

PELVIC ORGAN PROLAPSE- A CONCERN

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ABSTRACT**BACKGROUND**

Pelvic organ prolapse is a downward descent of pelvic organs and results in protrusion of the vagina and the uterus. It often provides additional symptoms to patient's life already complicated by menopause. There has been a considerable variation in presentation depending on numerous variables like age, ethnicity, education and symptoms.

Aim- Present study aims at studying various factors governing symptomatology and treatment choice of women in perimenopausal age group with uterovaginal prolapse in a central Indian population.

MATERIALS AND METHODS

This was a prospective study in which, all women attending Gynaecology Outpatient Department of Indira Gandhi Government Medical College, Nagpur presenting with pelvic organ prolapse over a period of 3 years from January 2013 to December 2015 were studied. They were studied for differences in sociodemographic factors, treatment choices and followed up for a period of 6 months after surgical/conservative treatment.

RESULTS

A total of 256 women were studied. According to our study, the risk of prolapse increased with age, increasing parity and increasing body mass index (BMI). Duration of symptoms ranged from 2 months to 15 years with 26.4% suffering for more than 5 years. Younger women were more likely to present earlier, opting more commonly for surgical treatment.

CONCLUSION

There is a need for increasing awareness as well as primary prevention regarding uterovaginal prolapse in general population and especially in perimenopausal age group. This can be instrumental in early access to health care system.

KEYWORDS

Pelvic Organ Prolapse (POP).

HOW TO CITE THIS ARTICLE: Gurjar B, Kedar K. Pelvic organ prolapse- A concern. J. Evolution Med. Dent. Sci. 2017;6(14):1080-1083, DOI: 10.14260/Jemds/2017/234

BACKGROUND

Pelvic organ prolapse (POP) is a downward descent of pelvic organs and results in protrusion of the vagina and the uterus. Because these displacements are each associated with defects in integrated connective tissue structures, they may each be considered as pelvic hernia. 316 million women worldwide as of 2010 (9.3% of all females) were affected by POP.

Women in developed countries who have access to modern health care can benefit from the advances that have been made in treating prolapse. If the problem is viewed from a worldwide perspective, the scope of suffering is much greater. In areas of high parity and little or no access to health care, countless women suffer from problems associated with pelvic organ prolapse with no real possibility of resolution.

A brief review of the history of treatment of prolapse is helpful in understanding modern treatments available and acceptable to the women. Because it was mentioned in the writings of Hippocrates and Galen, prolapse was clearly known to the ancients. Early treatments may seem quaint by today's standards. Fortunately, others have not survived. Vaginal packing, tampons, massages, and exercises were used with some success. Other women were suspended from their feet for a period of 24 hours to treat prolapse.

Rodericus A. Castro advised that prolapse should be attacked with a red hot iron as if to burn it, when fright would cause it to recede into the vagina. Various caustics were used, including silver nitrate, nitric acid, acid nitrate of mercury, hot metal, and sulfuric acid.¹ Fortunately, we have come a long way into an era of more rational & scientific treatment.

In 21st century, in spite of having knowledge & skill of a gamut of prolapse surgeries still in a developing country like India POP is even more of a concern as women are less likely to seek medical care or report late to a healthcare centre owing to lack of awareness, education and poverty. It adds symptoms to patient's life, which most of the times is, already complicated by menopause. Although mortality is negligible, but there is significant morbidity or deterioration of lifestyle.

Financial or Other, Competing Interest: None.

Submission 24-01-2017, Peer Review 05-02-2017,

Acceptance 07-02-2017, Published 15-02-2017.

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DOI: 10.14260/Jemds/2017/234



Aims and Objectives

Present study aims at studying various factors governing symptomatology and treatment choice of women with uterovaginal prolapse in a central Indian population.

MATERIALS AND METHODS

Study Design

Prospective observational study.

Inclusion Criteria

All women attending Gynaecology OPD of Indira Gandhi Government Medical College, Nagpur presenting with signs and symptoms of POP who consented to be a part of study were included. This is a teaching institute & prime referral centre of central India for nearby states.

Exclusion Criteria

Women without any symptoms of POP and Women with symptoms of POP not consenting to be the part of study were excluded.

Time Period

3 years – Jan. 2013 to Dec. 2015.

Methodology

Initial evaluation included symptomatology and socio-demographic factors like age, parity, body mass index, sexual activity and menopausal status. Pre-existing morbidities like chronic cough and medical conditions governing treatment choice like diabetes, hypertension were noted. After a thorough history taking, women were physically examined and severity of the prolapse was graded as per POP-Q Classification. It was preferred over other methods of grading like Baden-Walker and Shaw’s Classification as it is more defects specific & no subjectivity. Presence or absence of Stress Urinary Incontinence (SUI) was also noted. Blood, urine and imaging investigations were performed as and when required.

All available treatment options as per age, parity and sexual activity of the patient were discussed. Surgical treatment choices included vaginal hysterectomy with or without anterior and/or posterior compartment defect repair as well as fertility and uterus sparing surgeries. Postoperative complications if any were noted. Women who were not willing for surgical treatment or were deemed unfit for a surgical intervention were given a choice of conservative or non-surgical approach. It included pelvic floor exercises (Kegel), Vaginal estradiol cream application and Pessary insertion. Final treatment choice of the patient was respected. Women who opted for Pessary insertion were taught about Pessary care and need for regular followup was impressed upon. All women were followed up for a period of 6 months after surgical/conservative treatment. Comparison of treatment choices between surgically treated and non-surgically treated groups was done using Chi-square test.

RESULTS

The present study was conducted at a tertiary care centre catering to the health needs of a major female population of central India, with an average of 50 to 60 women attending the Gynaecology Outpatient Department daily. Over a period of 3 years from January 2013 to December 2015, a total of

256 women reported to OPD with history and examination findings consistent with Pelvic Organ Prolapse.

Table 1 shows Age and parity wise distribution of study population. Although majority of women belonged to the age group of 40-49 years, most of the women who underwent conservative management belonged to a higher age group. Most of the women had given birth to 2 or 3 children, out of which very few i.e. 21 women (8.2%) had a history of previous caesarean section/sections. This finding reinforces the theory that vaginal delivery contributes to pelvic floor damage, proposed as a causative factor for Prolapse.

Age Group in Years	Surgically Treated	Conser-vatively Treated	Total	Parity	Number of Women
20-29	2	0	2	Nullipara	2
30-39	28	0	28	Para 1	39
40-49	75	7	82	Para 2	58
50-59	37	28	65	Para 3	73
60-69	39	22	61	Para 4	48
70-79	1	17	18	Para 5	24
Total	182	74	256	Para 6 and above	12

Table 1. Age and Parity Wise Distribution of Women

Table 2- It was also found that most women presenting with POP were having a higher BMI. Majority women i.e. 109 had a BMI falling in Overweight category while 46 women were actually obese. Exact mechanism for this predisposition largely remains unknown.

BMI	Number of Women
<18.5	45
18.5-24.9	56
25-29.9	109
>30	46

Table 2. Relationship with BMI

Table 3 shows that a majority of women of the study group presented after 3 to 4 years of suffering. Duration of symptoms ranged from 2 months to 15 years with 26.4% suffering for more than 5 years. This finding underlines the social impact of this condition. Furthermore, late presentation represents not only the social taboo associated with the condition, but also indicates a lack of awareness, secondary position of a female in the family and possibly non-availability of primary health care. Something coming out per vaginam was the commonest chief complaint; however, other symptoms like Urinary frequency, Dysuria, Pelvic Pain, Constipation and SUI were also not uncommon.

Symptoms	Something Coming out PV	Urinary Complaints	Pelvic Pain	Constipa-tion	SUI	Total
<1	0	0	5	7	0	12
1-2	8	8	6	10	4	36
2-3	3	0	9	8	8	28
3-4	40	9	8	5	2	64
4-5	31	7	8	2	0	48
> 5	64	4	0	0	0	68
Total	146	28	36	32	14	256

Table 3. Duration of Symptoms and Presenting Symptoms

Out of a total 256 women, 182 women opted for surgical management while 74 women opted for non-surgical management. Each group was further subdivided into pre-menopausal and post-menopausal subgroups.

Table 4 shows distribution of women in the surgically treated group. It is evident from the table that majority of women in premenopausal group had lesser degrees of prolapse when compared with the postmenopausal group. Vaginal hysterectomy with or without anterior and/or posterior compartment repair was the most commonly performed surgery. One of the women had a huge cervical fibroid as a cause of prolapse and it was treated by hysterectomy. 8 younger women opted for conservative surgeries like Fothergill Procedure (4.3%) and Abdominal sling surgery in 9 women (4.9%). Only 5 of the women who had demonstrable SUI opted for surgical correction, which was done by Trans-Obturator Tape Repair. Rest of the women with SUI opted for medical management which was given in consultation with Urologist. Transvaginal mesh was not used in any of the Vaginal Hysterectomy owing to concerns about its safety. Two women who presented with vault prolapse following Vaginal Hysterectomy underwent Abdominal sacropexy.

POP-Q Menopause	Stage 1	Stage 2	Stage 3	Stage 4	Total
Pre-menopausal	1	71	31	2	105
Post-menopausal	8	21	44	4	77
Total	9	92	75	6	182

Table 4. Distribution of Women in Surgically Treated Group

A comparison was done between surgically treated and non-surgically (conservatively) treated group using Chi-square test. It showed that women in the premenopausal age group opted more commonly for surgical treatment when compared to post-menopausal group and this difference was statistically significant with a p value of <0.05 (Table 5).

Age	Non-surgical Treatment	Surgical Treatment	P value
Pre-menopausal	7	105	<0.05 (Significant)
Post-menopausal	67	77	

Table 5. Comparison between Surgically and Non-surgically Treated Groups

DISCUSSION

Pelvic Organ Prolapse is a significant public health problem in developing world, with literature being limited. Symptoms of prolapse definitely deteriorate the quality of life of women (Shrestha B).² Few studies are available focussing on the determinants of POP in developing world. Asresie A et al³ in their unmatched controlled study found that age more than 40 years was independent risk factor for POP. This was consistent with our finding that most of our women belonged to the age group of 40 years and above. Kinman CL et al⁴ studied the relationship between age and pelvic organ prolapse both in women with POP stage 2 and more. They concluded that women in 6th and 7th decade of life experienced higher level of bother from POP than older or younger women with the same stage of prolapse.

Most of the women had given birth to 3 or more children as per our study. Islam RL et al⁵ in their study on Bangladeshi women found that having 3 or more children was positively linked with having at least one symptom of pelvic floor disorder, which was consistent with our study. Very few i.e. 21 of our women (8.2%) had a history of previous caesarean section/sections. Other studies Akter F,⁶ Zeleke BM⁷ showed similar results. Howard D et al⁸ in their study focussed on vaginal birth as a primary risk factor for the development of pelvic floor disorders and have also suggested steps to prevent or minimise the development of pelvic floor problems like moderating forceps use and utilising risk assessment tools to offer caesarean delivery to those at greatest risk. Hallock JL⁹ study has concentrated on role of childbirth in development of single or multiple coexisting pelvic floor disorders.

We found that most women presenting with POP were having a higher Body Mass index. Ghandour L et al¹⁰ in their study also found that a BMI of >25 Kg/m² was an independent risk factor for the presence of Pelvic Floor Disorder symptoms. Elbiss HM,¹¹ de Sam Lazaro S,¹² Chen Y,¹³ Shimonov M¹⁴ have also found a correlation between POP and BMI.

Mazloomdoost D et al¹⁵ tried to understand the barriers to seeking care for POP and sought to assess attitude, knowledge and practice patterns of primary care providers of POP. They found that although primary care providers within a large healthcare system were familiar, more with urinary incontinence than POP, nearly one fifth were unaware of where to refer the patient. Their findings partly explain late reporting of women to tertiary care hospitals as seen in Table 3.

74 of our women opted for non-surgical treatments, pelvic floor exercises being one of them. Hagen et al¹⁶ have also found usefulness of pelvic floor training for secondary prevention of pelvic organ prolapse in their multicentre randomised controlled trial. Non-surgical interventions may provide an opportunity to address the significant burden of POP especially in underdeveloped areas as per Fitchett JR¹⁷ study. However, finding the efficacy of this treatment method was beyond the purview of our study.

Majority of our women underwent hysterectomy with pelvic floor repair. Surgical advances in pelvic floor repair in last two decades along with increased anaesthesia safety have probably led to increase in the number of prolapse surgeries.

The first vaginal hysterectomy for prolapse was performed by Samuel Choppin of New Orleans in 1861. In 1990s, pelvic anatomist John O. L. DeLancey of Michigan published a biomechanical analysis of normal vaginal anatomy. Understanding about pelvic floor defects and pelvic floor reconstructive surgeries have greatly evolved since then.

Use of Transvaginal mesh was steadily increasing till around 2008, after which its use declined owing to concerns about mesh complications. U.S. Food and Drug Administration warned in July 2011 that the use of a transvaginal mesh in treating vaginal prolapses is associated with side effects including pain, infection, and organ perforation. According to the FDA, serious complications are "not rare." We did not use transvaginal mesh in any of our women.

Most of the women (67) who underwent conservative management belonged to a higher age group (postmenopausal), while 105 of the younger (premenopausal) women opted more commonly for surgical intervention in our study. Our finding was consistent with Sullivan SA¹⁸ et al who studied a retrospective cohort study over 1 year with an aim of determining patient desire for either surgical or conservative treatment, as well as the actual treatment chosen and received after the first visit and 1 year later. To obtain predictors of choice, baseline demographic characteristics were obtained by them. They found that women who desired surgery were more likely to be younger, sexually active, have more advanced prolapse and have more bothersome symptoms. They concluded that younger women are more likely to either opt for surgery initially or change their treatment plan from conservative to surgical.

CONCLUSION

A total of 256 women were studied. According to our study, the risk of prolapse increased with age, increasing parity and increasing body mass index. Duration of symptoms ranged from 2 months to 15 years with 26.4% suffering for more than 5 years. Younger women were more likely to present earlier, opted more commonly for surgical treatment.

However, our study was limited by a small sample size. We conclude that there is a need of increasing awareness in women of all age groups, especially perimenopausal age groups about seeking medical care and treatment options for the management of Pelvic Organ Prolapse.

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