Original Article

Sacrohysteropexy with Prolene Mesh in the Management of Uterovaginal Prolapse

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Abstract

Objective: To determine the outcome of abdominal sacrohysteropexy, surgical technique for the management of uterovaginal prolapse using prolene mesh, in terms of success rate.
Design: Descriptive Case Series
Place and Duration of Study: Obstetric & Gynae Department FGPC Islamabad 6 months from September 2013-March 2014**.**
Methodology: It's a descriptive case series study conducted at Obs & Gynae Department of FGPC Islamabad. 18 patients were admitted from Gynae OPD. These patients had a uterovaginal prolapse from grade 1-3. Informed consent was taken. Abdominal Sacrohysteropexy done with prolene mesh under general anesthesia. Mesh was sutured between anterior longitudinal ligament of sacrum and posterior surface of the uterus. Postoperatively patients were observed for signs of wound infection like fever and gape wound at the end of 7 days. Follow-up period was 6 months and patients were examined for recurrence of prolapse.
Results: The mean age of women was 52 years (SD ± 1.1661). Mean parity was 5.166 (SD± 1.38). Among 18 patients, most of the women of our study had 2nd-degree prolapse (n=15, 83.3%). 2 of them had 3rd-degree prolapse (11. 1%). One woman had 1st-degree prolapse (5.6%).Postoperatively fever was not noted in any patient. Gape wound was not seen in any patient. Recurrence was seen in 01 patients (5.56 %).
Conclusion: The abdominal sacrohysteropexy is very safe and effective uterus preserving procedure with minimal post-operative complications and recurrence of symptoms. These good results constitute a pressing incentive to pursue abdominal sacrohysteropexy with prolene mesh in women with uterovaginal prolapse in Pakistan.
Key words: Uterovaginal prolapse, Sacrohysteropexy, Prolene mesh.

Cite this article as:. Aziz S, Shaheen R. Sacrohysteropexy with Prolene Mesh in the Management of Uterovaginal Prolapse.J. Soc. Obstet. Gynaecol. Pak. 2017; Vol 7(1):28-32.

Introduction

Women of almost every age group suffer from a distressing condition called Utero-vaginal prolapse.[1] The known risk factors are age and parity although exact prevalence is undetermined.[2] However, many times pelvic organ prolapse is not observed in multiparous women who give birth multiple times, on the other hand, some nulliparous women may present with pelvic floor dysfunction. These nulliparous women may have coexisting connective tissue disorders which lead to the development of uterovaginal prolapse.[3] It is very prevalent chronic morbidity in women of South East Asia. There are multiple factors which cause Pelvic organ prolapse, the most common causes of prolapse found was

Authorship Contribution: [1]Conception, Synthesis and Planning of the research, Interpretation, analysis and discussion, [2]Supervised and Final proofreading.

Funding Source: none
Conflict of Interest: none

Received: Jan 6, 2017 **Revised:** Mar 19, 2017

lifting heavy weight, household work during pregnancy and postpartum period. Similarly, non-availability of trained birth attendants in rural areas, frequent pregnancies without birth spacing, multiple deliveries and lack of nutritious food are also responsible.[4] Management of disease includes pelvic floor muscle training, use of vaginal pessaries and surgery. Mode of treatment depends on the severity or grade of POP, symptoms, the patient's general condition, desire for future fertility and as well as skill and comfort level of the surgeon with the particular procedure and the particular route. Different surgical approaches are now a day available for POP repair. The main aim of surgical treatment is a symptomatic relief, restoration of anatomy, correction of the vaginal axis and to improve the quality of life. Before removing the healthy organ such as uterus for the treatment of uterovaginal prolapse, patient's choice must be taken in consideration. There is increased interest in uterus sparing surgery these days. In the last two decades, many studies reported successful anatomical and functional results of uterus sparing POP surgery in both young and elderly women, Traditional physician-determined measures of treatment success appeared to be insufficient to determine the quality of surgical outcomes and patient satisfaction.[5-10] The traditional surgical treatment of POP is a vaginal hysterectomy. Mostly when hysterectomy is done for prolapse it results in the removal of healthy uterus and increased morbidity. As women are becoming more aware, they desire treatment of prolapse with preservation of uterus. Uterine preservation techniques include the Manchester procedure and the sacrohysteropexy. In recent years sacrohysteropexy has become popular.[11] Arthure and Savage were the first to describe attachment of the prolapsed uterus to the sacrum using an abdominal approach. However, while the earliest report described the procedure using a combination of autologous grafts and retropubic suspensions, more contemporary literature focuses on sacrohysteropexy using synthetic mesh.[16] Abdominal sacrohysteropexy can be offered to properly select women with symptomatic genital prolapse who wish to preserve the uterus and have childbearing potential.[12] Abdominal sacrohysteropexy with prolene mesh is very effective. It restores normal anatomy, maintains sexual function and preserves childbearing capacity. It also allows restoration of the length of the vagina and has a satisfactory outcome.[16] Current experience anticipates a mesh-related complication in less than 1% using a polypropylene mesh in abdominal correction of pelvic organ prolapse.[17]

Sacrohysteropexy/Sacrocolpopexy with mesh is associated with increased risk of infection or mesh erosion, some authors have reported up to 27% mesh erosion in patients after hysterectomy and 0-4% in uterus sparing surgery or sarocolpopexy without hysterectomy, while others found no difference.[16] It is uterine conserving surgical procedure with high success rate and short learning time for women who want to preserve their uterus and older women who cannot tolerate prolonged surgery due to comorbid conditions. Mesh related complications are negligible.

Methodology

This was descriptive case series study, which was conducted after approval from ethical committee at Gynae & Obstetrics department of FGPC Islamabad between September 2013 to March 2014.

Eighteen Patients were collected from Gynae outdoor clinics of our hospital after convenient sampling. Randomization/Blinding was not done. Women with Uterovaginal prolapse grade 1-3, nulliparous and multiparous women of any age and parity, women who did not want to undergo hysterectomy and women who were desirous of further childbearing were included in the study after obtaining informed consent. Women with malignancy of uterus and cervix, complete procidentia, congenital uterine anomaly, fibroid uterus abnormal uterine bleeding were excluded from the study.

The relevant obstetric and gynecological history with presenting symptoms was noted down in the pre-designed proforma. Although physical and pelvic examination was conducted to grade the type of prolapse. Patients were admitted in Gynae ward after thorough preoperative assessment and informed consent was obtained from the patients for the procedure and their contact number was taken. All the patients were counseled regarding complications of procedure mesh erosion, infection,

fever, damage to bladder or bowel, failure of procedure Abdominal sacrohysteropexy was done with prolene mesh under General Anesthesia. Mesh was sutured between the posterior surface of the uterus and anterior longitudinal ligament of sacrum with suture prolene 1. Main outcome measures were the success of the procedure in term of postoperative complications e.g. wound infection (fever, gape wound) and rate of recurrence. Follow up was ensured by taking contact numbers of patients. SPSS 16 was used for analysis of the result. Patient characteristics were summarized using descriptive statistics for continuous variables (mean ± standard deviation, minimum, maximum and sample size) and frequency tables for categorical variables (numbers and percentages). Statistical analysis of the data was conducted at 6 months' follow-up.

Results

The mean age of women was 52 years (SD ± 1.1661). The mean age of women was 52 years (SD ± 1.1661) with ranges from 35 to 70 years. In the study, 10 (55.6%) of the woman have ages between 50 – 70 years whereas 06 (33.3%) cases have age between 35 – 49 years as shown in Table. I.

Table I: Characteristics of Age

Age (years)	Frequency	Percentage
35-49	6	33.3%
50-70	10	55.6%
Less than 35	1	5.6%
More than 70	1	5.6%

Similarly, 11 (61.1%) have parity 01-05 whereas 07 (38.9%) have parity between 06 – 10 as shown in Table. No. II.

Table II: Characteristics of Parity

No. of Children	Frequency	Percentage
1-5	11	61.1%
6-10	7	38.9%

Mean parity was 5.16 (SD± 1.38). Among 18 patients, most of the women of our study had 2nd degree prolapse (n=15, 83.3%).1 of them had 3rd degree prolapse (5.6%). One women had 1st degree prolapse (5.6%). (Figure 1) Postoperatively fever was not noted in any patients. Gape wound was not seen in any patient. Recurrence was seen in 1 patients (5.56 %).The success rate of procedure 94.44 %. (Figure 2)

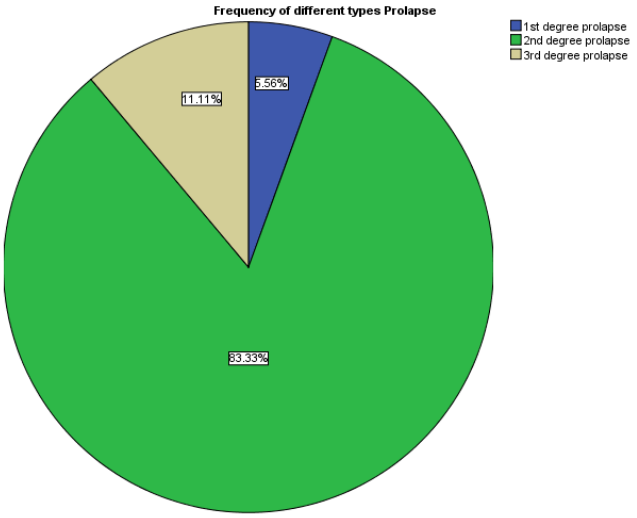


Figure 1: Frequency of different types of prolapse

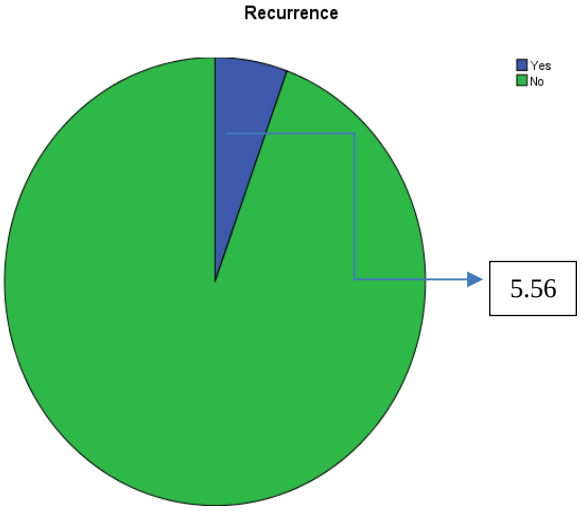


Figure 2: Frequency of recurrence of prolapse after 6 months of Sacrohysteropexy (n=18)

Discussion

Uterovaginal prolapse (UVP) is gynecological morbidity that presents with the symptoms of something coming out the vagina, as well as perineal heaviness. POP causes hypertrophy of cervix, cervical/vaginal ulcers and urinary incontinence. It also causes urinary tract infection. Unfortunately, this problem has not been properly investigated and

documented in Pakistan. So many patients are not aware with the surgical options available for this problem; hence, this study was designed and conducted to determine the efficacy and safety of abdominal sacrohysteropexy with prolene mesh which is a uterine preserving procedure alternative to vaginal hysterectomy. The incidence of POP can be reduced by greater attention towards gynecological health like safe family planning practices enforced with health education and improved empowerment and socioeconomic status of women.[13] Pelvic floor dysfunction is a major problem in elderly women. The lifetime risk of undergoing surgery for prolapse or incontinence by the age of 80 years is 11% and one-third of all operated women undergo repeat surgery due to recurrence of prolapse. It is still a matter of debate whether or not to remove the prolapsed uterus. In recent years, there is more emphasis on the uterosacral ligaments as the most important structures to prevent uterine or middle compartment descent. Therefore, it is emphasized to use techniques that involve these ligaments in the restoration of the middle compartment. Results of our study showed the success rate of abdominal sacrohysteropexy between 94.44%. Out of 18 women none had fever and gape wound after 1 week and 5.55 % had a recurrence of prolapse after 6 months. Our study showed that age and parity of patients are not significantly related to a postoperative complication of the procedure. There may be other factors which may cause wound infection and recurrence of prolapse. In a study by Barranger et al, 257 women who underwent uterus conserving surgery, 24 pregnancies (9.7%) and 16 deliveries, (6 caesarean section, 10 vaginal deliveries, and 6 abortions) have been reported to date.[14] In another 1 year study conducted in Allied hospital Faisalabad, no women had intraoperative and postoperative complications after sacrohysterpexy with mesh. Mesh erosion was not observed. In 16.7% women recurrence of prolapse was observed. The success rate was 83.3%. Pregnancy was reported in 8.3% woman who delivered by lower segment caesarean section.[15] In Cochrane review, abdominal sacrocolpopexy was found to be superior to vaginal sacrospinous fixation, with a decreased rate of recurrent vault prolapse.[18] In the literature, in three randomized controlled trials abdominal sacrocolpopexy was compared to vaginal sacrospinous ligament fixation operations. In two of three studies, the abdominal approach was superior to the vaginal approach for prolapse repair. The results of third study showed that 17% of the patients had postoperative recurrent prolapse after vaginal procedures compared to 4% of those who had abdominal surgery.[19] Many women with prolapse wish to retain their uterus at the time of surgery. So it is a need to determine the efficacy of uterine-sparing procedures to help women make informed decisions regarding prolapse.[20] We use prolene mesh in all patients who undergo sacrohysteropexy. Mesh has risk of erosion to an adjacent intraperitoneal structure or adhesion of bowel to it with the development of symptoms and signs of acute or chronic obstruction**.** This surgical procedure should be decided depending upon patient`s choice, future fertility desire, age, BMI, past surgical history, additional pelvic and abdominal procedures, and degree of pelvic organ prolapse[18]**.** POP is common among rural, farmer, parous and older women as most of them have deliveries at home with prolonged labor. Age, parity and occupation were associated with the grade of prolapse.[21] Proper preoperative evaluation and planned surgery help in reducing morbidity if surgery becomes the treatment of choice.[22] Various types of synthetic and biological mesh are available, varying in structure and physical properties such as absorbability. In a study performed by Elad Leron and Stuart L & Slanton Sacrohysteropexy was performed by using Teflon mesh while in Farhat Karims study sacrohysteropexy was performed using prolene-1. [22] The outcome was successful with no complications and it was more cost effective as synthetic mesh is avoided and there is reduced hospital stay. However, it leads to erosion and bowel adhesion and obstruction. In a study performed by Demirci and Leron E et al, no intraoperative and postoperative complications were found. In a review of 30 cases by Barranger et al, it is intraoperative and postoperative complications occurred in two patients (6.6%) and four patients (13.3%) respectively.[14] In Pakistan in a study sacrohysteropexy was performed with prolene-1. The short-term outcome was successful with no complications.[24] Patients should be warned about potential complication of mesh[25]. In our study no

erosion, infection of the prolene mesh was observed, and we preferably use prolene mesh for sacrohysteropexy/ sacrocolpopexy**.**

Sacrohysteropexy has a satisfactory anatomical functional outcome. Except 1,all our patients have maintained good anatomical and functional support for the follow-up period.

Conclusion

Abdominal sacrohysteropexy with prolene mesh is very safe and effective procedure with promising results and minimal post-operative complications. It has short learning curve. Women with uterovaginal prolapse who opt for uterine preservation should be offered abdominal sacrohysteropexy with prolene mesh. It is very safe and effective alternative to vaginal hysterectomy and prevents removal of healthy uterus.

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