Indian Journal of
Gynecology

Open Science Publications

Volume 5, Issue 1 - 2025

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# Successful Management of Recurrent Vaginal Vault Prolapse

## Case Report

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**Article Information:** **Submission:** 05/06/2025; **Accepted:** 04/07/2025; **Published:** 07/07/2025



### Abstract

Vault prolapses is a distressing complication following hysterectomy. Apicalprolapse, particularly in the form of vault descent, remains a critical concern due to its impact on quality of life and high risk of recurrence after initial repair. Thisrequires tailored management. Sacrospinous ligament fixation, being a widelyaccepted surgical approach, has a reasonably good success rate. Here we describe a case of recurrent vaginal vault prolapse in a postmenopausal woman who hadvault prolapse repair done 2 years ago.

**Keywords:** Recurrent vaginal vault prolapsed; Sacrospinous ligament fixation

## Introduction

Vaginal vault prolapse is a significant long-term sequela of hysterectomy, with a reported prevalence of 11% to 43%, depending on surgical technique and patient risk factors [1]. As the aging female population grows due to increased longevity from healthier lifestyle, health-seeking behaviour, medical advancement, and better health care access, the incidence of pelvic organ prolapse (POP) is expected to rise [2]. Projections suggest that in the next 10-15 years, millions of women worldwide will be affected, with nearly 40% requiring surgical intervention [3]. Sacrospinous ligament fixation (SSLF) has gained widespread acceptance as a native tissue repair technique, especially in postmenopausal women [4]. Despite success rates of up to 97%[5], it remains a clinical challenge, particularly in patients with inadequate previous apical suspension and unaddressed compartmental defects. Furthermore, emerging data from multicenter registries emphasize that prior prolapse surgery is a significant predictor of recurrence, reinforcing the need for individualized, compartment-specific interventions [6].This case illustrates the complexity of managing recurrent vault prolapse following failed native tissue repair. It signifies the surgical considerations, anatomical precision, and long-term strategies required for optimizing outcomes in such high-risk cases.

## Case-Report

A 67-year-old postmenopausal patient presented to gynecology OPD of tertiary care centre with complaints of something protruding from the vagina. She described progressive worsening of the prolapse along with the sensation of dragging and difficulty in completely emptying her bladder but denied any urgency or stress incontinence. She had H/o 2 FTNDS and had undergone a Total Abdominal Hysterectomy 15 years earlier for symptomatic fibroids. She also gave history of vault prolapse 2 years following Total Abdominal Hystrectomy and underwent vaginal vault prolapse repair which failed and she had recurrence within 3 months and presented to us in gynecology OPD with vault prolapse. Their was no history of chronic pulmonary disease or any other comorbidities. On general examination she was averagely built and nourished and systemic examination was within normal limits. Per speculum examination showed a significant vault descent with the apex of the vagina outside the introitus. There was associated Grade 3 cystocele and Grade 2 rectocele. Vaginal mucosa was thin atrophied. On per vaginal examination, the vaginal apex was seen and there was no palpable mass or tenderness in the fornice. Rectal examination confirmed an intact sphincter tone and moderate posterior compartment laxity. Routine preoperative investigations were within normal limits.

Pre- anesthetic evaluation declared the patient fit for surgery. She was planned for vaginal sacrospinous ligament fixation (SSLF) with anterior colporrhaphy to address the combined vault and anterior compartment defects. After detailed counseling and written consent, she was admitted for elective surgery. Under spinal and epidural anesthesia, she was placed in lithotomy position. Intraoperatively, vaginal epithelium was infiltrated with a diluted adrenaline-saline solution to reduce bleeding. A vertical midline incision was created over the posterior vaginal wall, followed by precise lateral dissection to access and delineate the pararectal space. Ischial spine was palpate and 2 cm medial to it sacrospinous ligament was palpate. Then with due precaution to safeguard the pudendal neurovascular structures. Two non-absorbable sutures of 1-0 prolene were passed through the sacrospinous ligament at an Interval of about 1.5 cm and subsequently exteriorized through the posterior vaginal cuff to achieve balanced tension and optimal anatomical positioning of the vaginal vault. Reconstruction of the anterior vaginal wall was performed by reinforcing the pubocervical fascia to correct the cystocele. Redundant mucosa was excised, and layered closure done using vicryl 2-0. Hemostasis was secured, and a rectal exam confirmed no inadvertent rectal injury. No intraoperative complications occurred. Postoperatively, the patient remained hemodynamically stable. She was mobilized on day two and tolerated a regular diet. Bowel function resumed on postoperative day three. She was discharged on postoperative day four with advice on perineal hygiene, pelvic floor exercises, avoidance of heavy lifting, and constipationprevention.At her two-week follow-up, the patient reported complete resolution of vaginal bulge symptoms and no urinary complaints. Wound healing was satisfactory, and there wasno evidence of granulation tissue or suture erosion. By the six-week follow-up she reported improved quality of life, confidence, and relief from the distressing symptoms that had troubled her for over a year.

This case emphasizes the importance of individualized surgical planning in recurrent pelvic organ prolapse especially after failed native tissue repairs. Sacrospinous fixation remains a reliable approach when performed with proper technique, especially in the absence of mesh use or when synthetic material is contraindicated. Careful intraoperative identification of anatomic landmarks and selection of permanent sutures are key to avoiding recurrence. Comprehensive postoperative care and physiotherapy further enhance long-term outcomes in these patients.

## Discussion

Preoperative assessment using the Pelvic Organ Prolapse Quantification (POP-Q) system revealed significant apical descent consistent with Stage III vault prolapse and Grade 3 anterior compartment defect (cystocele), necessitating combined apical and anterior compartment repair [7]. Vaginal vault prolapse is a well-recognized late complication following hysterectomy, particularly when apical support is not adequately addressed at the time of surgery [8]. It affects up to 11.6% of women post-hysterectomy, with risk increasing among those with prior vaginal deliveries, pelvic surgeries, or connective tissue disorders [9]. The failure to suspend the vaginal apex during the initial hysterectomy predisposes to progressive descent over time [10].

Among surgical options for vault prolapse, SSLF is one of the most accepted native tissue repair techniques [11]. Anchoring the vaginal apex to the sacrospinous ligament (typically on the right side) restores apical support without requiring abdominal access, which is particularly advantageous in elderly or medically compromised women [9]. SSLF offers advantages such as short operative time, reduced hospital stay, avoidance of mesh-related complications, and is cost-effective in resource-limited settings [9]. Studies have demonstrated success rates ranging from 74–97% in restoring apical support [8]. However, the procedure is not without risks. Complications may include gluteal pain, pudendal nerve injury, vaginal axis deviation, vaginal shortening, and dyspareunia, particularly if anatomical landmarks such as the ischial spine and sacrospinous ligament are not clearly identified or if sutures are misplaced [6]. = Comparative studies have shown that while sacrospinous ligament fixation is a commonly preferred native tissue repair technique, laparoscopic sacrocolpopexy and uterosacral ligament suspension are viable alternatives with distinct advantages and limitations. Sarlos et al. demonstrated that laparoscopic sacrocolpopexy offers superior anatomical correction and higher objective success rates compared to sacrospinous fixation, though it requires longer operative time and specialized expertise [8]. Visco et al. reported that uterosacral ligament suspension achieves satisfactory apical support and may reduce the incidence of gluteal pain and vaginal axis deviation seen with sacrospinous fixation, but carries a higher risk of ureteral injury if careful dissection is not performed [12]. Maher et al. emphasized that the selection of surgical approach should be individualized, taking into account patient comorbidities, previous pelvic surgeries, and the presence of associated compartment defects [10]. ** = Intraoperative risks include hemorrhage from the presacral venous plexus, bladder or rectal injury, and trauma to nerves or vessels [10]. In this case, meticulous dissection was performed along the posterior vaginal wall, extending laterally into the pararectal space to access the sacrospinous ligament, while preserving structures like the rectum and pudendal neurovascular bundle. Permanent sutures were placed approximately 2 cm medial to the ischial spine to minimize complications and reduce the recurrence risk [12]. It is important to note that anterior compartment defects often coexist with apical prolapse, and failure to repair the associated cystocele may lead to persistence or recurrence of symptoms [10]. Postoperative pelvic floor physiotherapy has been shown to enhance long-term functional outcomes and maintain pelvic support [6]. Therefore, proper patient selection, surgeon expertise, and comprehensive postoperative care are crucial to achieve optimal outcomes and minimize recurrence. [11] In appropriately selected patients, sacrospinous ligament fixation continues to be the preferred repair method for managing vaginal vault prolapse [12].

## Conclusion

Recurrent vaginal vault prolapse following hysterectomy remains a challenging but treatable condition. Sacrospinous ligament fixation is a reliable and effective surgical option for restoring apical support in women with symptomatic vault prolapse, especially when mesh use is contraindicated or abdominal surgery is unsuitable [12].



**Citation:** Parsania K, Satia M, Badhwar V. Successful Management of Recurrent Vaginal Vault Prolapse. Indian J Gynecol. 2025;1(1): 110.

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