Original Article

EFFECTIVENESS OF AUTOLOGOUS RECTUS SHEATH SLING ABDOMINAL PROCEDURE FOR UTERO-VAGINAL PROLAPSE

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ABSTRACT

Background: Uterovaginal prolapse is one of the most common presentations among women attending gynecological OPD. Various conservative procedures have been reported in the past, each with advantages and disadvantages.The objective of this study is to assess the effectiveness of autologous rectus sheath sling abdominal procedure for uterovaginal prolapsed

Material and Methods: The current study was a retrospective observational study carried out at the gynecology department, Indus Hospital Lahore. Consecutive sampling was done to include all patients who had this surgery during 2018-2022. After the surgery, follow up was started from day 10th of surgery, the second follow up was at 1 month after surgery and the last was after 6 months to assess complications of the procedure and effectiveness of procedure. Data were analyzed using SPSS 24.

Results: In the current study, a total 30 patients were enrolled. The mean age of the patients was 30 (4.12) years. Based on the degree of prolapse, the first degree of prolapse was observed in 18 (60%) patients while the second degree of prolapse was observed in 12 (40%) patients. The success rate was observed in 100% of patients (n=30) immediately post-operatively and 2 patients got pregnant after the surgery and delivered normally in the same hospital without any difficulty and with the maintenance of the effectiveness of surgery. Two patients developed first degree uterovaginal prolapse after surgery and were initially having 2nd degree prolapse. Severe blood loss and visceral organ injury were not observed in any enrolled patients while post operative fever and recurrence were observed in 2 (6.67%) and 2 (6.67%) patients respectively.

Conclusion: The use of an autologous rectus sheath as a sling in uterine conservation surgery for uterovaginal prolapse is an efficient, safe and cost-efficient approach, especially for younger women needing uterine conservation surgery.

Key Words: Surgery, Pregnant, Prolapse

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INTRODUCTION

Uterovaginal prolapse is one of the most common presentations among women attending gynecological OPD. Prevalence of pelvic organ prolapse (POP) among young to middle-aged women in Pakistan and worldwide, shows similar risk factors, morbidity and complications.[1,2]

In Pakistan, the prevalence of utero-vaginal prolapse is about 1.7%.[3] Malnutrition, low socioeconomic position and unskilled birth attendants are all contributing factors to this

high incidence in Pakistan. Young women are more likely to have uterovaginal prolapse, therefore surgical therapy should address both the patient's symptoms and her ability to conceive.[4-6] Various conservative procedures have been reported in the past, each with advantages and disadvantages.[4]

Previously, the females with uterovaginal prolapse were treated with ring pessary[7,8] or had been treated with traditional surgical treatment which is either vaginal hysterectomy or Manchester repair but both surgical options are complicated requiring prolonged surgical time and higher surgical expertise especially when the female wants to preserve her fertility in a childbearing age.[9] The evolution in the surgical treatment of uterovaginal prolapse has resulted in the introduction of modern approaches for uterine conservation with minimal risk of complications or reoccurrence.[10]

We have a wide range of treatment options for them starting from conservative (non-surgical) options and surgical treatments with or without the conservation of the uterus. Lifestyle changes, pelvic floor exercises and the use of pessaries help these women for some or complete symptomatic relief. If these are not helpful then some conservative surgical procedures for correction of uterovaginal prolapse needs to be opted in young women and for those who are desiring fertility.[6,11-13] Manchester repair was the most commonly performed conservative procedure especially in women with cervical lengthening in the past[14] and many women suffered from menopausal symptoms if they underwent a hysterectomy for their complaints.

The invention of different abdominal sling operations is used for this purpose with their advantages and disadvantages.[15,16] Mesh sling repairs are being used with good results but recently number of the surgeries of most mesh repairs are decreased because of its long-term complications and compelling us to move towards the use of autologous tissue. As they are less time consuming, less invasive and cost effective too. All the studies that had been done up till now using rectus sheath slings are with small sample sizes. So, a large, multicentric study is planned to see the effectiveness of an autologous rectus sheath sling for the correction of uterovaginal prolapsed.[5,6,11,12,17]

The objective of this study is to evaluate the effectiveness of this procedure then it would be in top rank among all surgeries performed for UV prolapse in young females.

MATERIAL AND METHODS

The current study was a retrospective observational study carried out at the gynecology department, Indus Hospital Lahore, free of cost tertiary care hospital. The sample size of this study includes all patients who had this surgery during 2018-2022. All the enrolled patients will be followed from 10th post-operative day till 6 months after surgery. The inclusion criteria of the current study include all the patients in the reproductive age group for whom this procedure was done for uterovaginal prolapse whether they completed their family or not and wanted to conserve their uterus and for whom hysterectomy was not a suitable option because of young age group while the exclusion criteria were old age/menopausal women. All the patients who fulfilled the inclusion criteria were included in this study during the above-mentioned period. These selected patients then were booked for abdominal surgery in which a rectus sheath sling was stitched on the back of the uterus medial to the uterosacral ligament with or without plication of round ligament and Moscowitz suture. After the surgery, the follow up was started from the day 10th of surgery, the second follow up was 1 month after surgery and the last was after 6 months to assess complications of the procedure and effectiveness of the procedure in terms of her subjective relief of symptoms as well as on exam and was documented in a proforma. The record was also maintained for all those

females who get pregnant after the procedure and follow up of these was extended till delivery. Data were analyzed using SPSS 24. Continuous variables like age were reported as Mean (SD) or Median (IQR). Categorical variables like the success of the procedure were represented as frequencies and percentages.

RESULTS

In the current study, total 30 patients were enrolled. The mean age of the patients was 30(4.12) years. Based on age distribution, 20 (66.67%) patients were in the age of 18-30 years whereas 10 (33.33%) patients were observed in the age group 31-42 years. (Figure 1) Based on pre-operative presenting complaints, mass in the vagina was observed in 20 (66.67%) patients, vaginal discharge in 6 (20%) patients and backache was observed in 4 (13.33%) patients. (Figure 2) Based on the degree of prolapse, the first degree of prolapse was observed in 18 (60%) patients while the second degree of prolapse was observed in 12 (40%) patients using POP-Q classification. (Figure 3) No complications were observed intra-operatively. Minimum blood loss was observed during the operation. The success rate was observed in 100% of patients (n=30) immediately post-operatively and 2 patients got pregnant after the surgery and delivered normally in the same hospital without any difficulty and with the maintenance of the effectiveness of surgery. Two patients developed first degree uterovaginal prolapse after surgery and were initially having 2nd degree prolapse. Severe blood loss and visceral organ injury were not observed but post operative fever and recurrence were in 2 (6.67%) and 2(6.67%) patients respectively. (Table 1)

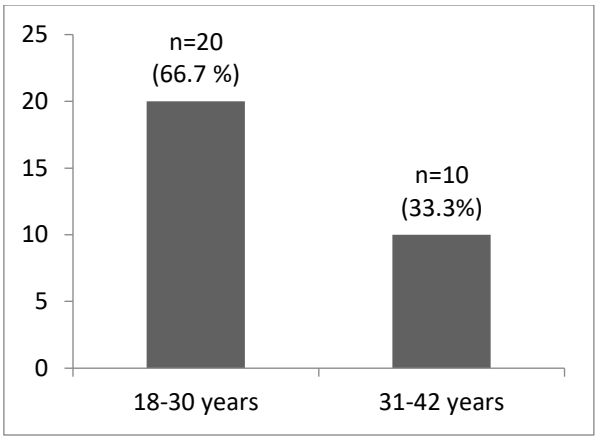

Figure 1: Age wise distribution of participants

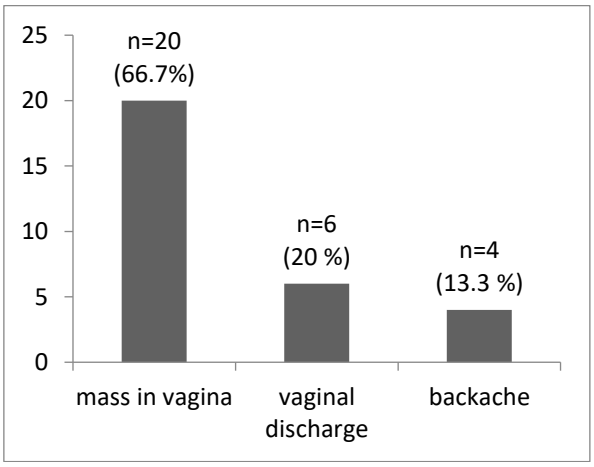

Figure 2: Distribution of participants based on pre-operative complaints

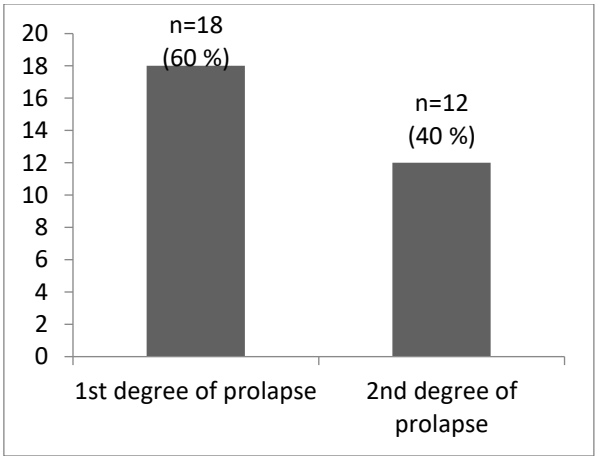

Figure 3: Distribution of participants based on the degree of prolapse.

Table 1: Post operative success rate and complications

Parameters	Frequency (%)
Success rate	30 (100%)
Visceral organ injury	00 (00%)
Severe blood loss	00 (00%)
Recurrence	2 (6.67%)
Post operative fever	2 (6.67%)

DISCUSSION

Pelvic organ prolapse (POP) treatment is especially difficult in younger patients. Currently, several novel treatment options for POP that preserve the uterus are being researched. In this

study, we make an effort to evaluate how well one of these methods works in our area of the world. As a woman gets older, POP is one of the most prevalent symptoms she may experience.[18]

In the current study, total 30 patients were enrolled. The mean age (SD) of the patients was 30(4.12) years. Based on age distribution, 66.67% of patients were in the age of 18-30 years whereas 33.33% of patients were observed in the age group 31-42 years. Based on pre-operative presenting complaints, mass in the vagina was observed in 66.67% of patients, vaginal discharge in 20% of patients and backache was observed in 13.33% of patients. Based on the degree of prolapse, the first degree of prolapse was observed in 60% of patients while the second degree of prolapse was observed in 40% of patients using POP-Q classification. No complications were observed intra-operatively. Minimum blood loss was observed during the operation. The success rate was observed in 100% of patients post-operatively. Severe blood loss and visceral organ injury were not observed in any enrolled patients while post operative fever and recurrence were observed in 2 (6.67%) and 2(6.67%) patients respectively. Another study carried out by Saima Iqbal et al. reported comparable results to our study. They enrolled 18 patients in their study. The mean age of the patients in their study was 32 (4.12) years. Except for a few patients who experienced dragging pain that lasted a mean of roughly one month, all patients had a favorable outcome from the treatment. There were no intraoperative or postoperative problems. The surgery resulted in a very small amount of blood loss. Up until this point in the post-operative follow-up phase, there have been no bowel issues.[11] Other previous studies also reported comparable results with our findings [5, 17]. Another study done by Saima Zulfiqar et al. also reported comparable results to our study. They enrolled 20 patients in their study. Eleven (55%) of the patients in the study were between the ages of 21 and 30 and nine (45%) were under the age of 40. In terms of patient parity, 9 (45%) patients had para 1, 6 (30%) had para 2 and 5 (25%) had para 3. Fifteen (75%) of the patients in this study reported experiencing a mass in the vagina, three (16%) reported experiencing back pain and two (9%) reported having vaginal discharge. Out of 20, 9 (45%) patients were cured, while 11 (55%) patients had utero-vaginal prolapse to some degree. Ninety-five percent of patients were satisfied with the surgery since their symptoms had been resolved. There were no difficulties throughout the operation. Little blood was lost throughout the surgery. In the post-operative period, one patient experienced a fever, which was treated with antipyretics and antibiotics. At the postoperative follow-up, there were no bowel issues. After surgery, there was no extended hospital stay. Nineteen individuals (95%) who underwent the procedure were successful. Recurrence occurred in one patient, who had a history of intermittent constipation and a chronic cough.[19] Another study also reported consistent results with our study.[6] Even though abdominal Sacro hysteropexy has a high success rate of 95%, numerous studies[20-22] reveal that women still need reoperations within the first year of the treatment. Infection and mesh erosion complications also

happened. This surgery requires less time. It is a simple process that typically takes 30 minutes. It loses less blood and has no bladder damage risk. Since it is a simple method, residents may implement it with little training.[23]

CONCLUSION

The use of an autologous rectus sheath as a sling in uterine conservation surgery for uterovaginal prolapse is an efficient, safe and cost-efficient approach, especially for younger women needing uterine conservation surgery. This method may be used in limited resource environments, resulting in a minimal hospital stay with no chance of recurrence.

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Conflict of interest: None

AUTHOR'S CONTRIBUTION

SA: Idea conceived, Supervision and review critically
AA: Data collection and manuscript writing

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