



ORIGINAL RESEARCH PAPER

Obstetrics & Gynaecology

CLINICAL STUDY OF CONSERVATIVE SURGERIES IN WOMEN WITH UTEROVAGINAL PROLAPSE

KEY WORDS:

Shrinivas Gadappa

Professor & Head, Department Of Obstetrics & Gynaecology, Government Medical College, Chh. Sambhajinagar

Ansari Jaweriya*

Resident Doctor Department Of Obstetrics & Gynaecology, Government Medical College, Chh. Sambhajinagar *Corresponding Author

Anurag Sonawane

Associate Professor, Department Of Obstetrics & Gynaecology, Government Medical College, Chh. Sambhajinagar

ABSTRACT

Pelvic organ prolapse (POP) is a common condition that may affect up to 50-70% of women worldwide. On an average a woman has an 11% risk of undergoing surgery for pelvic organ prolapse during her lifetime. Uterine conserving surgeries are now becoming successful options for women. Present study was aimed to study conservative surgeries done for Uterovaginal prolapse at a Tertiary hospital. The present 'Prospective Observational Study' was carried among women underwent conservative surgeries for uterovaginal prolapse. Total 57 women who underwent conservative surgeries for uterovaginal prolapse were enrolled in study the mean age was 26 ± 3.12 years and range was 26–44 years. The majority were classified as Para 1 (17.54%). Among these women 96.08% participants delivered by normal vaginal delivery & only 3.92% underwent LSCS among those who delivered normally 33.33% had history prolonged labor. The most common symptom reported was something coming out of the introitus, occurring in 77.19% of cases, in examination findings 68.42% had retroverted uterus. The majority of women who underwent conservative surgeries are from classified as Stage II (49.12%) prolapse according to POP Q. About 30 patients received conservative treatment previously. Manchester-Fothergill Procedure being the most common, undertaken by 61.40% of the patients. Most common immediate post-operative complication was pain 14.04%. Most common intermediate post-operative complication was Vaginal discharge 5.26%. About 60% specimen had normal HPE findings. About 75.44% being discharged in less than 7 days. Mean duration of hospital stay was 5 ± 0.5 days. From this study we conclude that, incidence was common among young women & higher parity. Commonest presenting symptom being something coming out of vagina & risk factor was prolonged labor. Nutrition plays crucial role in prevention and management with focus on maintaining optimal body weight, muscle tone, pelvic health. Third degree prolapse was almost commonly seen.

INTRODUCTION

Pelvic organ prolapse (POP) is a common condition that may affect up to 50-70% of women worldwide. On an average, a woman has an 11% risk of undergoing surgery for POP during her lifetime. [1] In India, nulliparous prolapse cases constitute 1.5–2 % of genital prolapse; the incidence is even higher (5–8 %) for young women who have just delivered one or two children making it one of the highest in the world. The prevalence is very high in India because Indian women, especially those with poor socioeconomic status, are anaemic and malnourished (maternal depletion syndrome) with poorly developed pelvic floor tissues and the additional insult of one or more vaginal deliveries at home is sure to bring down the cervix and uterus. [2]

The surgical management of uterine prolapse in women who wish to retain their uterus remains a challenge. Several techniques have been reported using open abdominal, laparoscopic and vaginal approaches. The laparoscopic approach offers both excellent intraoperative visualisation of supportive and adjacent structures and quick postoperative recovery. [13,14] Many patients suffering from uterine prolapse, particularly if they are parous women, have some degree of cystocele or rectocele or both, but these forms of genital prolapse may occur with little or no uterine prolapse. It must be made clear that whenever there is any uterine descent the bladder inevitably descends with the uterus [15]. Conservative treatments tend to be considered as priority before patients seek further help from surgery, especially for those at mild-degree of pelvic organ prolapse [16,17].

The aim of study is to study demographic characteristics, risk factors, clinical features, various conservative surgeries done and its complication. As our hospital is a prominent hospital catering majority of areas of Marathwada region of Maharashtra, Rural Population has high incidence of

unattended deliveries, multiparity, malnutrition therefore occurrence of uterovaginal prolapse is more in that population. Present study was conducted to study conservative surgeries done for Uterovaginal prolapse at a Tertiary hospital.

Methodology

The present 'Prospective Observational Study' was carried among women underwent conservative surgeries for uterovaginal prolapse at tertiary care center & willing to participate to study demographic profile, clinical presentation, associated risk factor & various conservative surgeries for uterovaginal prolapse at tertiary care center from Aug 2022 to Aug 2024. Sample size required for the study is calculated using the formula: Sample size = $Z^2 * p * q / d^2$. Calculated sample size was 57 with the prevalence of POP was considered 86%. [17]

The study was conducted after obtaining approval from institutional ethics committee. All Patients who satisfy the inclusion criteria were enrolled in the study after obtaining written informed consent. All eligible women Undergoing conservative surgeries for uterovaginal prolapse were followed up for regular intervals of 0 days, 3 days, 1 month & 3 month & recurrence is studied by universal sampling.

Examination is done in patients having suspicion of prolapse and confirmed by clinical examination and investigation. The data was collected in a pre-designed proforma which includes, demographic data of the patients including age, marital status, parity status, Occupation, family history of any vascular diseases, hypertension, and diabetes, duration of symptoms, any other associated risk factor etc. Further all patients underwent a General physical examination for vitals and BMI. Per speculum, per vaginal, rectovaginal examination is done and checked for Descend of uterus, Grade of descend

of uterus, Stress urinary incontinence, Cervical ulcer, Decubitus ulcer & POP Q classification. In all patients, laboratory investigations including CBC, LFT, KFT, Ultrasonography (Abdomen and Pelvis), Pap smear, TLC, DLC, Chest x ray, ECG. Additional tests were conducted in selected patients.

Data was entered in MS excel worksheet & analysed using SPSS (Statistical Package for Social Sciences) trial version 21.0. Data was presented in tabular and graphical format.

RESULTS

Total 57 women who underwent conservative surgeries for uterovaginal prolapse were enrolled in study the mean age was 26±3.12 years and range was 26– 44 years. The largest group was aged 26-30 (52.63%). The majority live in rural areas (56.14%). about 47.36% participants were Hindu by religion followed by 49.12% were Muslim. The largest group, 31.58%, has completed high school. The largest group, 66.67%, falls into the middle class.

Table 1: Distribution According To Demographic Parameter

Demographic Parameter	Frequency	Percentage
Age Group (Years)	26 - 30	30
	31 – 35	13
	≥36	14
Residence	Urban	25
	Rural	32
Religion	Hindu	27
	Muslim	28
	Buddhist	1
	Christian	1
Education	Illiterate	14
	Primary School	4
	Middle school	15
	High school	18
	Intermediate / Diploma	2
	Graduate	4
	Professional Degree	0
		0
Socio-economic Class	Upper class	3
	Upper Middle Class	3
	Middle class	38
	Lower Middle Class	6
	Lower Class	7

The majority were classified as Para 1 (17.54%), with a substantial proportion having Para 2 (42.11%) and Para 3 or more (29.82%). About 96.08% participants delivered by normal vaginal delivery & only 3.92% underwent LSCS. About 33.33% had history prolonged labor. About 50.88% had normal BMI. About 96.49% participants in menstruating stage & 3.51% in peri-menopausal stage.

Table 2: Distribution According To Obstetric History.

Obstetric History	Frequency	Percentage
Parity	Nulliparous	6
	Para 1	10
	Para 2	24
	Para ≥3	17
Mode of delivery	Normal	49
	LSCS	2
Obstetric risk factor	History of prolonged labor	19
	History of instrumental delivery	8
	Home delivery	15
	Delivery of baby >3.5 kg	12
	History of early resumption of activities	9

BMI	after delivery	9	15.79
	<18.4	14	24.56
	18.5-24.9	29	50.88
	25.0-29.9	8	14.04
	30 -34.9	4	7.02
	35-39.9	1	1.75
Menstrual status	≥40	1	1.75
	Menstrual	55	96.49
	Peri-menopausal	2	3.51
	Post-menopausal	0	0

The most common symptom reported was something coming out of the introitus, occurring in 77.19% of cases. Low backache & Dyspareunia followed, affecting 59.65% and 43.86% of participants, respectively. The majority experienced symptoms for 6 to 12 months (43.86%), followed by >12 months (31.58%). Symptoms lasting 3 to 6 months were reported by 21.05% of patients, while only 3.51% had symptoms for less than 3 months. Uterine descent was most frequently observed at the 2nd degree (63.16%) and 3rd degree (24.56%), 1st degree (12.28%) with no cases of 4th degree descent. cystocele was noted in 75% of the cases & rectocele in 25%. Only in 38 participants had associated pelvic findings. About 68.42% had retroverted uterus. The majority were classified as Stage II (49.12%), with fewer at Stage III (35.09%) and Stage I (15.79%). The most common intervention was the control of precipitating factors, performed in 50% of cases.

Table 3: Distribution According To Clinical History

Clinical History	Frequency	Percentage
Clinical Features	Something coming out of Introitus	44
	Incomplete Bladder Emptying	20
	Dyspareunia	30
	Incomplete Bowel Emptying	6
	Vaginal Discharge	36
	Low Backache	29
	Infertility	4
		7.02
Duration of symptoms < 6 Months	<3 Month	2
	3-6 Month	12
Duration of symptoms > 6 Months	6-12 Months	25
	>12 Months	18
Examination Findings	1 st Degree	7
	2 nd Degree	36
	3 rd Degree	14
	4 th Degree	0
Compartmental defects	Cystocele	12
	Rectocele	4
	Enterocoele	0
Associate pelvic findings	Supra-vaginal elongation	6
	Infra-vaginal elongation	15
	Decubitus ulcer	5
	Fibroid-polyp	1
	Cervical hypertrophy	8
	Hyperkeratosis of cervix	3
Position of Uterus in Prolapse	Anteverted	11
	Mid-posed	7
	Retroverted	39
Preoperative POP Q Staging	Stage I	9
	Stage II	28
	Stage III	20
	Stage IV	0

Pre-operative Interventions	Treatment for cervical ulcer	4	9.09
	Treatment for Urogenital Infections	12	27.27
	Correction of Anaemia	6	13.64
	Control of precipitating factor	22	50

About 30 patients received conservative treatment previously, 70% received pelvic floor muscle training & 30% weight reduction. About 22.81% beneficiary of the scheme and 77.19% non-beneficiary. Manchester-Fothergill Procedure being the most common, undertaken by 61.40% of the patients. The Purandare's Sling was used in 24.56% of cases, while the Shirodkar's Sling and Virkud Composite Sling were less frequently performed, at 3.51% and 10.53%, respectively. There was no any intraoperative complication in Purandare's sling surgery. Among participants undergoing Virkud Composite sling surgery 50% had sling placement difficulty. Most common Immediate post-operative complication was pain 14.04%. Most common intermediate post-operative complication was Vaginal discharge 5.26% followed by dyspareunia 3.51%. (Table 4)

Table 4: Distribution According To Management

Management		Frequency	Percentage
Conservative management	Pelvic floor muscle training	21	70
	Weight reduction	9	30
	Vaginal pessary	0	0
MJPAY Enrolment	Beneficiary	13	22.81
	Non-beneficiary	44	77.19
Surgery Performed	Manchester-Fothergill Procedure	35	61.4
	Purandare's Sling	14	24.56
	Virkud's composite sling	6	10.53
	Shirodkar's Sling	2	3.51
Intra-operative Complications			
Manchester-Fothergill Procedure	Bleeding	2	5.71
Purandare's Sling	None	0	0
Shirodkar's Sling	Prolonged period of surgery	2	33.33
Virkud Composite Sling	Sling placement difficulty	1	50
Post-operative complications (24-48 Hr.)	Pain	8	14.04
	Fever	6	10.53
	Urinary Retention	2	3.51
	UTI	2	3.51
Post-operative Intermediate Complication (Up to 3 Month)	Wound Discharge	1	1.75
	Wound Gape	1	1.75
	Vaginal Discharge	3	5.26
	Dyspareunia	2	3.51

The majority of patients were classified as Stage 0 (71.93%), indicating no significant prolapse, while 28.07% were classified as Stage 1, showing minimal prolapse. About 60% specimen had normal HPE findings. About 22.86% shows chronic cervicitis followed by 11.43% had squamous epithelial hyperplasia & 5.71% had chronic papillary cervicitis. About 75.44% being discharged in less than 7 days. In contrast, 24.56% of patients had hospital stays exceeding 7 days. Mean duration of hospital stay was 5±0.5 days.

Table 5: Distribution According To Final Outcome

Final Outcome	Frequency	Percent age
Follow Up POP Q Stage 0	41	71.93

HPE Findings	Stage 1	16	28.07
	Normal HPE	21	60
	Chronic cervicitis	8	22.86
	Squamous epithelial hyperplasia	4	11.43
	Chronic papillary Endo cervicitis	2	5.71
Duration of hospital stay	<7 days	43	75.44
	> 7 days	14	24.56

DISCUSSION

Uterovaginal prolapse occurs when the uterus and possibly the vaginal walls descend or protrude into the vaginal canal due to weakened pelvic support structures. This condition can lead to a range of symptoms and discomforts, including pelvic pressure, urinary and bowel issues, and sexual dysfunction. Here's an overview of uterovaginal prolapse, including causes, symptoms, and treatment options. In this study, total 57 women who underwent conservative surgeries for uterovaginal prolapse were enrolled in study the mean age was 26±3.12 years and range was 26– 44 years. Gangane N et al (2023) [18] found that, the mean age was 44.86±4.96 years. The largest group was aged 26-30, comprising 52.63% of the sample. Ages 31-35 make up 22.81%, while those aged ≥36 account for 24.56%. Kulkarni J et al (2020) [19] found that, maximum incidence of prolapse was between age group 31-50 yrs. (53%).

The majority live in rural areas, accounting for 56.14% of the sample, while 43.86% reside in urban areas. This distribution highlights a slightly higher prevalence of rural residents compared to urban ones. Majority of participants were Muslim 49.12% followed by Hindu 47.36%. Only 1.75% were Buddhist & 1.75% were Christian. The largest group, 31.58%, has completed high school. Following this, 26.32% have attended middle school, while 10.53% hold graduate or higher qualifications. Illiterate participants make up 24.56%, and those with primary school education represent 7.02%. The largest group, 66.67%, falls into the middle class. Lower class individuals make up 12.28%, while 10.53% are categorized as lower middle class. The upper class represents 5.26% and the upper middle class also accounts for 5.26%, indicating a diverse range of socioeconomic backgrounds among the participants. %), Kulkarni J et al (2020) [19], found that, maximum patients from lower socioeconomic condition (85%).

Lakshmid devi M et al (2016) [20] found that, majority of women belong to middle class (35.5%.) The majority were classified as Para 1 (82.46%), with a substantial proportion having Para 2 (42.11%) and Para 3 or more (29.82%). Only 10.53% of patients were nulliparous. Kulkarni J et al (2020) [19] found that, maximum incidence of prolapse in para three & above. Kulkarni J et al (2020) [19], found that, maximum patients had previous home deliveries 57.14%. Lakshmid devi M et al (2016) [20] found that, among the general risk factors, family history of prolapse is the major contributing factor. In the study, BMI is classified into four groups: <18.4 (7 individuals, 12.28%), 18.5-24.9 (18 individuals, 31.58%), 25 –34.9 (24 individuals, 42.11%), and ≥40 (8 individuals, 14.04%). Gangane N et al (2023) [18] found that mean BMI was 23.47±1.63 Kg/M².

In this study, the most common symptom reported was something coming out of the introitus, occurring in 77.19% of cases. Rameshkumar R et al (2017) [21] found that, most common symptom of mass per vagina followed by 10% had discharge per vagina, 10% had backache, 15% had pain abdomen and 20% had infertility & found that, 60% had third degree prolapse & 40% had second degree prolapse. Rameshkumar R et al (2017) [21] found that, 35% patients had concomitant cystocele, 15% patients had enterocele and 25% had concomitant rectocele. In our study, distribution of preoperative POP-Q staging among 57 patients. The majority were classified as Stage II (49.12%), with fewer at Stage III

(35.09%) and Stage I (15.79%). No patients were at Stage IV, highlighting a predominance of moderate pelvic organ prolapse in the preoperative assessment. About 22.81% were beneficiary in the scheme and 77.19% were not. Arya LA et al. (2005) [22] Enrolment in supportive schemes like MPPJAY was slightly higher (50%), indicating a potential difference in access to or utilization of such programs. About 30 patients received conservative treatment previously, 70% received pelvic floor muscle training & 30% weight reduction. Manchester-Fothergill

Procedure being the most common, undertaken by 61.40% of the patients. The Purandare's Sling was used in 24.56% of cases, while the Shirodkar's Sling and Virkud Composite Sling were less frequently performed, at 10.53% and 3.51%, respectively. In the study conducted by Kulkarni J et al (2020) [19], maximum women underwent Vaginal hysterectomy with pelvic floor repair. Only 9.67% underwent fothergilla's operation. About 15.05% underwent different sling operations.

In this study most common Immediate post-operative complication was pain 14.04%. Most common intermediate post-operative complication was Vaginal discharge 5.26% followed by dyspareunia 3.51%. (Kulkarni J et al (2020) [19] found that, most significant post-operative complication was pyrexia seen in total 19 (10.21%) and urinary infection in 3 (6.09%) cases. On follow-up visit there was one case of cystocele recurrence and one case of rectocele recurrence in vaginal hysterectomy with pelvic floor repair and one case of Fothergill's operation had 1st degree uterine descent with cystocele recurrence and one with cystocele recurrence only. Nawal Al Harbi et al (2023) [17] found that, post-operative recovery was uneventful for all patients, and they were discharge on next day with appointment for follow up at gynecology clinic after one month.

CONCLUSION

From this study we conclude that, incidence was common among young women & higher parity. Commonest presenting symptom being something coming out of vagina & risk factor was prolonged labor. Nutrition plays crucial role in prevention and management with focus on maintaining optimal body weight, muscle tone, pelvic health. Third degree prolapse was almost commonly seen. The Manchester-Fothergill Procedure emerged as the most common surgical intervention in cases with cervical elongation with overall positive outcomes and minimal complications reported and alleviating symptoms of prolapse. Shirodkar's sling is the perfect anatomical solution conservative approach to uterocervical descent. At the 3-month follow-up, a significant portion of patients showed improvement, with most achieving Stage 0 prolapse. This underscores the effectiveness of current treatments and the importance of timely and appropriate intervention in managing uterovaginal prolapse.

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