

Pelvic Organ Prolapse - Four Years Review from IGIMS, Patna

Urvashi Mishra¹, Poonam², Umakant Prasad³

ABSTRACT

Introduction: Pelvic organ prolapse is a common problem among women in developing countries. It is the herniation of uterus into or beyond the vagina often accompanied by prolapse of vaginal walls involving the bladder or rectum or both. This study was done to determine its prevalence and identify the risk factors so that advice could be given to prevent its occurrence and also to find out the current management practices in uterine prolapse.

Material and methods: During the study period (2014-2018) a total of 224 cases of prolapse reported in Gynaecology OPD. Prevalence was calculated to be 1.05% of the total OPD registrations of our department.

Results: The mean age of patients in this study was 49.5 years. The most common presenting complaint was something coming out per vaginum (73.1%). Majority had parity between 2 to 6. 84.5% had vaginal home delivery and 15.4% had hospital vaginal delivery. Most patients presented with third degree uterovaginal prolapse (58.7%). Vault prolapse constituted 11.3%. Associated cystocele was present in 35.7%, and rectocele in 14.2% of cases. The most common predisposing factor identified was unsupervised home delivery. Pessary application (n=25) and Kiegel's exercise advice (n=102) were done on OPD basis.

Conclusion: Improvement in general health, proper contraception and institutional delivery is required to prevent prolapse. Treatment should be tailored according to age and requirement.

Keywords: Pelvic Organ Prolapse

INTRODUCTION

Pelvic organ prolapse is a common problem among women in developing countries. It is the herniation of uterus into or beyond the vagina as a result of failure of the ligamentous and fascial supports. It often coexists with prolapse of the vaginal walls, involving the bladder or rectum or both. It causes physical and psychosocial problems affecting the quality of life of patients. It is no more limited to old age and affects many young women also. Known risk factors contributing to prolapse are childbirth, collagen abnormalities, increasing age and a chronic increase in intra-abdominal pressure.¹ Pelvic organ prolapse (POP) when defined by symptoms has a prevalence of 3-6% and up to 50% when based upon vaginal examination.² The global prevalence of uterine prolapse is 2%-20%. This study was done to determine the prevalence of prolapse and to identify the risk factors so that advice could be given to prevent its occurrence and also to find out the current management practices.

MATERIAL AND METHODS

This was a retrospective descriptive review of four years of all

cases of pelvic organ prolapse managed at our hospital from (2014-18). Data were retrieved from hospital registration statistics, gynaecology admission register, case files and operation theatre records of women under study. The data thus extracted from the case files, which are preserved in the hospital, were entered into Microsoft excel spread sheets and analysed with the help of calculator.

Only symptomatic cases, where indoor admission with surgical treatment was provided, were included in the study. Non surgical management (Kiegel's exercise and Pessary insertion) was done on OPD basis.

After a thorough history taking, women were physically examined and severity of the prolapse was graded as per Shaw's Classification. All available treatment options according to age, parity and sexual activity of the patient were discussed. Surgical treatment choices included vaginal hysterectomy with pelvic floor repair, and uterus sparing surgeries like Fothergill's operation, and Sling surgery. Postoperative complications if any were noted.

RESULTS

During the study period (2014-2018) a total of 224 cases of prolapse reported in Gynaecology OPD. The prevalence was estimated to be 1.05% of the total registrations in Gynaecology OPD (224/21,278). Total number of cases operated in routine OT was 691. Out of this 97 cases were operated for prolapse which accounted for 14.03% (97/691) of total operated cases and 4.36% (97/2221) of indoor admissions in the department. Pessary was inserted in 25 cases and Kiegel's exercise was advised in 102 cases on OPD basis. The mean age at the time of presentation was 49.5 years.

Only 2 patients were there in 70-79 years age group. Younger population i.e, less than 40 accounted for 12.3% of the studied population.

Table-2 shows occupation and mode of delivery. Majority were home maker (49.4%) and all delivered vaginally. Only ten (housewives and all five teachers) had institutional

¹Senior Resident, Department of Obstetrics and Gynaecology,

²Additional Professor, Department of Obstetrics and Gynaecology,

³Associate Professor, Department of Radiodiagnosis, Indira Gandhi Institute of Medical Sciences, Patna, India

Corresponding author: Dr Poonam, Additional Professor, Department of Obstetrics and Gynaecology, Indira Gandhi Institute of Medical Sciences, Patna, India

How to cite this article: Urvashi Mishra, Poonam, Umakant Prasad. Pelvic organ prolapse - four years review from IGIMS, Patna. International Journal of Contemporary Medical Research 2019;6(10):J1-J4.

DOI: <http://dx.doi.org/10.21276/ijcmr.2019.6.10.21>

vaginal delivery. All the rest(n=82) had vaginal home deliveries.

Age range	Number	Percentage
20-29	5	5.1%
30-39	7	7.2%
40-49	32	32.9%
50-59	32	32.9%
60-69	19	19.5%
70-79	2	2.06%
Total	97	

Table-1: Showing number of patients of different age groups in operated cases.

Occupation	Delivery	N	Percent
Home maker	Vaginal	48	49.4%
Field Labourer	Vaginal	22	22.6
House maid	Vaginal	13	13.4
Vegetable seller	Vaginal	9	9.2%
Teacher	Vaginal	5	5.1

Table-2: Showing occupation and mode of delivery

Symptoms	Number	Percentage
Protrusion of mass per vaginum	71	73.1%
Fullness of Vagina	25	25.7%
Urinary Symptoms	51	52.5%
Vaginal Discharge	55	56.7%
Impaired Sexual Function	3	3.09%
Constipation	27	27.8%
Backache	42	43.2%

Table-3: Shows different types of clinical presentation of prolapse

Table-3 shows the different types of clinical presentation with which the patients came. Amongst these, something coming out per vaginum was the most common presentation (73.1%) followed by vaginal discharge in 56.7% cases and urinary symptoms in 52.5% cases. Backache was seen in 43.2% and constipation in 27.8% cases. Comparatively less number of patients presented with fullness of vagina Only 3 patients complained of impaired sexual function. Many patients had more than one symptom.

Table-4 shows collectively the age range, parity, degree of prolapse and type of surgery done. In the 25-35 years age range, with parity between 1-2, four Fothergills and eight abdominal sling operations (Modified Purandares) were done. Of these two patients had second degree uterine descent and ten patients had third degree descent. Four patients with parity three in 40-46 years age group had first degree uterine descent with cystocele. Total abdominal hysterectomy with abdominal repair of cystocele was done in all four cases. Seventy vaginal hysterectomies with pelvic floor repair was done in P₂₋₆ for 15 cases of second degree utero vaginal prolapse, 47 cases of third degree UV prolapse and 8 cases of procidentia. All were between 42-72 years age group. Sacrospinous fixation of vault was done in 7 cases in 49-59 years age group with parity between 2-6. Only one abdominal sacrocolpopexy was done for vault prolapse. Patient was a para 4, aged 53 years. In the remaining three cases of vault prolapsed high uterosacral ligament suspension with fascial reconstruction was done. All 3 were between 43-45 years age group with parity between 3-4. Associated cystocele was present in 35.7% and rectocele in 14.2% cases.

Table -5, deals with the associated risk factors. All 97 cases operated for prolapse had vaginal deliveries. Eighty two

	Fothergills	Sling	Abd. Hyst. + abd cystocele repair	VH+PFR	Sacrospinous fixation of vault	Abd-Sacral colpopexy	High USL suspension + Fascial Reconstruction	Total
Age Range	25-32	20-35	40-46	42-72	49-59	53	42-45	
No. of Pts.	4	8	4	70	7	1	3	97
1 st Degree			4					4
2 nd Degree		2		15				17
3 rd Degree	4	6		47				57
Procidentia				8				8
Vault Prolapse					7	1	3	11
Parity	P ₁₋₂	P ₀₋₂	P ₃	P ₂₋₆	P ₂₋₆	P ₄	P ₃₋₄	

Associated cystocele in 35.7%; Associated rectocele in 14.2%

Table-4: Showing Age Range, Parity, Degree of Prolapse and Type of Surgery done

Risk factors	Number	Percentage
Vaginal delivery	97	100%
Multiparity	89	91.7%
Old age	49	50.5%
Anaemia	52	53.6%
Constipation	27	27.8%
Chronic cough	15	15.4%

Table-5: Showing associated risk factors

Complications	Number	Percentage
Post op anaemia or worsening of pre- existing anaemia	25	25.7%
Fever	17	16.4%
Cuff cellulitis	5	5.1%
Pelvic abscess	2	2.06%
Bladder injury (Intra-op)	3	3.09%
Urinary tract infections	21	21.6%

Table-6: Showing Complications after surgery

had vaginal home delivery and fifteen had vaginal hospital delivery. 91.7% cases were multiparous. 53.6% cases were associated with anaemia. Old age (>50 years) as risk factor accounted for (n=49) 50.5% cases followed by constipation in 27.8% and chronic cough in 15.4% cases.

Table -6, shows the complications encountered during and after surgery. Haemorrhage was the most common (20%) intraoperative complication. Bladder was injured in 3 cases. Anaemia or worsening of pre-existing anaemia was the most common complication observed in the post operative period (n=25 i.e, 25.7%). This was followed by urinary symptoms (n=21 i.e,21.6%) due to urinary tract infections.

Febrile morbidity accounted for 16.4% cases (n=17). Five patients (5.1%) had proven cuff cellulitis. Two patients (2.06%) had ultrasound diagnosis of pelvic abscess.

DISCUSSION

Pelvic organ prolapse is a common condition in parous women. Although, it rarely puts life at risk but definitely lowers the quality of life. The mean age at the time of presentation was 49.5 years. Its reported prevalence varies in different parts of the world. The overall prevalence of genital organ prolapse was 1.05% in this study. Pelvic organ prolapse (POP) when defined by symptoms has a prevalence of 3-6% and up to 50% when based upon vaginal examination² It is less than 3% in this study probably, because women in developing countries like ours are socialised to endure pain and discomfort, particularly if these result from conditions related to their reproductive function.

However, similar prevalence rate (1.4%) has been reported by Ahmed Yakubu et al.¹² Its prevalence differs in different age groups. Highest was found in women more than 40 years of age (n=85) 87.5% and (n=12) 12.3% in those below 40 years. The prevalence of symptomatic POP increased with age.³ According to the pelvic organ support study, age is a risk factor for pelvic organ prolapse—risk doubled with each decade of life.⁴ But, WHI trial contradicts the theory of estrogen lack (menopause) in the causation of prolapse.⁵ They found no association between oestrogen status and prolapse. Heritable or genetic factors might play a part.⁶

The aetiology of pelvic organ prolapse is multifactorial. Increasing parity was also associated with increasing severity of prolapse.⁷ In this study 91.7% cases were multiparous.

In the 25-35 years age range, with parity between 1-2, two patients had second degree and ten patients had third degree uterine prolapse. Amongst seventy patients with parity between 2-6, fifteen had second degree uterine descent, forty seven had third degree descent and eight had procidentia. All had history of vaginal delivery. Only 15 were hospital vaginal delivery rest being vaginal home delivery.

Although vaginal delivery is clearly associated with prolapse, specific obstetric risk factors remain controversial. Macrosomia, prolonged second stage of labour, episiotomy, anal sphincter injury, epidural analgesia, and the use of forceps and oxytocin have all been proposed as risk factors but have not been proved.⁸

Majority of women were home makers (49.4%) followed by field labourers (22.6%). They all came from rural background, where deliveries were conducted at home, unsupervised. Moreover, majority resumed to work soon after delivery. Probably lack of adequate period of rest in the postpartum period precipitated the problem. Only ten housewives and five teachers had hospital delivery. So occupation does matter.

Under-nutrition as cause of poor tissue tensile strength may be a possible co-factor in the pathogenesis of pelvic organ prolapse.⁹ We found anaemia in 52 cases (53.6% cases). Blood transfusions had to be given before taking up for surgery. This correlates well with the findings of Carolene Scherf et al¹⁰ who also found moderate to severe anaemia in 52% of her subjects under study, as a significant risk factor for the development of prolapse.

Conditions that cause excessive pressure on the pelvic floor like obesity, persistent coughing, heavy weight lifting and chronic constipation contribute to the development of prolapse. In this study 27.8% (n=27) patients suffered from chronic constipation and 15.4% (n=15) had chronic cough. Similar findings have been reported by Thapa et al¹³ (16% had chronic cough and 21% had chronic constipation). Nine patients with chronic constipation suffered from hypothyroidism. They were on inadequate dose of thyroxine at the time of first visit. Almost all had inadequate dietary fibre intake and were nutritionally deficient. Financial constraint and unawareness could be the underlying cause.

Amongst patients with chronic cough two had history of bone tuberculosis, and one each of pulmonary and genitourinary tuberculosis in past. This again reflects their nutritional status. Nine patients were asthmatic. Now a days pollution and loads of allergens are present in the environment which might be the cause of chronic cough in the remaining patients. Collectively, if constipation, chronic cough and anaemia are taken together into consideration as precipitating factors for prolapse, then certainly lifestyle needs to be modified. This can be achieved by quitting smoking, weight reduction, regular exercise and taking balanced diet.

Many symptoms have been attributed to prolapse, although none of them are specific, except for seeing or feeling a vaginal bulge.

Something coming out per vaginum was the most common symptom of presentation (73.1%) followed by vaginal discharge (56.7%) and urinary symptoms (52.5%). Slightly more than half of patients having vaginal discharge could be due to decubitus ulcer seen in 58.7% of cases.

Conservative management in the form of pessary was given to 25 patients and Kiegel's exercise in 102 patients. Ninety seven patients underwent surgical treatment for prolapse. Uterine conservative surgery in form of either Forthergill (4.1%) or abdominal sling (8.1%) was done in all cases under 40 years age. Two patients conceived after sling (Modified purandare's) operation. All were between 25-35 years age group.

Vaginal hysterectomy and pelvic floor repair were the main definitive treatment offered to the older patients (> 40 years)

with uterovaginal prolapse. This was done in 71% of cases. Mean age of our study population was 49.5 years. All cases of vault prolapse were referred from remote peripheral areas. They were 11 in number out of the total 97 cases operated for prolapse. Such high prevalence of vault prolapse in our study is not surprising as our hospital is a tertiary care teaching hospital where rejected cases from all corners of the state are accepted.

However, this is consistent with the findings of Marchionni M et al¹¹ which states that the incidence of vaginal vault prolapse was 11.6% when hysterectomy had been performed for genital prolapse and 1.8% when hysterectomy had been performed for other benign diseases.

Sacrospinous fixation of vault was the most common operation performed in these cases (n=7). In the post operative period significant low backpain was the main complain in almost fifty percent of all sacrospinous fixation cases. No significant post op complain was there in abdominal sacrocolpopexy and high uterosacral ligament suspension.

So the greatest challenge in surgery for uterine prolapse is to prevent subsequent prolapse of either the vault or anterior or posterior walls of the vagina. Hysterectomy alone fails to correct the loss of integrity of the cardinal-uterosacral ligament complex and weakening of the pelvic diaphragm.⁸ Haemorrhage was the most common (20%) intraoperative complication followed by bladder injury in 3 cases. Newly diagnosed anaemia or worsening of pre-existing anaemia was the most common complication observed in the post operative period (n=25 i.e., 25.7%). Low pre-operative haemoglobin (52%), which is an important risk factor, as seen in this study could be responsible for post operative anemia also, apart from the loss due to intra operative bleed. Caroline Scherf et al¹⁰ found similar (52.%) incidence of preoperative anaemia (risk factor) in her study. It should be optimized prior to hysterectomy to avoid worsening of anaemia and its related complications such as wound infection, delayed wound healing and febrile morbidity.

This was followed by urinary symptoms (n=21 i.e., 21.6%) due to urinary tract infections. Seven of these patients had history of recurrent UTI in the past. Three had diabetes. Most of UTI and anaemia were seen in vaginal hysterectomies. Pain was the main post operative complaint in sacrospinous fixation of the vault.

There was no significant post operative complain in those who underwent sling (modified purandare's) operation. It may be because average operative time was less (20-25 min) with almost 'dry' procedure and minimum handling of tissues.

In five vaginal hysterectomy cases cuff cellulitis developed. Two out of these five, complained of increasing pain around 6th to 7th post operative day and the remaining three came in late second week, after discharge with complaints of pain and fever. They required readmission. USG abdomen revealed pelvic abscess in two cases. Anaemia in all five with diabetes in two cases could be the reason in these patients.

Febrile morbidity was there in 16.5% of cases. It was seen more where operating time and intraop bleed was more.

Moreover, anaemia could be the indirect cause in such cases.

CONCLUSION

Intense contraceptive counselling along with special emphasis on institutional delivery should be done. Improvement in nutritional status and general health will reduce prolapse burden by correcting anaemia and its related complications. As prolapse of pelvic organs occurs in all age groups, and is no more limited to old age, its management should be tailored accordingly. This will avoid unnecessary hysterectomies.

REFERENCES

1. Swift S, Woodman P, O'Boyle A et al. Pelvic Organ Support Study (POSST): the distribution, clinical definition and epidemiologic condition of pelvic organ support defects. *Am J Obstet Gynecol* 2005;192:795-806
2. Barber MD, Maher C Epidemiology and outcome assessment of pelvic organ prolapse. *Int Urogynecol J*. 2013;24:1783-90
3. Tegerstedt G, Maehle-Schmidt M, Nyrén O, Hammarström M. Prevalence of symptomatic pelvic organ prolapse in a Swedish population. *Int. Urogynecol. J. Pelvic Floor Dysfunct.* 2005;16:497-503.
4. Swift SE, Woodman P, O'Boyle A, Kahn M, Valley M, Bland D, et al. Pelvic organ support study (POSST): the distribution, clinical definition and epidemiology of pelvic organ support defects. *Am J Obstet Gynecol* 2005;192:795-806.
5. Nygaard I, Bradley C, Brandt D. Pelvic organ prolapse in older women: prevalence and risk factors. *Obstet Gynecol* 2004;104:489-97.
6. Chiaffarino F, Chatenoud L, Dindelli M, Meschia M, Buonoguidi A, Amicarelli F, et al. Reproductive factors, family history, occupation and risk of urogenital prolapse. *Eur J Obstet Gynecol Reprod Biol* 1999;82:63-7.
7. 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.
8. Anjum Doshani et al. Uterine Prolapse. *Br Med J*. 2007; 335: 20
9. Lukman Y. Utero-vaginal prolapse: a rural disability of the young. *East Afr Med J* 1995;72:2-9.
10. Carolene Scherf et al. *BJOG: an International Journal of Obstetrics and Gynaecology* April 2002, Vol. 109, pp. 431-436
11. Marchionni M et al. True incidence of vaginal vault prolapse. Thirteen years of experience. *J Reprod Med*. 1999;44:679-84.
12. Ahmed Yakubu et al. Pelvic organ prolapse managed at Usmanu Danfodiyo University Teaching Hospital, Sokoto: A 10-year review. *Sahel med J* 2017;20:26-29
13. Thapa B, Rana G, Gurung S. Contributing factors of uterovaginal prolapse among women attending in Bharatpur hospital. *Journal of Chitwan Medical College*. 2014;4:38-42.

Source of Support: Nil; **Conflict of Interest:** None

Submitted: 18-09-2019; **Accepted:** 08-10-2019; **Published:** 18-10-2019