International Journal of Reproduction, Contraception, Obstetrics and Gynecology
Moharana MR et al. Int J Reprod Contracept Obstet Gynecol. 2025 Oct;14(10):3507-3510
www.ijrcog.org
pISSN 2320-1770 | eISSN 2320-1789

DOI: https://dx.doi.org/10.18203/2320-1770.ijrcog20252926

Case Series

Surgical management of uterine prolapse by sacrohysteropexy: a case series

Manas R. Moharana*, Banishree Pati

Department of Obstetrics and Gynecology, Raipur Institute of Medical Sciences, Raipur, Chhattisgarh, India

Received: 12 August 2025
Revised: 07 September 2025
Accepted: 08 September 2025

***Correspondence:**
Dr. Manas R. Moharana,
E-mail: manasmoharan06@gmail.com

ABSTRACT

Abdominal sacrohysteropexy is a transabdominal procedure where the prolapsed uterus is suspended from the sacral promontory by the use of mesh to restore the normal anatomical position. The purpose of our study was to assess the safety of sacrohysteropexy surgery by determining intraoperative and post-operative complications and its effectiveness in management of UV prolapse by pelvic organ prolapse recurrence on follow up. A rospective study was carried out in the department of gynaecology and obstetrics, RIMS medical college, Raipur, Chhattisgarh from January 2023 to December 2023. Eight young patients <40 years of age with 2nd degree or more uterovaginal prolapse, admitted through OPD were selected for abdominal sacrohysteropexy with polypropelene mesh. Variables of study including duration of surgery, any intra-operative and post operative complications, need of intra operative blood transfusion, post operative hospital stay; recurrence of POP in 06 months follow up were recorded. In these 8 patients, mean age was 33.5 years. All were married with parity 2 or more and all of them had only vaginal deliveries and had 3rd degree pelvic organ prolapse (POP). Duration of surgery was around 90 mins. In our cases intra operative blood loss was around 250 ml. Post operatively no case developed any complications and all were discharged on 5th post operative day. No recurrence was noticed in 06 months follow up. Abdominal sacrohysteropexy is a safe and an effective surgical treatment in terms of overall anatomical and functional outcome, intraoperative and postoperative complications, post operative recovery and length of hospital stay in women who desire uterine and hence fertility preservation.

Keywords: Uterine prolapse, Abdominal sacrocolpopexy, 15-49 years age females, Fertility preservation

INTRODUCTION

Abdominal sacrohysteropexy is considered gold standard for uterine prolapse surgery.[1] It is a transabdominal procedure where the prolapsed uterus is attached to sacral promontory using polypropylene mesh to restore normal anatomical position of uterus. One in 3 women are affected by POP and 1 in 10 require a surgical procedure for its correction during their lifetime.[2,3] POP is associated with various clinical symptoms including pelvic discomfort, vaginal bulge, urinary incontinence, urinary tract symptoms, fecal incontinence/sexual dysfunction. These often have a significant negative impact on their quality of life (QOL)/ even, serious life-threatening consequences.[4-9]

Conservative management of apical prolapse is commonly used as first line treatment and the main option for women who have not completed their family or keen to keep their menstrual functions. POP with a dominant apical defect can be treated using a number of surgical approaches and this choice can be one of the most challenging problems in urogynaecology.[10,11] However, high level evidence indicates that abdominal and laparoscopic sacrohysteropexy (LSC) result in better anatomical outcomes compared to sacrospinous ligament fixation and transvaginal mesh insertion.[11] Literature shows success rates of abdominal sacrohysteropexy to be more than 90% and is indicated in young patients who have 2nd degree or more uterovaginal prolapse. Other procedures for

uterovaginal suspension are sacrospinous ligament fixation and modified uterosacral ligament suspension.[12,13]

The purpose of our study was to assess the safety of sacrohysteropexy surgery by determining intraoperative and post-operative complications and its effectiveness in management of UV prolapse by POP recurrence on follow up.

CASE SERIES

This study was conducted on 8 young prolapse scheduled to undergo abdominal sacrohysteropexy in department of obstetrics and gynecology, RIMS hospital, Raipur in the year 2023 over a period of 12 months.

When a patient came to OPD with a complain of something coming out of vagina, she was examined and prolapse was confirmed by pelvic examination. Inclusion criteria for our study were age<40 years and with 2nd degree or more POP. Each patient was counselled for uterus preserving surgery and willing patients were admitted.

After getting admitted all routine investigations like, CBC, ABO Rh typing, FBS, PPBS, LFT, KFT, USG pelvis, urine routine and microscopy, PAP Smear, ECG, chest X-ray were done. Endometrial biopsy was done before the major procedure.

Informed written consent was taken from all patients after explaining the risk of recurrence and mesh erosion. Medical fitness for surgery was taken for all patients and preanesthetic checkup was done. Preoperative bowel preparation was done in all patient and standard preoperative medications given. Nonabsorbable polypropelene macroporous monofilament surgical mesh was used in all cases.

Procedure

Laparotomy done under spinal anaesthesia and abdomen was entered by a Pfannenstiel incision, intraoperative findings noted in each case. Uterus was elevated and held with uterine holding forceps. Retroperitoneum was dissected starting from sacral promontory to posterior aspect of uterus at the level of attachment of uterosacral ligament after identifying ureter of the right side. Left side was avoided due to proximity to bowel. Suspension was done by fixing the mesh on uterine site at the level of uterosacral ligament using 2-0 prolene suture. The distal part of mesh was fixed to anterior longitudinal ligament at the level of sacral promontory. Care was taken not to injure the veins present over anterior longitudinal ligament. The mesh was fixed at both ends by taking 2 sutures at each end. At the end mesh was reperitonealised and abdomen was closed.

Postoperative IV fluids, antibiotics and analgesics were given. Oral fluids were started after 8 hours and gradually diet was introduced. Surgical site dressing was done after 72 hours. urinary catheter was removed after 24 hours. Patient was asked for follow up after 3 months and following complications were checked for, recurrence of prolapse according to POP-Q classification, presence of exposed mesh, dyspareunia, constipation.

Table 1: Patient profile.

Variables	Profile
Avg age (in years)	33.5
Menopausal status	Not yet achieved
Incontinence	None
Degree of prolapse	Stage 3
Type of gynaecological surgery (previous operation)	B/L tubal ligation
BMI (kg/m^2)	22±2
Parity	>2

All 8 patients had stage 0 (POPQ classification) in per speculum examination at 3 months and 6months of follow-up. For all patients, the post-op period was uneventful.

Table 2: POP-Q classification.

Stages	Classification
Stage 0	No descent of pelvic structures on straining
Stage 1	Leading edge of prolapse>1 cm above hymen
Stage 2	Leading edge of prolapse at level of introitus,from 1cm above to 1cm below the hymen
Stage 3	Leading edge of prolapse>1cm below hymen
Stage 4	Complete vaginal vault eversion.

All our patients had stage 3 prolapse before surgery and in postoperative follow up after 3 and 6 months, all patients had stage 0 prolapse according to POP-Q classification.

Table 3: Surgical complications.

Variables	
Operative time	90±30 minutes
Estimated blood loss (ml)	250±50 ml
Hospital stays (days)	5±1 days
Complications	None

There were no complications encountered in our patients. The average blood loss was around 250 ml and the average hospital stay was around 5 days.

DISCUSSION

Abdominal sacrohysteropexy with polypropylene mesh is a safe and effective surgery for correction of apical prolapse in young patients. It also maintains the axis of vagina which is not seen in vaginal sacrospinous fixation surgery. Instead of abdominal approach we can suspend pop to sacrospinous ligament vaginaly. Advantages of vaginal

approach are short surgical time, and short hospital stay but vagina can become narrow, short and axis is also deviated in unilateral sacrospinous fixation.[14] It can be done by laparoscopic approach. Definitely, laparoscopic surgery has more advantages over open surgery; less blood loss and short hospital stay are advantages of the laparoscopic surgery.[15-17] Proceeded for open abdominal approach. Mesh erosion is one of the complications of this surgical approach but fortunately no patient presented with it during the follow up period. In our study, patients were called for follow-up after 3 and 6 months of surgery to check for recurrence of prolapse by per speculum exam, urinary symptoms, constipation, dyspareunia, mesh erosion and back pain. Our follow-up is still continuing.

Table 4: Comparison with other studies.

Study	Mean age (in years)	Mean parity	Grade of prolapse	Success rate	Recurrence rate	Follow up
Moiety et al[18]	46	100% multi	2/3	93.9%	6.1%	6 months
Demicri and Leron[19]	-	-	3	95%	5%	25 months
Barranger et al[20]	35.7	-	2/3	93.4%	6.6%	44.5 months
Ali et al[21]	75% <35 25% <40	50% >para 2 50%=para 1 or para 2	2/3	100%	0%	6 months
Tahir et al[22]	30	83.3% multi 16.6% nulli	2	83.3%	16.6%	12 months
This study	33.5	100% multi	3	100%	0%	6 months

The sample size for women who underwent abdominal sacrohysteropexy in this study was 8 cases near to the number of cases in study by Tahir et al.[22] The mean age for women who underwent abdominal sacrohysteropexy in our study was 33.5 years whereas in studies by Tahir et al and Barranger et al the mean ages were 30 years and 35.7 years respectively whereas in studies by Moiety et al it was 46 years and in study by Ali et al 75% women were <35 years of age and 25% were between 35 to 40 yrs of age.[18,20,21] The mean parity in our study >2 ,whereas study by Tahir et al had 83.3% multipara and 16.6% nullipara.[22] All of the women in our study had 3rd degree prolapse which was comparable to studies by Barranger et al and Demirci and Leron, Moiety et al and Ali et al. The similar age of all patients for comparison and grade of prolapse being the same, low parity and early follow up after abdominal sacrohysteropexy showed 100% success rate as compared to other studies. Study did not experience any case of recurrence post-operatively, while all other studies had recurrences of prolapse after surgery.[18-21]

Barranger et al has also mentioned about 1 mesh rupture and 4 intra-op complications encountered in their study.[20] Follow-up period of this study was 6 months which was similar to study by Moiety et al and Ali et al and less as compared to studies by Tahir et al, Barranger et al and Demirci and Leron where the follow up period was 12 months, 44.5 months and 25 months respectively.[18-22]

Limitations of our study was small size of study group, short follow-up period and lack of a comparison group.

CONCLUSION

Abdominal sacrocolpopexy with polypropylene mesh can be considered as and effective treatment method for young female with POP who want to preserve their uterus.

The surgery is quite safe with minimal complications and easy to perform with a short learning curve.

In future expertise by minimally invasive methods will give better patient outcomes with reduced morbidity.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: Not required

REFERENCES

1. Maher C, Feiner B, Baessler K, Glazener CMA. Surgical management of pelvic organ prolapse in women. Cochrane Database of Systematic Rev. 2010;(4):CD004014.
2. Swift S, Woodman P, O'Boyle A, Kahn M, Valley M, Bland D, 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(3):795-806.
3. Wu JM, Matthews CA, Conover MM, Pate V, Jonsson FM. Lifetime risk of stress urinary incontinence or pelvic organ prolapse surgery. Obstet Gynecol. 2014;123(6):1201-6.
4. Obinata D, Yamaguchi K, Ito A, Murata Y, Ashikari D, Igarashi T, et al. Lower urinary tract symptoms in female patients with pelvic organ prolapse: efficacy of pelvic floor reconstruction. Int J Urol. 2014;21(3):301-7.
5. Handa VL, Cundiff G, Chang HH, Helzlsouer KJ. Female sexual function and pelvic floor disorders. Obstet Gynecol. 2008;111(5):1045-52.
6. Slieker-ten Hove MCP, Pool-Goudzwaard AL, Eijkemans MJC, Steegers-Theunissen RPM, Burger CW, Vierhout ME. The prevalence of pelvic organ prolapse symptoms and signs and their relation with

bladder and bowel disorders in a general female population. Int Urogynecol J. 2009;20(9):1037-45.
7. Adjoussou SA, Bohoussou E, Bastide S, Letouzey V, Fatton B, de Tayrac R. Prévalence des troubles fonctionnels et associations anatomo-fonctionnelles chez les femmes présentant un prolapsus génital. Progrès en Urol. 2014;24(8):511-7.
8. Lucassen EA, la Chapelle CF, Krouwel E, Groeneveld M. Renal failure caused by severe pelvic organ prolapse. BMJ Case Rep. 2019;12(7):e229318.
9. Miyagi A, Inaguma Y, Tokoyoda T, Nakajima T, Sezaki R, Matsukawa T. A case of renal dysfunction caused by pelvic organ prolapse. CEN Case Rep. 2017;6(2):125-8.
10. Barber MD, Maher C. Apical prolapse. Int Urogynecol J. 2013;24(11):1815-33.
11. Maher CM, Feiner B, Baessler K, Glazener CMA. Surgical management of pelvic organ prolapse in women: the updated summary version Cochrane review. Int Urogynecol J. 2011;22(11):1445-57.
12. Snyder TE, Krantz KE. Abdominal-retroperitoneal sacralcolpopexy for the correction of vaginal prolapse. Obstetricsand Gynecol. 1991;77(6):944-9.7.
13. Timmons MC, Addison WA. Abdominal sacral colpopexy in 163 women with posthysterectomy vaginal vault Prolapse and enterocele: evolution of operative techniques. J Reproduct Medic Obstetr Gynecologist. 1992;37(4):323-7
14. Muhlendorf IK, Browning GM. Vaginal length and sexual function after colpopexy for complete uterovaginal eversion. Am J Obstet Gynecol. 1993;169(2 Pt 1):284-7.
15. Velanovich V. Laparoscopic versus open surgery: a preliminary comparison of quality-of-life outcomes. Surg Endosc. 2000;14(1):16-21.
16. Freeman RM, Pantazis K. A randomized controlled trial of abdominal versus laparoscopic sacrocolpopexy for the treatment of post-hysterectomy vaginal vault prolapse: LAS study. Int Urogynecol J. 2013;24(3):377-84.
17. Klauschie JL, Suozzi BA, O'Brien MM. A comparison of laparoscopic and abdominal sacralcolpopexy: objective outcome and perioperative differences. Int Urogynecol J Pelvic Floor Dysfunction. 2009;20(3):273-9.
18. Moiety FM, Hegab HM, Ghanem IA, Zedan WM, Salem HA. Abdominal sacrohysteropexy for uterovaginal prolapse: a prospective study on 33 cases. Arch Gynecol Obstet. 2010;281(4):631-6.
19. Demirci F, Ozdemir. Adominal sacrohysteropexy in young women with uterovaginal prolapse: result of 20 cases. J Reprod Med. 2006;51(7):539-43.
20. Barranger E, Fritel X, Pigne A. Abdominal sacrohysteropexy in young women with uterovaginal prolapse; long term follow up. Am J Obstet Gynecol. 2003;189(5):1245-50.
21. Ali R, Ehsan R, Niaz G, Abid F. Abdominal sacrohysteropexy for uterine vaginal prolapse and preservation of reproduction. Professional Med J. 2021;28(5):652-5.
22. Tahir S, Yasmin N, Kanwal S, Aleem M. Abdominal sacrohysteropexy in young women with uterovaginal prolapse. APMC. 2012;6(1):75-80.

Cite this article as: Moharana MR, Pati B. Surgical management of uterine prolapse by sacrohysteropexy: a case series. Int J Reprod Contracept Obstet Gynecol 2025;14:3507-10.