Incidence of common risk factors in patients with utero vaginal prolapse

Mehreen Nisar*[1], Bushra Nisar[1], Aqsa Nisar[1]

[1] *Department of gynecology & obstetrics khyber teaching hospital, Peshawar Pakistan.*

ABSTRACT

Background: Uterovaginal prolapse is a very common condition, particularly among old and parous women. Most of the women who have delivered vaginally develops some degree of prolapse at some point in life, but not all the women are diagnosed as they do not seek help for this problem. Therefore, the exact prevalence is still unknown in Pakistan. Uterovaginal prolapse is a preventable and treatable condition and if not addressed timely, this condition may have serious consequences affecting the woman's quality of life. Thus, it is very important to study the risk factors leading to uterine prolapse and try to prevent this serious condition by taking necessary measures. The purpose of our study is to find out the incidence of common risk factors in cases of utero vaginal prolapse at Obstetrics and Gynecology department, Khyber Teaching Hospital, Peshawar.

***For Correspondence**

Dr. Mehreen Nisar
Department of gynecology & obstetrics khyber teaching hospital, Peshawar Pakistan.

E-mail:
meg_leen@live.com

Methodology: This study was carried out in the Department of Obstetrics and Gynecology of Khyber Teaching Hospital, Peshawar through a cross sectional (descriptive) study design in which consecutive (non-probability) sampling method was used. Duration of the research was 6 months (11th February 2011 to 11th August 2011) in which the total sample size was 211 patients calculated from 6.8% risk of utero vaginal prolapse (after two or more vaginal deliveries) with confidence interval of 95%. Margin of error of 3.4% was taken under WHO software for sample size calculation..

Results: In this study, majority of the cases (58%) belonged to the age groups of 51 to 60, followed by 35% who were in age range of 41-50 years and 7% of the women were in age range of 30-40 years. With the standard deviation ± 1.26, the mean age came out to be 52 years.

Common risk factors of uterovaginal prolapse among 211 patients was analyzed. Risk factors significantly associated with uterovaginal prolapse were unassisted or poorly assisted deliveries with the second leading factor being the rising number of vaginal births. Uterovaginal prolapse occurrence was commonly found (48%) in those patients who had deliveries assisted by unskilled birth attendant followed by 40% of women who had multiple vaginal deliveries, 33% patients who were grand multiparous and 7% patients who had chronic constipation..

Conclusion: Our data confirmed that advanced age, low availability of skilled birth attendant, increasing number of vaginal births and high parity are the major risk factors that statistically increases the chances of pelvic organ prolapse. Hence certain awareness programs should be started to highlight this important public health issue, along with initiation of preventive care strategies and early treatment plans for genital prolapse..

Keywords: Parity, Pelvic Organ Prolapse, Uterovaginal prolapse,

INTRODUCTION

Uterine prolapse is the downward displacement of the uterus into or beyond the vagina due to the inability of the ligaments and fascia to support it. This condition usually co-exists with the vaginal wall prolapse involving the bladder or rectum.[1]

The prevalence of prolapse to the level of hymen has a diverse range from 2 – 48%. This long range is probably due to variations in the sources of study populations, age, race, parity and examination methods. According to the Pelvic Organ Prolapse Quantification (POPQ) system, its distribution was found as stage 0, 6.4%; stage 1, 43.3%; stage 2, 47.7% and stage 3, 2.6%.[2]

Just to manage Pelvic organ prolapse, more than 200,000 surgical procedures are carried out every year in the United States.[3,4] This was also found to be the leading indication for hysterectomy in United States of America in women aged 55 years & older.[5] There is an estimated 11%

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risk for surgical intervention for this condition in all women.[6] Surgical procedures done to treat Pelvic Organ Prolapse account for direct cost of over $01 billion each year in USA.[7]

Etiology of uterovaginal (UV) prolapse is multifactorial. Important risk factors for UV prolapse are child birth injury, high parity, lack of access to skilled attendant during delivery.[1,8,9,10] Other major contributing risk factors include chronic disorders of raised intra-abdominal pressure like chronic constipation, chronic obstructive pulmonary disease (COPD and Asthma), and increased body mass index.[1,9,10]

The prevalence of UV prolapse increases with number of vaginal deliveries. After two vaginal deliveries, the frequency of UV prolapse is 6.8%.[11]

According to a study conducted in Nepal, about 33.34% respondents presenting with prolapse were grand multiparous. Out of these, 78% were delivered by untrained persons and 8% by skilled birth attendant. A high percentage of the respondents (89%) were delivered at home and the remaining 11% in hospital.[12]

According to another study 7% of the patients who presented with UV prolapse had chronic constipation[9].

Utero vaginal prolapse is a major public health problem as well as economic burden on the patient and her family. It has a deleterious impact on women's quality of life, but very little attention is given to this problem. Insufficient data is available on this issue in our local population. The main purpose of our study was to determine underlying potential risk factors of UV prolapse. The aim is to turn up with certain strategies for the policy organizers and authorities based on the conclusions of the studies. Through this research paper, we want to address this important issue and increase awareness about the commonest risk factors for pelvic organ prolapse. Moreover, there is need of certain awareness programs at Government level to let the women of our society know that UV prolapse is an avoidable and repairable condition. Appropriate safety measures, accurate management during pregnancy, delivery by experienced birth attendant, correct post-natal care, and timely treatment of the chronic underlying conditions like constipation can play a major role in preventing utero vaginal prolapse.

METHODOLOGY

This research study was carried out at Obstetrics and Gynecology department, Khyber Teaching Hospital, Peshawar. Duration of the study was 6 months (11th February 2011to 11th August 2011). Through a descriptive cross sectional study design, consecutive (non probability sampling) 211 patients were included in the study (6.8% risk of utero vaginal prolapse after two or more vaginal deliveries, 95% confidence interval with 3.4% margin of error under WHO software for sample size determination.)

All patients age 30 to 55 years presenting in Gynae OPD with uterovaginal prolapse were included. However, women (presenting with uterovaginal prolapse) with history of chronic cough associated with chronic obstructive pulmonary diseases (COPD) or abdominopelvic mass or those with obesity (BMI ≥ 30kg/m2) were excluded in order to reduce confounders and bias in study results.

Patients were included from the Gynae OPD of Khyber Teaching Hospital Peshawar. After fulfilling the criteria of inclusion, they were enrolled in the study. After obtaining approval from hospital ethical committee, written informed consent was obtained from the patient as part of ethical practice. Demographic characteristics like name, age, address were recorded on a Performa. All those patients having UV prolapse of any degree confirmed by examination using PAPQ system were included in study. Detail history was taken especially regarding underlying possible risk factors of UV prolapse like grand multi parity, multiple vaginal deliveries and deliveries assisted by skilled birth attendant and chronic constipation. The history was taken by the researcher from the patient and by checking previous records if available to control bias. The confounding variables like chronic cough, abdominopelvic mass and BMI ≥30kg/m^2 were excluded through detailed history and clinical examination and investigations to exclude bias in the study results. Performa questionnaire form was used to collect data from the enrolled patients.

All the data obtained was entered in software SPSS version 10 and evaluated by its statistical package. Quantitative data for example age was presented in mean and standard deviation while qualitative or categorical data (grand multi parity, multiple vaginal deliveries, chronic constipation and presence of unskilled attendant at the time of delivery etc.) were evaluated in the form of frequencies and percentages. Risk factors were stratified among the age to see the effect modifiers. Results were interpreted in the form of tables, graphs and pie charts.

Table 1 - Common risk factors of uterovaginal prolapse (n=211)

Common Risk Factors of Uterovaginal Prolapse	Frequency	Percentage
Grand multi Parous	70	33%
Multiple Vaginal Deliveries	84	40%
Deliveries assisted by unskilled birth attendant	101	48%
Chronic Constipation	15	7%

Table 1 - Relation of common risk factors of uterovaginal prolapse with age distribution (n=211)

Common Risk Factors of Uterovaginal Prolapsed	30-40 years	41-50 years	51-60 years	Total
Grand multi Parous	3	22	45	70
Multiple Vaginal Deliveries	2	33	49	84
Deliveries assisted by unskilled birth attendant	4	37	60	101
Chronic Constipation	1	6	8	15

RESULTS

This study was done in Obstetrics and Gynecology Department of Khyber Teaching Hospital, Peshawar in which a total of 211 patients were evaluated for uterovaginal prolapse and the following results were obtained on analyzing the obtained data.

On analysis of the age distribution among these 211 patients, it was determined that most of the patients n=122 (58%) were in age group of 51-60 years followed by n=74 (35%) patients who had an age of 41-50 years and n=15 (7%) patients were aged 30-40 years. Mean age was found to be 52 years taking the standard deviation of ± 1.26. (Table No. 1)

Common risk factors of uterovaginal prolapse among 211 patients were analyzed. Incidence of uterovaginal prolapse was mostly found n=101 (48%) in those patients who had deliveries assisted by unskilled birth attendant followed by n=84 (40%) patients who had multiple vaginal deliveries, n=70 (33%) patients who were grand multiparous and n=15 (7%) patients who had chronic constipation (Table No. 2)

Association of common risk factors of uterovaginal prolapse with age distribution was analyzed as in 101 patients who had deliveries assisted by unskilled birth attendant and 60 patients were between 51-60 years of age. There were 37 women who were in age group of 41-50 years and 4 of the total patients were of about 30-40 years of age. In 84 patients who had multiple vaginal deliveries, 49 were in age range of 51-60 years, 33 were in 41-50 years' age group and 2 of the total patients were between 30 to 40 years. Out of 70 grand multi parous women, 45 patients were included in age range group of 51-60 years, 22 were between 41-50 years of age and 3 patients were in 30-40 years' age group. In 15 patients who had chronic constipation, 8 were 51-60 years of age, 6 women were aged 41-50 years and there was only one patient who was between 30-40 years (Table No. 3)

Mean age came out to be 52 years considering the standard deviation of ± 1.26.

DISCUSSION

In our study most of the patients i.e. 58% were in age group of 51-60 years, 35% who had 41-50 years' age range and 7% were in 30-40 years' age. Similar results were cited in a study performed by Swift SE et al[13] in which 60% patients belonged to 51-60 years' age group followed by 31% patients belonging to the lower age group of 41-50 years and 9% were around 30-40 years of age. In another study done by Machlennan AH et al[14], similar observations were recorded with 63% (51-60 years' age group) followed by 32% patients in age range from 41 to 50 years. The younger age group (30-40 years) included only 5% of the total patients.

In this research the frequency of uterovaginal prolapse was mostly found (48%) in those women who had deliveries assisted by unskilled birth attendants followed by 40% patients who had multiple vaginal deliveries, 33% patients who were grand multi parous and 7% patients who had chronic constipation. Comparable figures were also observed in a study conducted by Darshah A et al[15] where 33.34% incidence of uterovaginal prolapse was found in grand multiparous. 78% incidence was recorded in untrained persons, 32% patients had multiple vaginal deliveries and 5% patients were those who had chronic constipation. According to Miedel et al, in addition to the parity and age, high BMI, family history and constipation or hard stools also significantly and positively increase the presence of uterovaginal prolapse.[16] This was further reinforced by a study performed in 2011 by Walker et al, that risk factors for pelvic organ prolapse in developing countries are similar to those in more affluent countries particularly increased age and parity and that the social consequences of this condition can be devastating for women.[17]

In our study, association of common risk factors of uterovaginal prolapse with age distribution were analyzed as in 101 patients who had deliveries assisted by unskilled birth attendant. A large number of cases (60) belonged to the 51-60 years' group, with 37 women fitting in age range of 41-50 years and only 4 patients were about 30-40 years of age. In total of 84 patients who had multiple vaginal deliveries, 51-60 years' age group included the largest number of patients i.e. 49, followed by 33 women in age range 41-50 years and only 2 were 30-40 years old. In 70 patients who were grand multi parous, the same trend follows that the number of cases shows an increasing trend from 30-40 years' age group reaching to the maximum at 51-60 years' age range. In 15 patients who had chronic constipation, 8 women were in age group of 51-60 years, 6 were aged from 41 to 50 years and 30-40 years old group included only one of the total patients.

CONCLUSION

Our data confirmed that advanced age, low availability of skilled birth attendant, increasing number of vaginal births, increasing parity statistically increases the risk of pelvic organ prolapse. Lastly, awareness campaigns, preemptive strategies and timely treatment plans of genital prolapse should be instigated to reduce this crucial public health problem.

There should be certain programs to increase awareness that uterovaginal prolapse is a preventable and treatable condition. Women of our society should be educated that timely precautions, apt management during pregnancy, giving birth in the presence of an experienced birth attendant, appropriate post-delivery care, enough birth spacing with proper family planning and avoiding chronic constipation play a major role in preventing UV prolapse. It can be achieved by guaranteeing that women of our society are educated about preventive exercises and treatment strategies for UV prolapse at an early stage. Another key factor to prevent UV prolapse is to ensure easy access of the women to medical assistance. Quality health service should be provided to each and every woman according to international standards. Campaigns raising awareness should be conducted even at village level and also to make prevention exercises and early stage UV prolapse treatment as part of essential health service package with in health sector reform packages. Steps must be taken to reinforce provision of antenatal care services, skilled birth attendants and postnatal care services for each and every delivery. Trained birth attendants should be trained on safe delivery practice.

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