ORIGINAL ARTICLE

Morbidity of Uterine Prolapsed among the Women in the Chakrata Block of Dehradun District

Rajeev Prasad Bijalwan[1], Maithili Bhagavatula[2], Virender Dutt Semwal[3], Poonam Rawat[4], Vivek Anand[5]

[1]Dy. Manager, [2]Director, [3]Senior Medical officer, [4]Medical officer, [5]Assistant Project Manager; Rural Development Institute, Himalayan Institute Hospital Trust, P.O. Doiwala, Jolly grant, Dehradun, Uttarakhand

| Abstract | Introduction | Methodology | Results | Conclusion | References | Citation | Tables / Figures |

Corresponding Author

Address for Correspondence: Dr Rajeev Prasad Bijalwan, Dy. Manager, Rural Development Institute, Himalayan Institute Hospital Trust, P.O. Doiwala, Jolly grant, Dehradun, Uttarakhand
E Mail ID: rdi@hihtindia.org

Citation

Article Cycle

Abstract

Background: Pelvic organ prolapse (POP) is a common health problem affecting nearby 40% of multi Para women above 35 years of age. The life-time risk for women to undergo surgery for the management of POP is about 11%. 30% of these (11%) women will need additional surgery due to prolapse recurrence. The risk of POP increases with the number of vaginal births and is higher in older and obese women. POP has significant negative effects on a woman's quality of life, ranging from physical discomfort, psychological and sexual complaints to occupational and social restrictions. **Methods:** This is a community based cross sectional descriptive study carried out for the 141 women, who experienced at least one time pregnancy. The study was conducted in two phases, in the first phase; a structured questionnaire was prepared and screening of cases done by the Accredited Social Health Activist (ASHA) at household level. In the second phase, outreach examination camps was conducted for the screened cases by a Gynecologist. The degree of severity of cases was decided using a Standard Score System. **Results:** The finding of the study revealed that the mean age of the respondents was 36.3 years. Majority of the respondents (41.5%) were of age >36 years and only 1% were of the below 20 years. The majority of the respondents were from SC/ST community with 43% schedule caste and 38.7% schedule tribe. A good percentage of respondents were literate (58.8%), with 17% respondent having education level of primary and junior and 1.9% having above high school level. 37.7% of respondents were occupied with agriculture activities and 46.7 were housewife. The major source of income for more than half of the respondents was agriculture (56.6%). Two third of the respondents were living in joint families households (74.2 %). **Conclusions**: The study revealed that the higher burden of uterus prolapse is found in those with poor economic background, those aged above 30 years and with more than two deliveries conducted at home. Median time for prolapse suffering was two years. The age of respondents, occupation, age at first birth, place of delivery, work load during the peurperium period, time to resume work after delivery, number of delivery and person providing assistant during delivery are the key associated factors.

Key Words

Pelvic organ prolapse; peurperium period; associated factors

Introduction

Pelvic organ prolapse (POP) is a common health problem affecting up to 40% of multi Para women over 35 years old (1). The life-time risk for women to undergo surgery for the management of POP is about 11% and 30% of these women will need additional surgery because of prolapse recurrence (2). The risk of POP increases with the number of vaginal births and is higher in older and obese

women. POP has significant negative effects on a woman's quality of life, ranging from physical discomfort, psychological and sexual complaints to occupational and social restrictions (3). POP is defined as the descent of one or more of the pelvic organs. Anterior vaginal wall prolapse concerns the bladder and/or urethra (cystocele, urethrocele). Apical prolapse entails either the uterus or post-hysterectomy vaginal cuff. Posterior vaginal wall prolapse concerns the rectum but can also include the small or large bowel (rectocele, enterocele).

Uterine prolapse (UP) is a complex condition that is often in secret because of the shame of the condition affecting a sensitive part of the women's body (4). Women who suffered uterine prolapse continue to remain silent across the life because many women fear condemnation from their communities and family members. The global prevalence of uterine prolapse is estimated between 2 to 20% among women below 45 years of age, who have experienced at least one time pregnancy during her life (4). Many studies have revealed that in India the prevalence rate is 15-20% below for the same age (5). Uterine prolapse is a reproductive health condition distinguished by the protruding of the womb out of the genitals and this is quiet prevalent across the country.

In the US alone, pelvic organ prolapse is over 250 000 surgical procedures per year, with about 30% being re-operated (4). In 1997, a study performed in the Pacific Northwest, the lifetime risk of undergoing a single operation for prolapse or incontinence by age 80 was found to be 11.1% (6) Female pelvic organ prolapse may give rise to symptoms of vaginal fullness and dragging, with the patient eventually noticing a protrusion from the vagina. Certain forms of prolapse are associated with bladder and bowel dysfunction (6, 7) although the exact nature and magnitude of such associations are not well defined at present. As prolapse is a relative indication for surgery, options of pelvic reconstructive surgery have to be discussed with patients.

The World Health Organization estimates that approximately 33 % of the total global burden of disease is related to reproductive health (4). The global prevalence of genital prolapse is 2 to 20 % under 45 years of age (8). In India, more than 1 million of women suffer from genital prolapse and majority of them falls under the reproductive age group (9). It is estimated that about half of the women loss their pelvic floor support and result in

some degree of prolapse and among them only 10-20 % seek medical treatment for the problem (10). In the United Kingdom genital prolapsed accounts for 20% among women on the waiting list for major gynaecological surgery (11). A cohort study with more than 17000 women aged 25-39 years, carried out in England and Scotland showed that the incidence of prolapse (with at least one hospital admission with the prolapse problem) is 2.04 per 1000 person years observation and the annual incidence of surgery for prolapse is 16.2 per 10,000. Hysterectomy is the second most common surgical procedure performed in United States and prolapse is the indication for 13 % of the total surgery (12). A study carried out by women health initiative in United States among 27342 participants, 40% had some degree of prolapse and 14 % were diagnosed with uterine prolapse (13). Another study in US also shows 11% life time risk of surgery for prolapse or incontinence among 149,554 women enrolled in the study (14).

Uterine prolapse is one of the most common gynecological problem in India. Number of national and international studies has shown that uterine prolapses are a second major morbidity problem among the women during their reproductive period. Uterine prolapsed is a preventable and curable disease and it reported second priority in surgery, the operation followed by hysterectomy. Thus it is important and necessary for researchers to study it and provide appropriate and adequate statistics and status of this disease to policy makers and planners for providing effective solution.

Aims & Objectives

1. To understand the causes and associated factors of uterus prolapse.
2. To analyze the relationship of uterine prolapse cases with parity, age, education and birth outcomes.
3. To identify the stages of severity of uterine prolapse

Material and Methods

This is the community based cross sectional descriptive study among 141 women, who have experienced at least one time pregnancy during her life time. The study was conducted in Chakrata block in Dehradun District in Uttarakhand in two phases. In the first phase, a structured questionnaire was prepared and screening of cases was done by the Accredited Social Health Activists (ASHAs) at

household levels. The outreach examination camps were planned at different locations for verifying the screened cases by a Gynecologist in the second phase. The degree of severity of cases were decided by using standard score card.

Area of study and sampling Method: Chakrata block was selected as RDI/HIHT has been implementing SKSHAM (Community Based Rehabilitation) project in the area since 2011. (Table -1) The multi stage sampling technique was adapted in which at the first stage the ASHAs workers screened Prolapse of Uterus cases at household/community level. Screened cases was identified using structured questionnaire. The questionnaire was prepared and pretested at community level before the actual survey. All ASHAs were trained in a day long orientation besides hand on training on the administration of questionnaire at the field level. Outreach prolapse of uterus examination camps were organized in second phase at different locations across the block so that all selected screened women were verified or examined by trained gynecologist. (Table -2)

Source of Data: The quantitative data of this study was taken from women in the reproductive age in the Chakrata block of Dehradun district. For the validation of diagnosis, all screened cases was examined by the medical doctor in the outreach clinic camps.

Tools and Instrument of the Data: The clinic examination tool base on Standard Score System was the main tools for the data collection. The clinical examination was done by qualified, trained and experiences female medical doctor. (Table -3).

Data Collection Procedure: In the outreach camps medical doctor examined all the screened cases according to the standard protocol. During the medical examination, the medical doctor took verbal consent from the respondents about the confidentiality and privacy of their responses and its use for academic purposes only. During the examination appropriate and adequate counseling was done on preventive measures and treatment was advised accordingly.

Data Analysis and Interpretation: SPSS window 19 was used for data entry, analysis and Interpretation. Responses from the interview schedule was done carefully to remove the possible errors and inconsistency for the raw data. The frequencies of respondents was tabled and test statistically for reliability. The data was finally interpreted according to the need of the research objectives.

Results

The finding revealed that the mean age of the respondents was 36.3 years. Majority of the respondents (41.5%) were >36 years of age and only 1% were below 20 years of age. Largest numbers of respondents were schedule caste (43%) followed by schedule tribe (38.7%). Maximum numbers of respondents were literate (58.8%). Highest number of respondent's education level was primary and junior (17%) and the least was among high school (1.9%) and above. 37.7% of respondents were engaged in agriculture and almost half (46.7) of them were housewives. The major source of income for more than half of the respondents was agriculture (56.6%) and two third of respondents were living in joint families (74.2 %). (Table-4).

The study illustrated that majority of the respondents (87.8%) was married when they were 20 years or below. The minimum age of marriage was 10 years and maximum age was 27 years however the mean age of marriage was 18.4 years. Maximum number of them were first time pregnant before the age of 20 (44.4%) however 5.7% women were pregnant first time before the age of 16 years. 54.6% of total respondents gave birth to three or more than three children. The study showed that three fourth (63.2%) of respondents were suffering from uterus prolapse for less than 5 years; however 34.9% of respondents were suffering from more than 5 years. The median duration of suffering was 2.4 years. Most of the women (88%) heard about uterus prolapse from health providers. Majority of women (67%) who experienced first time uterus prolapse had given two or more birth at home in continuation.

Majority of respondents were over 30 years of age. Feeling of something coming down was reported by more than 42% cases followed by vaginal bleeding (37%) as major symptoms. The associated factors were marriage below the age of 18 years (66%), first birth before the age 21years (78%), first birth at home (81%). Respondents who had two or more than two deliveries at home (89%) was also key other associated factors. (Table-5)

Out of 14 respondents scanned by ASHAs and examined by gynecologist, 65 (46%) cases were confirmed uterus prolapse cases. Out of 65 cases, 12% were in 1st stage, 45% were in 2nd stage, 18% were in 3rd stage and 25% respondents in 4th stage.

Discussion

Reproductive ill health holds major global encumbrance of morbidity and mortality for women. It is notable that pelvic organ prolapse contribute large amount of morbidity among women. Globally, prevalence of uterine prolapse is 15 -25 % amongst women above 20 years of age. The result in this study demonstrated that 75% women of the respondents were suffering from uterine prolapse for more than five years. 23.9% were suffering from last 10 years indicating that the incidence of cases has not been reduced yet. Contrary to this, a study conducted by Bonetti at al. (11) calculated the average time elapsed was 10 years in a campaign based study whereas Barbra & Bonder at al. (12) reported that the median time period for clinical presentation of uterine prolapse was 50 years among those who had attended for the treatment in hospital.

A study conducted by Paneru D (13), shows that, those suffering from the uterine prolapse, reported feeling of something coming down through vagina-22%, followed by 51% experiencing vaginal bleeding and protrusion from vagina. The findings showed strong association between age of the respondents age at first child birth and number of birth and number of children with uterine prolapsed. The findings coincides with the study conducted by Paneru (14) which flaunted significant level of association with the age of respondents, the age at first child birth and number of parity indicating that the above mentioned factors are the risk factors of uterine prolapse.

The result exhibited that most of the affected population were Schedule Caste (43%). The level of education, economical status and occupation of the women are significantly related with uterine prolapse. This result was similar to findings of the study conducted by Pant and Deuwa (4), where they stated that majorities of the prolapse case (45.54%) were from Dalit community. However, study illustrates that race and caste does not matter as risk factors, as even the higher caste women suffer from uterine prolapse. Although Paneru (3) also reported that the prevalence of uterine prolapse was higher among those who have low socio economic status, illiteracy and women carrying heavy loads or strenuously working. The findings of the study revealed that there is significant degree of association with the type of delivery. The study indicated that 66% delivered two or more than two deliveries at home. Maratha (15) also revealed the same findings, that most (70%) of the genital prolapse cases developed due to the deliveries conducted at home without help of skill birth attendants.

Resuming hard work within 42 days of the delivery and past multiple history of home delivery was strongly associated with the onset of uterine prolapse. Pant (14) observed that those who were diagnosed having utero vaginal prolapse resumed to work soon following delivery. Similarly Barbara Bonder (12) reported that most of the uterine patients had delivered two or more than two birth at home.

Majorities of the respondents (87%) visited public health facilities for the health services during reproductive illness. About 50% of those who are suffering from uterine prolapse received treatment for uterus prolapsed from hospital by applying ring pessary (72.2%). Kumari *et al* (16) found that 57% patients having uterine prolapse had not taken any services. About 44% women who were treated by any kind of services reported that they had significant improvement due to treatment.

Almost all respondents replied that uterine prolapse can be prevented by avoiding lifting or carrying heavy loads. The findings of the study are supported by Paneru *et al* (13) study resulting that almost all respondents replied that uterine prolapsed can be prevented by avoiding lifting or carrying heavy loads followed by intake of nutritious diet.

Out of 141 cases, more than 50% cases belongs to 1st and 2nd stages which are easily preventative stages, however, 43% cases required immediate surgical interventions. Paneru *et al* (13) also found the same finding in their study and she claimed that 3rd and 4th stage of Uterus prolapse morbidity affects economic and social cultural activities of women on regular basis

Conclusion

The study depicted that the higher burden of uterus prolapse found in those with low economic background, above 30 years of age and those who had more continuous two or more deliveries at home. Median time of suffering was two years. The age of respondents, occupation, age of first birth, place of delivery, work load during the peurperium period, time to resume work after delivery, number of delivery and person providing assistant during

delivery are the key associated factors. The study also revealed that 31% of respondents received services from hospitals. In most cases ring pessary was applied and significant improvement in their health was reported. However 69% did not took any treatments due to low socioeconomic status

Recommendation

1. Prolapse of Uterus needs to be focused in women's health issues as well as community health education programs.
2. Frontline staffs such as ANM (Auxiliary Nurse Midwives) and ASHA (Accredited Social Health Activist) should be trained on identification of uterus prolapse in early stages.
3. Public Health System should provide financial support for surgical procedure, especially to women from poor socio-economic background.

Authors Contribution

RP: conception and design, acquisition of data, or analysis and interpretation of data, MB: conception and design, VD: acquisition of data, analysis and interpretation of data, PR: analysis and interpretation of data, VA: Data entry.

Acknowledgement

References

1. Slieker-ten Hove MC, Pool-Goudzwaard AL, Eijkemans MJ, Steegers-Theunissen RP, Burger CW, Vierhout ME. The prevalence of pelvic organ prolapse symptoms and signs and their relation with bladder and bowel disorders in a general female population. Int Urogynecol J Pelvic Floor Dysfunct. 2009 Sep;20(9):1037-45. doi: 10.1007/s00192-009-0902-1. Epub 2009 May 15. PubMed PMID: 19444368; PubMed Central PMCID: PMC2721135. [PubMed].
2. Olsen AL, Smith VJ, Bergstrom JO, Colling JC, Clark AL. Epidemiology of surgically managed pelvic organ prolapse and urinary incontinence. Obstet Gynecol. 1997 Apr;89(4):501-6. PubMed PMID: 9083302. [PubMed]
3. Blandon RE, Bharucha AE, Melton LJ 3rd, Schleck CD, Babalola EO, Zinsmeister AR, Gebhart JB. Incidence of pelvic floor repair after hysterectomy: A population-based cohort study. Am J Obstet Gynecol. 2007 Dec;197(6):664.e1-7. PubMed PMID: 18060973; PubMed Central PMCID: PMC2562278. [PubMed]
4. DeLancey JO. The hidden epidemic of pelvic floor dysfunction: achievable goals for improved prevention and treatment. Am J Obstet Gynecol. 2005 May;192(5):1488-95. Review. PubMed PMID: 15902147. [PubMed].
5. Marchionni M, Bracco GL, Checcucci V, Carabaneanu A, Coccia EM, Mecacci F, Scarselli G. True incidence of vaginal vault prolapse. Thirteen years of experience. J Reprod Med. 1999 Aug;44(8):679-84. PubMed PMID: 10483537. [PubMed].
6. Mant J, Painter R, Vessey M: Epidemiology of genital prolapse: observations from the Oxford Family Planning Association Study. Br J Obstet Gynaecol 1997, 104:579-85.
7. Altman D, Granath F, Cnattingius S, Falconer C. Hysterectomy and risk of stress-urinary-incontinence surgery: nationwide cohort study. Lancet. 2007 Oct 27;370(9597):1494-9. PubMed PMID: 17964350. [PubMed].
8. Bodner-Adler B, Shrivastava C, Bodner K. Risk factors for uterine prolapse in Nepal. Int Urogynecol J Pelvic Floor Dysfunct. 2007 Nov;18(11):1343-6. Epub 2007 Mar 1. PubMed PMID: 17333434. [PubMed]
9. Pant PR. Utero vaginal prolapse in far western region of Nepal. Department of obstetrics and Gynecology, Institute of Medicine 2009; 31(2):19-21
10. Kandela P. Lebanese medicine--still struggling against the odds. Lancet. 2000 Mar 11;355(9207):907. PubMed PMID: 10752715. [PubMed].
11. Hawkes S, Morison L, Foster S, Gausia K, Chakraborty J, Peeling RW, *et al*. Reproductive-tract infections in women in low-income, low prevalence situations: assessment of syndromic management in Matlab, Bangladesh. Lancet 1999; 354:1776-81. [PubMed].
12. Bulut A, Filippi V, Marshall T, Nalbant H, Yolsal N, Graham W. Contraceptive choice and reproductive morbidity in Istanbul. Stud Fam Plann. 1997 Mar;28(1):35-43. PubMed PMID: 9097384. [PubMed].
13. Wasserheit JN. The significance and scope of reproductive tract infections among Third World women. Suppl Int J Gynecol Obstet. 1989;3:145-68. Review. PubMed PMID: 2686703. [PubMed].
14. Bang RA, Bang AT, Baitule M, Choudhary Y, Sarmukaddam S, Tale O. High prevalence of gynaecological diseases in rural Indian women. Lancet. 1989 Jan 14;1(8629):85-8. PubMed PMID: 2562890. [PubMed].

Tables

TABLE 1 DEMOGRAPHIC DESCRIPTION OF STUDY AREA

Block	Total number of village	Total population	Number of ASHAs	Number of AWCs	Number of eligible couples	% institutional delivery	Fertility rate
Chakrata	194	60346	113	127	12756	36%	3.9

TABLE 2 PROCESSES OF SAMPLING

Stage	Description
1st	Chakrata block were selected purposely
2nd	ASHAs screened all women who have at least experience with one pregnancy in their life time through a structural questionnaire
3rd	Clinical examination of all 137 screened cases by ASHAs at community level

TABLE 3 EXAMINATION TOOL FOR ASSESSMENT THE STAGES OF PROLAPSE OF UTERUS (SCORE CARD)

S No	Characteristics	Options			
		1	2	3	4
1	Conditional	Cough	Constipation	Pelvic tumor	Sever ascites
2	Last delivery after symptom appear	Home delivery/ Intramuscular injection during delivery	Hospital / doctor use ventose	Interval between pervious pregnancy less than 1.5 years	Immediate hard work after delivery/ lifting heavy weight
3	Position	Cervix drop into vagina	Cervix drops just inside the opening of the vagina	Cervix is outside the vagina	Entire uterus is outside the uterus
4	Symptoms I	Feeling fullness in pelvic areas	Low backache	Painful intercourse	Difficulty in urination / difficulty in walking
5	Symptom II	Recurrent urine, bladder infection	Vaginal bleeding/ increasing discharge	Foul smelling / discharge of pus	Uncontrolled urination/ irritation in urinary tract

TABLE 4 % OF DISTRIBUTION OF RESPONDENTS BY AGE AT THE TIME MARRIAGE, FIRST PREGNANCY AND ONSET OF DISEASE AS WELL RELATIONSHIP WITH PARITY AND DURATION OF ILLNESS

Age group	% of respondents	Mean (Years)	Maximum (Years)	Maximum (Years)
Age at the time of marriage				
<16	20.8			
17-20	67.0	18.4	10	28
21-25	8.5			
>26	3.8			
Age at the time of first pregnancy				
<16	5.7			
17-20	37.7	19.2	14	25
21-25	27.4			
>26	1.9			
Onset of Uterus prolapses				
<16	0			
17-20	1			
21-25	14.3	36.3 years	20 years	55 years
26-30	26.4			
31-35	15.1			
>36	41.5			
Relationship with onset of problem and parity				
1	22.6			
2	17.0	2.7	1	8.4
3	24.5			
> 4	30.2			
Duration of problem				
< 1 year	17.9			
2-5 years	45.3	2.4	1	26
6-10 years	10.4			
> 10 years	24.5			

TABLE 5 KEY SYMPTOMS OF THE SELECTED RESPONDENTS (%)

	Vaginal symptoms	
	Sensation of a bulge or protrusion	22
II	cervix drop into vagina	41
III	cervix drops just inside the opening of the vagina	31
IV	cervix is outside the vagina	37
V	Vaginal bleeding	51
VI	Foul smelling	37
Urinary Symptom		
I	Incontinence, frequency	27
II	Weak or prolonged urinary stream	41
III	Uncontrolled urination	68
Bowel symptoms		
I	Constipation	27
II	Incontinence of flatus	67
III	Pain in lower abdomen	61
Sexual symptoms		
I	Dysperinuea (painful intercourse)	21
II	Lack of sensation	33

TABLE 6 DESCRIPTION OF DEGREE OF UTERUS PROLAPSE CASES

S No	Particular	Number	%
1	Total screened cases by ASHAs	141	
2	Total cases examine by Gynecologist	140	
3	Positive uterus prolapse	65	46
3.1	Cervix drop into vagina (1st stage)	8	12
3.2	Cervix drops just inside the opening of vagina (2nd stage)	29	45
3.3	Cervix is outside the vagina (3rd stage)	12	18
3.4	Entire uterus is outside the vagina (4th stage)	16	25