and ligaments atrophy [7].

Prevalence of both stress urinary incontinence (SUI) and uterovaginal prolapse is high and rising with age. Risk factors include multiparity, obesity, chronic obstructive lung disease and previous gynaecological surgery. The underlying pathology is still unknown but may include defective connective tissue [8].

OBJECTIVE
General Objective
The main aim of this study to find out risk factors behind development of uterovaginal prolapse with special attention of risk factors.

Specific Objective:
➢ Evaiution of cases in terms of symptoms and signs.
➢ Identification of precipitating factors for development of prolapse.
➢ Identification of obstetrical factor predispos for developing prolapse.
➢ Distribution of degree of prolapse

METHODOLOGY

Study Place	The study will be conducted in the department Obstratics & Gynecology, B.S.M.M.U, Dhaka
Study Population	From all patients admitted with the complains of uterovaginal prolapse, aged over 40 yrs.
Sample Size	Case- 50, Control- 50
Study Design	Case control study
Duration of study	October 2009 -June 2010
Sampling technique	Random sampling
Inclusion Criteria	All admitted patients with the complains of uterovaginal prolapse aged over 40 yrs
Exclusive Criteria	Vault prolapse after abdominal hysterectomy, vault prolapse after vaginal hysterectomy, only cystocele, only rectocele, only cystocele and rectocele.

Sampling procedure:
Out of all patient admitted as genital prolapse is the department of obstetric & Gynecology, BSMMU only 50 cases were taken as case and from Gyne OPD 50 cases were taken as control that did not develop prolapse of same age group.

Data collection procedure:
Random method are used for identify the case and control in BSMMU and to include in the study.

Data Collection:
All the patients were explained about the aim and objective of the study and the test procedure were before performing a test. All data was taken in a protested, well-structured questionnaire by direct question answer and hospital record. Data included age of patients; socio-economic status, f age of marriage, nutritional status, menstrual hjstory, personal history, medical history & detail obstetrical history were taken.

RESULTS

This table were arranged in four groups - <45 years. 45-55 years. 55-65 years. >65 years to see which group is most common for utero vaginal prolapse. Among the case 18% women is <45 years, 28% is 45-55 years, 34% is 55-65 years, 20% is >65 years. Where as in control group, 52% is <45 years, 24% is 45-55 years, 22% is 55-65 years, 2% is >65 years. P value is 0.001 which is highly significant.

Table I: Distribution of age by groups

Age (in year)	Group		
	Case	Control	p value*
<45	9(18.0f)	26 (52.0)	
45-55	14 (28.0)	12 (24.0)	
55-65	17(34.0)	11 (22.0)	0.001
>65	10(20.0)	1 (2.0)	
Total	**50 (100.0)**	**50(100.0)**	
Mean ± SD	56.88 ±10.31	48.12±8.26	

*t test was done to measure the level of significance.
*Figure within parentheses indicates in percentage.

This data showed the relation of parity of the mother with risk of prolapse. In case group 84% were para >5, in control group it was 20% and P value was 0.001, which is highly significant

Table II: Distribution of parity by groups

Parity	Group		
	Case	Control	P value*
Nulipara	0(.0)	1 (2.0)	
1-2	1 (2.0)	15(30.0)	
3-4	7(14.0)	24 (48.0)	0.001
>5	42 (84.0)	10 (20.0)	
Total	50(100.0)	50 (100.0)	
Mean ± SD	5.20 ± 2.47	2.94 ±1.62	

*t test was done to measure the level of significance.
*Figure within parentheses indicates in percentage.

Repeated child birth is a important risk factor of utero vaginal prolapse. Table show the birth spacing incase group was <3yrs & in control group it was >5yrs, p value is 0.001 which is highly significant.

Table Ill: Distribution of birth spacing and age of marriage by groups

	Group		
	Case	Control	P value*
Birth spacing	2.63 ±0.81	4.16 + 2.64	
Age of marriage	17.62 ±3.03	21.58 ±3.63	0.001

*t test was done to measure the level of significance.
*Data was shown as Mean ± SD

In this study we arranged the mother family in 5 groups on the basis of total monthly family income. Lower middle class in case group was 50%, in control group it was 32% and P value was 0.191. Most of the patients were belongs poor socio-economic conditions.

Table IV: Distribution of socio-economic status by groups

Socio-economic status	Group		p value*
	Case	Control	
Lower class	3 (6.0)	1 (2.0)	
Lower middle class	25 (50.0)	16 (32.0)	
Middle class	20(40.0)	28 (56.0)	0.191
Upper middle class	1 (2.0)	4 (8.0)	
Upper class	1 (2.0)	1 (2.0)	
Total	50(100.0)	50(100.0)	

*Chi square test was done to measure the level of significance.
* Figure within parentheses indicates in percentage.

There is close relation of nature/complication of labour with development of utero vaginal prolapse. Injury sustained during childbirth is important factor in the etiology of prolapse. In this study most of the patients had H/O prolonged labour (14.6%),80% had too easy vaginal delivery,4.2%had H/O obstructed labour only 0.4% had H/O instrumental delivery.

Table V: Distribution of complications of labour by groups

Complications	Group	
	Case	Control
Normal	208 (80.0)	121 (82.3)
Prolonged labour	38(14.6)	23 (15.6)
Obstructed labour	1 1 (4.2)	2 (1.4)
Instrumental delivery	1 (0.4)	O(.O)
Prom labour	2(0.8)	1 (0-7)
Total	**260(100.0)**	**147(100.0)**

Figure within parenthesis indicates in percentage.

Showed 74% had H/O constipation, in control group it was 12%, and p value 0.001.Which is highly significant. Constipations difficulty in defaecation acts as a contributory factor for utero vaginal prolapse.

Table VI: Distribution of symptoms (2) /defaecation problem by groups

Defecation problem	Group		
	Case	Control	p value*
Constipation	37 (74.0)	12 (24.0)	0.001
Difficulty in defaecation	15(30.0)	O(.O)	0.001

*Chi square test was done to measure the level of significance.
*Figure within parentheses indicates in percentage.

Table VII: Distribution of symptoms (3) by groups

Discharge per vagina	Group		p value*
	Case	Control	
Watery	34 (68.0)	6(12.0)	0.001
Blood stained	O(.O)	2 (4.0)	0.495**
Something coming down per-vagina	100	0	.001

*Chi square test was done to measure the level of significance.
**Fisher's exact test was done to measure the level of significance. "Figure within parentheses indicates in percentage.

Table showed relation of chronic cough with prolapse, it was present in 22% cases & p value is 0.001 which is significant.

Table VIII: Distribution of history of present illness by groups

History of present illness	Group		
	Case	Control	p value*
Asthma	1 (2.0)	2 (4.0)	0.999**
Chronic cough	1 1 (22.0)	0(.0)	0.001*
DM	9(18.0)	10(20.0)	0.799*

*Chi square test was done to measure the level of significance.
**Fisher's Exact test was done to mea'stire the level of significance.
*Figure within parentheses indicates in percentage.

Table IX: Distribution of personal history by groups

Personal history	Group		
	Case	Control	p value*
Heavy physical work	37 (74.0)	1 (2.0)	0.001
Coital activity	6 (12.0)	23 (46.0)	0.001

* Chi square test was done to measure the level of significance.
* Figure within parentheses indicates in percentage.

In this study, 18% had 1st degree, 72% had 2nd degree and 10% had 3rd degree prolapse were shown.

Table X: Distribution of degree of prolapse

Degree of prolapse	Frequency	Percent
1	9	18.0
2	36	72.0
3	5	10.0
Total	**50**	**100.00**

DISCUSSION

Genital prolapse is a common gynaecological problem and occurs in women at all ages but frequently found in reproductive age. It is the 3rd or 4th commonest gynaecological condition encountered amongst women in Bangladesh [9]. Patients with genital prolapse usually presents with the complaints of something coming down per-vagina, frequency of micturition, sense of incomplete evacuation of bowel and bladder. Most of the patients present in 3rd or 4th decade of life for advice [10]. Etiology is multifactorial, surgery is very effective and satisfactory treatment for prolapse. This study concerns with the clinical profile, etiology and risk factors of 50 cases of genital prolapse in B.S.M.M.U.

Table I showed that 62% of the patients belong to 45-65 years of age in case group, whereas in control group it was 46% and P value is .001, which is highly significant. This observation is consistant with the findings of other studies done in our country [11-15].

Most of the patients of my study group where multiparous (84% where para > 5) and in control group this were 20% and P value is .001, which is highly significant.

The present study is showing that most of the patients were coming from low socio-economic condition (Table IV) in my study in low socio-economic group case were 56% and control were 34%, P value 0,191. Low socio-economic condition may contribute in the causation of uterovaginal prolapse by affecting nutrition, repeated childbirth, no rest during puerperium knowledge regarding birth spacing, trauma during delivery and possibility of a good antenatal and intranatal care. The study conducted by Begum R.A (1997) has also shown that most of the patient of the study group were poor [17].

Injury sustained during childbirth is an important factor in the etiology of prolapse. In this study, most of the patients had history of prolonged labour (14.6%), 80% had H/O easy vaginal delivery, 4.2% had H/O obstructed labour and only 0.4% had history of instrumental delivery. This observation correlates well with the finding of other studies.

Table VIII (condition of puerperium) this study is showe that many patients^ (82.3%) did not take adequate rest during puerperium which may interfere with normal changes affecting the support of pelvic organs.

In this series, 100% patients had history of something coming down per vagina. Many patients had varying degrees of difficulty in micturation, 42% frequency, 58% had incomplete voiding, 10% had retention of urine and 4% stress incontinence. 68% had some vaginal discharge in case group and in control group it is 12% and P value .001 which is highly statically significant. This observation is consistent with many other workers in this country [11-15].

Personal history showed heavy physical work were 74% in case group and 2% in control group, P value was .001 which is highly significant. History of constipation were 74% in case group and 12% in control group, P value was .001 which is highly significant. So these acts as important predisposing factor for prolapse.

There is a realation of medical condition like chronic cough with prolapse.In my study 22%patient had h/o chronic. Cough,p value isO.001 which is highly significant.

Data showed that the commonest type was second degree prolapse 72%. This may be due to the fact that the third degree prolapse mainly occurs after several years of menopause when the uterus become small, atrophied and there is failure of hormonal supports. In many studies, second degree prolapse was more common than third degree prolapse [14-17].

CONCLUSION

In Bangladesh the incidence of genital prolapse is quite high where most of the deliveries are conducted at home by untrained dais. Frequent childbirth, too many pregnancies and deliveries conducted by untrained personnels have long been known to be the important risk factors in the etiology of prolapse. This study reflects the same observation. 84% patients were parous (more than 5), average spacing were less than 3yrs in case group, most (85.4%) deliveries were conducted at home by untrained dais. Almost all patients with complaints of something coming down per vagina and many had bladder and bowel problems.

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