

Case Report

Uterine Preservation in a Young Woman with Pelvic Organ Prolapse: An Interventional Case Report

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Abstract

Introduction: The prevalence of pelvic organ prolapse (POP) is approximately 2 - 20% in women under the age of 45 years. Uterine preservation appears promising for young patients who have not completed childbearing. Sacrohysteropexy is preferred when uterine preservation is desired, with cure rates of 91-100%. This report describes a woman with pelvic organ prolapse who wished to preserve her uterus and underwent abdominal sacrohysteropexy

Case Illustration: A 42-year-old woman, P2A0, presented with a bulging mass following vaginal birth, noted 6 months before admission. She continues to menstruate regularly, and her husband hopes to have another child. On Pelvic Organ Prolapse Quantification (POP-Q) examination, she was diagnosed with 4th grade uterine prolapse, 3rd grade cystocele, and 3rd grade rectocele. She decided to preserve her uterus with abdominal sacrohysteropexy. At one-month follow-up, the patient was satisfied with the procedure and reported no further complaint of mass bulging.

Discussion: Sacrohysteropexy is a promising procedure to preserve the uterus, with success rates of up to 90% at three to five years. Use of mesh may be associated with the risk of infection and mesh erosion into the vagina. Recurrence is usually caused by pelvic floor weakness, with a rate of 16.7% in a local study.

Conclusion: Abdominal sacrohysteropexy is a safe procedure for POP in young women who wish to preserve the uterus, provided it is performed carefully.

Keywords: : Pelvic organ prolapse; sacrohysteropexy; uterus conservation; young woman

Preservasi Uterus pada Prolaps Organ Panggul Wanita Muda: Sebuah Laporan Kasus Intervensi

Abstrak

Pendahuluan: Prevalensi prolaps organ panggul (POP) terjadi sekira 2 - 20% pada wanita di bawah 45 tahun. Konservasi uterus tampak menjanjikan pada pasien usia muda dan masih menginginkan anak. Sakro histeropeksi menjadi salah satu pilihan, preservasi uterus dapat mencapai 91-100%. Kasus ini melaporkan terapi konservasi uterus pada wanita POP yang masih muda dengan keinginan untuk memiliki keturunan melalui operasi sakrohisteropeksi per abdominal.

Ilustrasi Kasus: Seorang wanita 42 tahun, P2A0, datang dengan massa menonjol dari jalan lahir sejak 6 bulan. Dia masih menstruasi dan suaminya masih berharap memiliki anak. Pada pemeriksaan POP-Q didapatkan prolaps uterus derajat 4, sistokel derajat 3, dan rektokel derajat 3. Dia memutuskan konservasi uterus melalui prosedur sakro histeropeksi. Satu bulan setelah prosedur, pasien merasa puas dan tidak ada keluhan lagi.

Diskusi: Sakro histeropeksi merupakan tindakan pembedahan yang menjanjikan dengan angka tidak ada kekambuhan pada tiga sampai lima tahun mencapai 90%. Penggunaan mesh berkaitan dengan risiko infeksi dan keluar mesh dari vagina. Angka rekurensi biasanya disebabkan oleh kelemahan dasar panggul dengan prevalensi 16,7%.

Kesimpulan: Sakro histeropeksi perabdominam merupakan prosedur aman untuk POP wanita muda yang masih menginginkan adanya rahim.

Kata kunci: Konservasi uterus; prolaps organ panggul; sakro histeropeksi; wanita muda

Introduction

Globally, the prevalence of pelvic organ prolapse (POP) is around 2 to 20% in women under the age of 45 years. Pelvic organ prolapse is commonly encountered among women of reproductive age in developing countries.¹ Meanwhile, the lifetime prevalence risk reaches 30-50% among parous women over 50 years of age.² Several childbirth-related factors contribute to POP, including multiparity, instrumental delivery, prolonged labor, and delivery of a macrosomic infant.³

In general, management of POP depends on the degree of prolapse, symptom severity, the patient's general health and quality of life, and the surgeon's expertise. The definitive treatment for symptomatic prolapse or prolapse at stage II or higher is surgery. There are several options for pelvic reconstructive surgery, and vaginal hysterectomy (VH) is usually offered to patients.⁴ between January, 2007 to October, 2015. Data of the patients who had sacrohysteropexy were reviewed. Complications during surgery and post-operative period including haemorrhage, visceral injury, paralytic ileus and peritonitis were studied. Success of procedure, need of blood transfusion, hospital stay and condition on discharge and six weeks follow-up were noted. Data were analyzed using SPSS version 16. Mean $\pm$ SD was calculated for numerical, while frequencies were computed for categorical variables.

Results:

Data of 60 patients were reviewed. Early post-operative success was 100%. Duration of surgery was less than two hours in 57 (95%)

Uterine preservation seems promising for young patients who have not completed their families. Preserving the uterus in these young women with POP remains a challenge. Several surgical options are available, including Manchester repair, sacrococcyx hysteropexy, and abdominal or laparoscopic hysteropexy. Sacrococcyx hysteropexy is preferred when uterine preservation is desired, with cure

rates of 91-100%.⁵

The main aim of pelvic reconstructive surgery is to restore normal anatomy, correct defects, and return bladder, bowel, and sexual function. It also decreases the incidence of recurrence. Sacrohysteropexy is effective and safe in the management of symptomatic uterine prolapse.⁶ hysteropexy or cervicopexy Fixation of the uterine fundus to the anterior abdominal wall was popular; however, prolapse remained untreated. Therefore, sacrocervicopexy uses a strip of synthetic mesh between the anterior portion of the cervix and the sacral promontory. The ideal prosthesis should be biocompatible, inert, resistant to mechanical stress, sterile, non-carcinogenic, readily available, and affordable.⁷

This report describes a woman with pelvic organ prolapse who wished to preserve her uterus and underwent abdominal sacrohysteropexy.

Case Illustration

A 42-year-old woman, P2A0, presented with a vaginal bulge that had been present for six months. She had felt the lump 3 years earlier, after a year of vaginal delivery; however, it had not been bothersome. She had two vaginal deliveries, with the largest birthweight of 3,500 grams. She continued to menstruate regularly, and both she and her husband desired another child. She reported no urinary or bowel symptoms. On physical examination, the cough and prolapse reduction tests were negative. Pelvic Organ Prolapse Quantification (POP-Q) examination revealed stage IV uterine prolapse, stage III cystocele, and stage III rectocele (Figure 1 and Table 1). We did not perform an anal levator avulsion on pelvic floor ultrasound. After counseling, she decided to preserve her uterus through abdominal sacrohysteropexy. Under general anesthesia, a laparotomy was performed. After adhesiolysis, the vesicouterine fold

was dissected to expose the anterior cervix. A Y-shaped monofilament polypropylene mesh was utilized. The two arms of the “Y” were secured to the anterior and posterior aspects of the cervix using non-absorbable polypropylene sutures. The long arm of the mesh was then tunneled retroperitoneally and fixed to the sacral promontory (anterior longitudinal ligament) with non-absorbable sutures, ensuring a tension-free suspension. The mesh was entirely reperitonealized to prevent bowel adhesion. The steps of the procedure are shown in Figure 2. Seven days after surgery, we repeated POP-Q, and the results showed no cystocele, uterine prolapse, or rectocele (Table 2). At the one-month follow-up, the patient reported satisfaction with the procedure and no longer experienced vaginal bulging.

Figure 2 shows that the anterior and posterior uterine attachments (top left) were released. Afterward, the vesicouterine fold was opened (top right), and the mesh was

measured to form a Y-shape (bottom right). Finally, the mesh was sutured to the sacrum (bottom left)

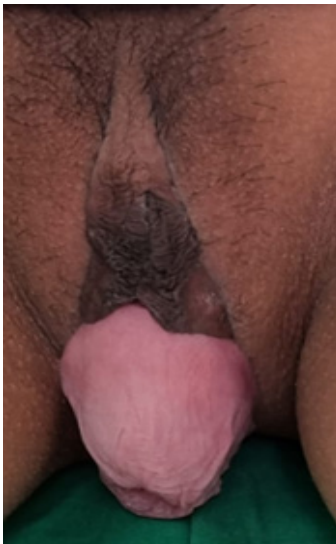


Figure 1 Patient’s condition before surgery, with 4th grade uterine prolapse, 3rd grade cystocele, and 3rd grade rectocele

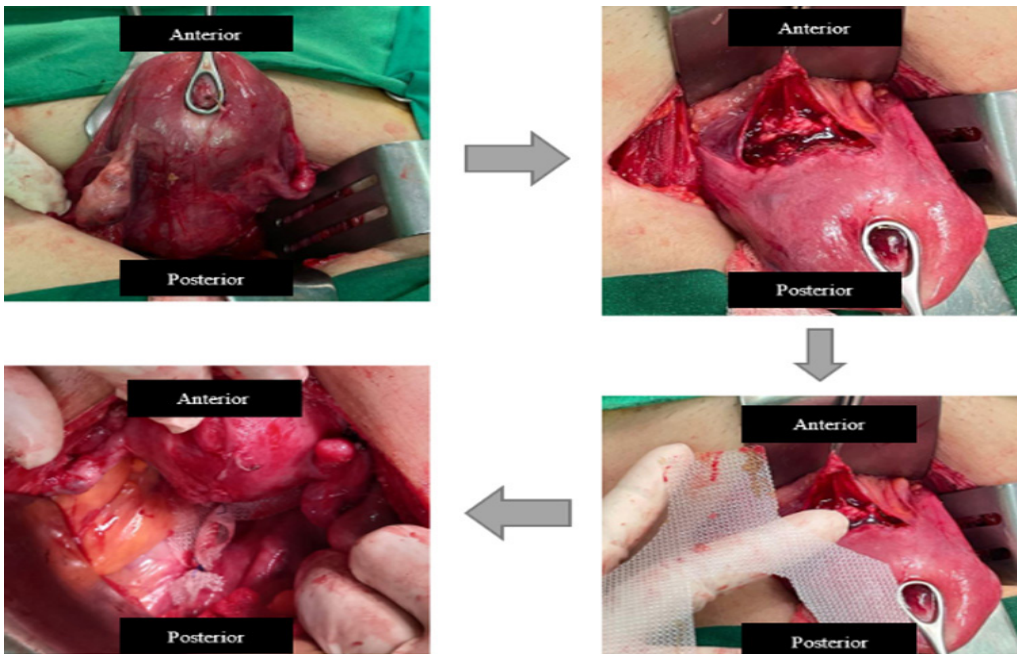


Figure 2 Steps of the abdominal sacrohysteropexy procedure.

Table 1 POP-Q Result before Surgery

Aa = +3	Ba = +5	C = +6
gh = 4	pb = 3	tv1 = 8
Ap = +3	Bp = +4	D = +4

Table 2 POP-Q Result 1 Month after Surgery

Aa = -3	Ba = -3	C = -6
gh = 4	pb = 3	tv1 = 8
Ap = -3	Bp = -3	D = -8

Table 3 Timeline of Clinical Episodes

Time	Clinical Event
3 years prior	Patient first felt a mild vaginal lump post-delivery; no intervention sought
6 months prior	Symptoms worsened with a persistent bulging mass
Admission at polyclinic	Clinical evaluation and POP diagnosis (POP-Q)
Day of surgery	Abdominal sacrohysteropexy performed
Day 7 (follow-up 1)	Immediate postoperative evaluation; POP-Q showed successful correction
1 month (follow up)	Subjective satisfaction; no recurrence; returned to daily activities

Discussion

Pelvic organ prolapse is a common health problem in women that affects quality of life and is a leading indication for hysterectomy for benign disease. In developing countries, the higher prevalence of risk factors in developing countries contributes to the occurrence of POP at a younger age.⁸

The conventional surgical treatment for POP is vaginal hysterectomy with pelvic floor reconstruction; however, the uterus is normal. Approximately 40% of women undergoing vaginal hysterectomy may subsequently develop vaginal vault prolapse.⁹ Besides,

the risk of ovarian failure after hysterectomy is reported to be two times higher than with uterus preservation.¹⁰ A study in 2013 concluded that 60% of POP women wished to avoid hysterectomy, whether acceptable as an alternative treatment.¹¹ Uterus preservation will support the pelvic floor, preserve fertility, improve sexual function, and well-being.⁴

Firstly, Manchester introduced the surgical procedure in POP in 1880. Unfortunately, it is associated with several major problems, including a 20% recurrence of prolapse and a decrease in fertility and pregnancy rates by up to 50%. Cervical stenosis is a common problem after this procedure.^{12,13} Another option is transvaginal sacrospinous fixation; however, the sacrospinous ligament is in close proximity to the sciatic nerve and the pudendal vessels and nerve. Therefore, it may lead to significant buttock and leg pain and hemorrhage.¹⁴

Sacrohysteropexy is a promising uterine-preserving procedure, with reported success rates of up to 90% at 3–5 years of follow-up. The long-term recurrence rate remains uncertain; there is still a small chance that another part of the vagina or uterus may prolapse again. Sacrohysteropexy can be performed either through an open abdominal approach or laparoscopically, including robotic-assisted techniques. The uterus is lifted and held by attaching a mesh around the cervix and then securing the other end of the mesh to the bone at the base of the spine with stitches or titanium clips. The mesh is buried under the lining of the abdomen to prevent the bowel from adhering to it.¹⁵ In our case, we lifted the uterus by attaching a synthetic mesh to the vesico-uterine fold and fixing the other mesh to the sacrum with stitches.

Use of mesh may be associated with the risk of infection and the intrusion of mesh into the vagina. In our case, one month after the procedure, the patient reported no complaint. Studies by Price N, et al.⁹ and Ayesha K, et al.⁴ between January, 2007

to October, 2015. Data of the patients who had sacrohysteropexy were reviewed. Complications during surgery and post-operative period including haemorrhage, visceral injury, paralytic ileus and peritonitis were studied. Success of procedure, need of blood transfusion, hospital stay and condition on discharge and six weeks follow-up were noted. Data were analyzed using SPSS version 16. Mean $\pm$ SD was calculated for numerical, while frequencies were computed for categorical variables.

Results: Data of 60 patients were reviewed. Early post-operative success was 100%. Duration of surgery was less than two hours in 57 (95% did not report any case of erosion, infection, or rejection of mesh.

In our case, the patient wished to become pregnant in the future; thus, this surgical procedure is one of the best available options. POP-Q examination showed improvement in the anterior, mid, and posterior compartments before and after surgery. The patient was satisfied with the procedure. Compared with vaginal sacroccyopexy and uterosacral ligament suspension, sacroccyopexy has the highest success rate, about 90%.¹⁵ However, women after sacrohysteropexy with mesh should undergo cesarean section as the method of delivery to avoid disruption of the reconstructed support.^{16,17} A larger number of women of reproductive age group are presenting with complaints of POP, seeking treatment for POP along with the preservation of the uterus. These groups of patients may plan for pregnancy in the future. There is limited data on successful pregnancy, delivery and long-term outcome after sacrohysteropexy. We present here the management of a case of pelvic organ prolapse quantification (POP-Q). However, the risk of scar tissue from mesh can make future cesarean sections more difficult. Recurrence is usually caused by pelvic floor weakness, with a rate of 16.7% in a local study.¹⁸ 29–43 years Another study, which

followed up to 23.9 months, reported no cases of recurrence.¹⁴

A primary limitation of this report is the short follow-up period of one month. While immediate anatomical correction was achieved, long-term durability, potential mesh complications (such as erosion, which occurs in 2–10% of cases), and the risk of late recurrence due to persistent pelvic floor weakness require extended monitoring. The key lesson from this case is that uterine preservation via abdominal sacrohysteropexy is a viable and satisfying option for young women with advanced POP who desire fertility. Clinicians must balance anatomical success with the patient's reproductive goals, emphasizing the need for comprehensive preoperative counseling regarding delivery methods and long-term mesh-related risks.

Conclusion

Abdominal sacrohysteropexy is a safe and effective short-term procedure for young women with pelvic organ prolapse who wish to preserve their uterus when performed appropriately. While initial outcomes are promising, the long-term success, especially regarding mesh-related complications and outcomes of subsequent pregnancies, warrants further investigation through multicenter studies with extended follow-up durations

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