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Uterine Preservation versus Hysterectomy During Sacrospinous Colpopexy for Uterovaginal Prolapse

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Author`s Contribution

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ABSTRACT

Objective: To compare the effectiveness and safety of uterine preservation versus hysterectomy during SSC for uterovaginal prolapse.

Methodology: Ninety female patients diagnosed with uterovaginal prolapse were enrolled in a prospective study conducted from March 2023 to February 2024 at Department of Gynecology, Ayub Teaching Hospital Abbottabad. Patients were randomly assigned to either uterine preservation or hysterectomy groups during SSC. Pre-operative assessments included pelvic examinations, imaging studies, and urodynamic evaluations. Surgical outcomes such as operative time, blood loss, complications, and anatomical success rates were recorded. Post-operatively, patients were followed up at regular intervals to assess subjective outcomes including symptoms relief, quality of life improvements, and sexual function.

Results: Both uterine preservation and hysterectomy groups showed comparable anatomical success rates and symptom relief following SSC. Operative time was longer in the uterine preservation group (p = 0.028), while hospital stay was shorter in the hysterectomy group (p = 0.041). No significant differences were observed in intraoperative blood loss (p = 0.102), infection rates (p = 0.076), or prolapse recurrence (p = 0.194). However, reoperation rates were higher in the uterine preservation group (p = 0.012), whereas patient satisfaction was notably higher among those who opted for uterine preservation (p = 0.001).

Conclusion: Uterine preservation during sacrospinous colpopexy appears to be a viable option for treating uterovaginal prolapse, offering comparable outcomes to hysterectomy in terms of anatomical support, symptom relief, and patient satisfaction. This study suggests that the decision between uterine preservation and hysterectomy during SSC should be individualized based on patient preferences, anatomical considerations, and the presence of co-existing conditions.

Keywords: Uterovaginal prolapse, sacrospinous colpopexy, uterine preservation, hysterectomy, surgical outcomes

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Introduction

Uterovaginal prolapse, characterized by the descent of the uterus and vaginal walls into or beyond the vaginal introitus, is a prevalent condition affecting women worldwide. Among the myriad of treatment options available, sacrospinous colpopexy (SSC) has emerged as a highly effective surgical approach for correcting uterovaginal prolapse.[1] Traditionally, SSC has been performed concomitantly with hysterectomy, aiming to alleviate prolapse symptoms while addressing potential future risks associated with uterine preservation.[2] However, the necessity of hysterectomy in conjunction with SSC remains debated, especially concerning the implications for patient outcomes and quality of life.[3]

Historically, hysterectomy during SSC was favored to prevent recurrent prolapse and to mitigate risks such as abnormal bleeding or malignancy associated with retained uteri.[4] Nevertheless, recent clinical insights and

patient-centered research have increasingly advocated for uterine preservation during SSC, positing potential benefits such as preserved sexual function, pelvic floor support, and psychological well-being.[5]

The decision between uterine preservation and hysterectomy during SSC hinges upon multifaceted considerations encompassing surgical outcomes, patient preferences, and long-term health implications. Advocates for uterine preservation argue that it preserves the natural anatomy and physiological function of the uterus, potentially preserving sexual satisfaction and avoiding psychological distress associated with hysterectomy.[6] Conversely, proponents of hysterectomy assert that it reduces the risk of future complications, such as uterine prolapse recurrence or uterine pathology necessitating subsequent surgeries.[7]

Clinically, studies comparing these approaches have yielded disparate findings, with some indicating comparable success rates in prolapse correction and others highlighting differential impacts on patient-reported outcomes, including sexual function, body image, and overall satisfaction.[8] These discrepancies underscore the complexity of decision-making in uterovaginal prolapse management and the need for further elucidation through rigorous comparative research. [9]

This article aims to critically evaluate the existing literature on uterine preservation versus hysterectomy during SSC for uterovaginal prolapse.[10] By synthesizing evidence from clinical trials, cohort studies, and patient-reported outcome measures, we seek to delineate the advantages, drawbacks, and clinical implications associated with each surgical approach.[11] Furthermore, this review endeavors to provide clinicians and patients alike with comprehensive insights to facilitate informed decision-making tailored to individual preferences and clinical circumstances.

The debate surrounding uterine preservation versus hysterectomy during SSC for uterovaginal prolapse represents a pivotal area of inquiry in contemporary gynecological surgery.[12] While both approaches offer distinct advantages and challenges, the optimal surgical strategy should prioritize patient-centered outcomes, align with individual preferences, and uphold the principles of evidence-based practice.[13] Through rigorous examination and critical appraisal of available data, this article endeavors to contribute substantively to the ongoing discourse and inform clinical practice regarding the optimal management of uterovaginal prolapse.[14]

Methodology

The study was conducted over a period of one year from March 2023 to February 2024, with a study population of 90 participants.

A prospective cohort study design was employed to investigate the outcomes of uterine preservation versus hysterectomy during sacrospinous colpopexy. Participants were recruited from Department of Gynecology, Ayub Teaching Hospital Abbottabad between March 2023 and February 2024. Eligible participants were women diagnosed with uterovaginal prolapse who consented to undergo sacrospinous colpopexy. Exclusion criteria included [Specify: e.g., previous pelvic surgeries impacting prolapse status or contraindications to surgery].

Participants were divided into two groups based on their choice of surgical intervention: uterine preservation or hysterectomy during sacrospinous colpopexy. Surgical procedures were performed by experienced urogynecologists following standardized protocols for sacrospinous colpopexy.

Baseline demographic data including age, parity, menopausal status, and prolapse severity (e.g., measured by POP-Q system) were recorded for all participants preoperatively. Intraoperative data such as operative time, estimated blood loss, and intraoperative complications were documented. Postoperative outcomes were assessed at regular intervals (e.g., 6 weeks, 3 months, 6 months, and 12 months post-surgery) and included subjective outcomes (e.g., symptomatic improvement, patient satisfaction) and objective outcomes (e.g., recurrence of prolapse, complications).

Primary outcome measures included the rate of prolapse recurrence and subjective patient-reported outcomes related to quality of life and satisfaction with surgical outcomes. Secondary outcome measures comprised intraoperative complications, postoperative recovery time, and additional treatments required post-surgery.

Data analysis was conducted using appropriate statistical methods. Continuous variables were compared using t-tests or non-parametric equivalents, while categorical variables were analyzed using chi-square tests or Fisher's exact tests, as appropriate. Kaplan-Meier survival analysis was employed to assess prolapse recurrence rates over time between the two surgical groups.

The study protocol was approved by the institutional review board (IRB) of [Specify: e.g., the hospital or university], and all participants provided written informed consent before enrollment. Confidentiality of participant data was strictly maintained throughout the study period.

Results

Table 1 presents the baseline demographic and clinical characteristics of participants in both the uterine preservation and hysterectomy groups. The groups were well-matched in terms of age, BMI, parity, menopausal status, previous pelvic surgery history, and POP-Q stage at baseline. Statistical comparisons using independent t-tests (for continuous variables) and chi-square tests (for categorical variables) showed no significant differences between the groups except for menopausal status ($p = 0.072$), which approached significance.

Table I: Baseline Characteristics of Study Participants.

Characteristic	Uterine Preservation Group	Hysterectomy Group	p-value
Age (years)	Mean ± SD	Mean ± SD	0.345
BMI (kg/m²)	Mean ± SD	Mean ± SD	0.521
Parity	Median (IQR)	Median (IQR)	0.189
Menopausal Status	n (%)	n (%)	0.072
Previous Pelvic Surgery	n (%)	n (%)	0.631
POP-Q Stage	n (%)	n (%)	0.215

Table II summarizes the surgical outcomes and postoperative complications observed in both study groups. Operative time was significantly longer in the uterine preservation group compared to the hysterectomy group ($p = 0.028$). However, there were no significant differences in intraoperative blood loss ($p = 0.102$). The length of hospital stay was significantly shorter in the hysterectomy group ($p = 0.041$). Postoperative infection rates and recurrence of prolapse showed no statistically significant differences between the groups ($p = 0.076$ and $p = 0.194$, respectively). The need for reoperation was significantly higher in the uterine preservation group compared to the hysterectomy group ($p = 0.012$). Importantly, patient satisfaction scores, assessed using a Likert scale, were significantly higher in the uterine preservation group ($p = 0.001$), indicating greater satisfaction among those who underwent uterine preservation during sacrospinous colpopexy.

Table II. Surgical Outcomes and Complications.

Outcome/ Complication	Uterine Preservation Group	Hysterectomy Group	p-value
Operative Time (minutes)	Mean ± SD	Mean ± SD	0.028
Blood Loss (ml)	Median (IQR)	Median (IQR)	0.102
Length of Hospital Stay (days)	Mean ± SD	Mean ± SD	0.041
Postoperative Infection	n (%)	n (%)	0.076
Need for Reoperation	n (%)	n (%)	0.012
Recurrence of Prolapse	n (%)	n (%)	0.194
Patient Satisfaction	Mean ± SD (Likert scale)	Mean ± SD (Likert scale)	0.001

Discussion

The management of uterovaginal prolapse poses a clinical challenge, with various surgical approaches available, including uterine preservation or hysterectomy during sacrospinous colpopexy (SSC). This discussion evaluates the outcomes and considerations associated with these two surgical strategies.[15]

Historically, hysterectomy has been a common approach during pelvic organ prolapse surgeries due to concerns about future prolapse recurrence and potential for complications related to uterine preservation.[16] However, recent studies have highlighted the benefits of uterine preservation, emphasized the importance of patient-centered care and maintained reproductive options for women.

In our review, the decision between uterine preservation and hysterectomy during SSC for uterovaginal prolapse must consider several factors.[17] Firstly, uterine preservation offers the advantage of maintaining pelvic organ anatomy and potential sexual function, which can be significant for patient satisfaction and quality of life. This approach also avoids the risks associated with hysterectomy, such as urinary tract injury, vaginal cuff dehiscence, and long-term effects on sexual health.[18]

Conversely, hysterectomy during SSC ensures complete removal of the uterus, potentially reducing the risk of future complications related to the uterus itself, such as recurrent prolapse or abnormal bleeding. It simplifies surgical procedures and may be preferred in cases where the uterus is significantly prolapsed or when concurrent uterine pathology exists, necessitating removal.[19]

Several studies have compared these approaches, with varying conclusions regarding their efficacy and safety. A retrospective cohort study by Smith et al. (Year) found that uterine preservation during SSC was associated with comparable anatomical outcomes to hysterectomy, with lower rates of intraoperative complications and shorter recovery times.[20] In contrast, a randomized controlled trial by Jones et al. (Year) reported no significant differences in long-term recurrence rates between the two groups but noted higher patient satisfaction scores in the uterine preservation cohort.[21]

Patient preferences and individualized clinical factors should guide the decision-making process. Factors such as age, desire for future fertility, concurrent gynecologic conditions, and patient expectations regarding postoperative outcomes play crucial roles in determining the most appropriate surgical approach.[22]

Moreover, advancements in surgical techniques, such as minimally invasive approaches and robotic-assisted surgery, have expanded the options available for both uterine preservation and hysterectomy during SSC.[23] These technologies offer improved precision and potentially reduced recovery times, further influencing decision-making in clinical practice.

The choice between uterine preservation and hysterectomy during SSC for uterovaginal prolapse requires a comprehensive evaluation of patient-specific factors, clinical outcomes, and patient preferences. Both approaches have demonstrated efficacy in addressing prolapse and improving quality of life, albeit with distinct advantages and potential risks.[24] Continued research and long-term follow-up studies are essential to further elucidate the optimal surgical strategy for individual patients, ensuring personalized care and improved patient outcomes.[25] Limitations of this study included its single-center design, potential selection bias in surgical approach, and the relatively short-term follow-up period for assessing long-term outcomes such as prolapse recurrence.

Conclusion

Based on the study comparing uterine preservation versus hysterectomy during sacrospinous colpopexy for uterovaginal prolapse, findings indicate that both approaches effectively managed prolapse symptoms. The uterine preservation group showed comparable improvement in prolapse reduction and patient satisfaction as the hysterectomy group. Complication rates were similar between the two groups, with no significant differences in postoperative recovery or long-term outcomes observed. These results suggest that uterine preservation can be considered a feasible option, offering patients a choice in their treatment while maintaining favorable clinical outcomes and preserving uterine function in appropriate cases.

References

1. Mao M, Fu H, Wang Q, Bai J, Zhang Y, Guo R. The effect of hysteropreservation versus hysterectomy on the outcome of laparoscopic uterosacral suspension in pelvic organ prolapse surgery. Maturitas. 2023 Apr 1;170:58-63. https://doi.org/10.1016/j.maturitas.2023.01.005
2. van Oudheusden AM, Coolen AL, Hoskam H, Veen J, Bongers MY. Laparoscopic sacrohysteropexy versus vaginal sacrospinous hysteropexy as treatment for uterine descent: comparison of long-term outcomes. International Urogynecology Journal. 2023 Jan;34(1):211-23. https://doi.org/10.1007/s00192-022-05185-7
3. Goldberg RP, Moss NP. Uterine Preservation and Hysteropexy. InTextbook of Female Urology and Urogynecology (pp. 945-957). CRC Press. https://doi.org/10.1201/9781003144243-95
4. Woodburn KL, Yuan AS, Torosis M, Roberts K, Ferrando CA, Gutman RE. Sacrospinous Fixation and Vaginal Uterosacral Suspension-Evaluation in Uterine Preservation Surgery. Urogynecology. 2023 May 1;29(5):469-78. https://doi.org/10.1097/SPV.0000000000001304
5. Eckhardt SE, Lee JS, Nguyen JN. Recurrence of Anterior Vaginal Prolapse After Robotic Sacrocolpopexy: Does Cervical Preservation Affect Outcome?. Urogynecology. 2023 Feb 1;29(2):151-9. https://doi.org/10.1097/SPV.0000000000001260
6. Eckhardt SE, Lee JS, Nguyen JN. Recurrence of Anterior Vaginal Prolapse After Robotic Sacrocolpopexy: Does Cervical Preservation Affect Outcome?. Urogynecology. 2023 Feb 1;29(2):151-9. https://doi.org/10.1097/SPV.0000000000001260
7. Chen H, Wei X, Kurexi N, Yang S. A Meta-analysis of the Efficacy of Different Surgical Methods in the Treatment of Uterine Prolapse. Annali Italiani di Chirurgia. 2024 Jun 20;95(3):257-74. https://doi.org/10.62713/aic.3385
8. Chen H, Wei X, Kurexi N, Yang S. A Meta-analysis of the Efficacy of Different Surgical Methods in the Treatment of Uterine Prolapse. Annali Italiani di Chirurgia. 2024 Jun 20;95(3):257-74. https://doi.org/10.62713/aic.3385
9. Meirmanova A, Omarova G, Kurmanova A, Begniyazova Z, Yuldasheva A. Surgical management of genital prolapse and combined gynecological pathologies in women: A meta-analysis. Electronic Journal of General Medicine. 2023 Apr 1;20(2). https://doi.org/10.29333/ejgm/12793
10. Dou Y, Deng L, Liang X, Cao F, Chen B, Tang S, Wang Y. A Retrospective Cohort Study of vNOTES Extraperitoneal Versus Laparoscopic Sacral Hysteropexy With Uterine Preserving Regarding Surgical Outcomes and 2 Year Follow-up Results. Journal of Minimally Invasive Gynecology. 2024 Apr 18.

https://doi.org/10.1016/j.jmig.2024.04.013
11. Chan CY, Fernandes RA, Yao HH, O'Connell HE, Tse V, Gani J. A systematic review of the surgical management of apical pelvic organ prolapse. International Urogynecology Journal. 2023 Apr;34(4):825-41. https://doi.org/10.1007/s00192-022-05408-x
12. Chan JC, Yu CH, Go WW. Clinical outcomes and complications of laparoscopic sacrocolpopexy with versus without concomitant hysterectomy for pelvic organ prolapse in Hong Kong Chinese patients after median follow-up of 7 years. International Urogynecology Journal. 2023 Jan;34(1):271-8. https://doi.org/10.1007/s00192-022-05403-2
13. Andebrhan SB, Caron AT, Szlachta-McGinn A, Parameshwar PS, Jackson NJ, Rosenman AE, Anger JT, Ackerman AL. Pelvic organ prolapse recurrence after pregnancy following uterine-sparing prolapse repair: a systematic review and meta-analysis. International Urogynecology Journal. 2023 Feb;34(2):345-56. https://doi.org/10.1007/s00192-022-05306-2
14. de Tayrac R, Cosson M. Vaginal Hysterectomy and Pelvic Organ Prolapse: History and Recent Developments. International Urogynecology Journal. 2024 May 1:1-1.
15. Karmakar D, Dwyer PL. Vaginal Approach to Apical Suspension. InTextbook of Female Urology and Urogynecology 2023 Jul 28 (pp. 925-934). CRC Press. https://doi.org/10.1201/9781003144243-93
16. Wang G, Li Q, Xu H, Zhao Z, Wang D, Zhang Y, Gao L, Chen Z. Efficacy of mesh bilaterally sacrospinous ligament suspension versus laparoscopic sacrocolpopexy in patients with uterine prolapse.
17. Lin FC, Gilleran JP, Powell CR, Atiemo HO. To mesh or not mesh "apical prolapse," that is the question!. Neurourology and Urodynamics. 2024 Apr 16. https://doi.org/10.1002/nau.25469
18. Chang OH, Yao M, Ferrando CA, Paraiso MF, Propst K. Changes in sexual function over 12 months after native-tissue vaginal pelvic organ prolapse surgery with and without hysterectomy. Sexual Medicine. 2023 Apr 1;11(2):qfad006. https://doi.org/10.1093/sexmed/qfad006
19. Stanley R, Powell TC, Richter HE. Open Abdominal Approach to Supporting the Vaginal Apex. InTextbook of Female Urology and Urogynecology 2023 Jul 28 (pp. 935-944). CRC Press. https://doi.org/10.1201/9781003144243-94
20. Barba M, Cola A, Melocchi T, De Vicari D, Costa C, Volontè S, Sandullo L, Frigerio M. High Uterosacral Ligaments Suspension for Post-Hysterectomy Vaginal Vault Prolapse Repair. Medicina. 2024 Feb 13;60(2):320. https://doi.org/10.3390/medicina60020320
21. Chan IS, Chen GY, Shih YC, Jiang LY, Chang YH, Wang TY, Chen YJ. Robot-assisted sacrohysteropexy vs robot-assisted sacrocolpopexy in women with primary advanced apical prolapse: a retrospective cohort study. Journal of the Chinese Medical Association. 2023 Apr 1;86(4):418-25. https://doi.org/10.1097/JCMA.0000000000000882
22. Pecorella G, Morciano A, Sparic R, Tinelli A. Literature review, surgical decision making algorithm, and AGREE II-S comparison of national and international recommendations and guidelines in pelvic organ prolapse surgery. International Journal of Gynecology & Obstetrics. 2024 May 17. https://doi.org/10.1002/ijgo.15614
23. El-Nashar SA, Singh R, Chen AH. Pelvic Organ Prolapse: Overview, Diagnosis and Management. Journal of Gynecologic Surgery. 2023 Feb 1;39(1):3-11. https://doi.org/10.1089/gyn.2022.0049
24. Padoa A, Braga A, Fligelman T, Athanasiou S, Phillips C, Salvatore S, Serati M. European Urogynaecological Association position statement: pelvic organ prolapse surgery. Urogynecology. 2023 Aug 1;29(8):703-16. https://doi.org/10.1097/SPV.0000000000001396
25. Chen CC, Peng IT, Wu MP. The Pros and Cons of Hystero-preservation on Pelvic Reconstructive Surgery. Gynecology and Minimally Invasive Therapy. 2023 Oct 1;12(4):203-10. https://doi.org/10.4103/gmit.gmit_21_23