

# A Case of Laparoscopic Sacrohysteropexy: A Uterus Preserving Surgical Procedure for the Treatment of Uterine Prolapse

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Pelvic organ prolapse (POP) is defined as the descent of pelvic organs from normal position due to pelvic floor dysfunction. A woman has a 11% life time risk of undergoing surgery for POP.

A case of laparoscopic sacrohysteropexy, a uterus preserving surgical procedure for the treatment of uterine prolapse is presented and 6 month follow up outcomes are reported.

A 26 year-old woman presented with complaints of a mass bulging out of her vagina and pressure feeling in her pelvis. Her pelvic examination revealed second degree uterine prolapse with no prolapse of anterior and posterior vaginal walls. She underwent laparoscopic sacrohysteropexy. On her follow up at first and sixth months postoperatively, she had remained asymptomatic. Her pelvic examination revealed no uterine prolapse.

Laparoscopic sacrohysteropexy is an effective, safe and conservative procedure for the treatment of uterine prolapse.

**Key Words:** Laparoscopic sacrohysteropexy, Uterine prolapse, Mesh, Uterine suspension

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## Introduction

Pelvic organ prolapse (POP) is defined as the descent of pelvic organs from normal position due to pelvic floor dysfunction. POP is a very common condition and has a prevalence of 20-30% among women older than 20 years old.<sup>1</sup> A woman has a 11% life time risk of undergoing surgery for POP.<sup>2</sup> Many women with uterovaginal prolapse demand uterine preservation during surgery due to various factors including continuation of fertility, its influence on sexual identity, avoidance of major surgery. Several abdominal and vaginal procedures have been described for uterus preserving prolapse surgery. Laparoscopic pelvic reconstructive surgery is a current option with the development of laparoscopic techniques.

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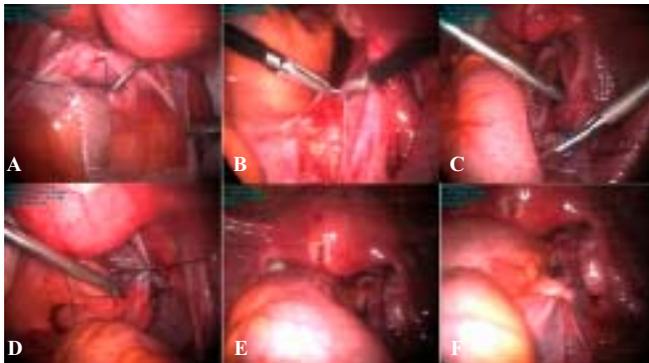
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## Case Report

A 26 year-old woman presented with complaints of a mass bulging out of her vagina and pressure feeling in her pelvis. Her past obstetrical history revealed a spontaneous vaginal delivery of a normal weight infant with an uncomplicated labor and a second vaginal delivery of a macrosomic infant with a prolonged labor. She had a normal BMI and didn't smoke or have a chronic disease. She stated that her symptoms started after the birth of second baby and she had been referred to another clinic with same complaints and underwent anterior and posterior colporrhaphy but her complaints persisted after surgery. She was examined on lithotomy position using the Baden Walker Halfway System.<sup>3</sup> Her pelvic examination revealed second degree uterine prolapse with no prolapse of anterior and posterior vaginal walls. She was administered a questionnaire involving questions about prolapse symptoms, dyspareunia, urinary incontinence and sexual life. It revealed that prolapse symptoms had a severe effect on her quality of life. This questionnaire was repeated at first month and sixth month postoperatively. She was counselled about treatment options. She wanted neither a pessary nor physiotherapy and she wished to preserve her uterus because of her young age and desire for future fertility.

The procedure was performed under general anesthesia with the patient in semi-lithotomy position. An uterine manipulator was inserted transvaginally. Pneumoperitoneum is established using CO<sub>2</sub> via a veress needle. A 10 mm umbilical

port, a 5mm suprapubic port and two 5 mm lateral ports were placed. A polypropylene mesh was used to suspend uterus to sacral promontory. One arm of the mesh was sutured to posterior cervical wall with non-absorbable monofilament 2-0 sutures. The ureters were identified bilaterally. Peritoneum over sacral promontory was opened up and the incision was continued down into the pelvis medially to right ureter and laterally to rectum. Other arm of the mesh was sutured to sacral promontory. Complete peritonisation of the mesh was performed by suturing the opposing edges of peritoneum over the mesh by absorbable sutures (Figure 1). Pelvic examination done immediately after surgery while the patient was under general anesthesia revealed no uterine prolapse. Operation lasted approximately 50 minutes and blood loss was less than 50 milliliters. There were no intraoperative or postoperative complications. She was discharged home on the second postoperative day.



*Figure 1: The technique of sacrohysteropexy: A: suturing of the mesh to posterior cervix B:incision of peritoneum over sacral promontory C:suturing of the mesh to sacral promontory D:peritonisation of the mesh E-F: after complete peritonisation of the mesh*

On her follow up at first and sixth months postoperatively, she had remained asymptomatic. Her pelvic examination revealed no uterine prolapse. She stated that there had been marked improvement at her quality of life, self confidence and sexual functions.

## Conclusion

Vaginal hysterectomy has been considered the classical treatment of uterine prolapse. However it has been advocated that uterus itself isn't the cause of prolapse so uterine preservation should be considered when planning surgery for prolapse especially in young women.<sup>4</sup> When compared with hysterectomy, uterine conservation has many advantages including less operative time, decrease in intraoperative blood loss and shorter hospital stay and it has comparable success with hysterectomy.<sup>5</sup> Several studies have shown that uterine preservation also has positive effect on body perception and self confidence of women.<sup>4</sup>

Conception of uterine preservation during prolapse surgery is not new. The Duke of Manchester first described Manchester Fothergill operation in 1888<sup>6</sup> and up to date several methods have been developed for uterus preserving prolapse surgery either through an abdominal or vaginal approach. Laparoscopic pelvic reconstructive surgery is a current option with the advancement of laparoscopic techniques. Laparoscopic surgery brings the advantages of lower perioperative morbidity, a decrease in postoperative pain and shorter hospital stay. Several laparoscopic uterus preserving surgical operations are described including ventrosuspension, suture hysteropexy and sacrohysteropexy. Ventrosuspension using round ligaments for uterine suspension has a low success rate. In a case series of 9 women, 8 had recurrence 3 months postoperatively.<sup>7</sup> Suture hysteropexy is defined as plication of uterosacral ligaments and reattachment to cervix. In a case series of 43 women undergoing suturehysteropexy, 81% remained asymptomatic on follow up. Authors concluded that suture hysteropexy is an effective method for treatment of prolapse however routine cystoscopy was suggested due to potential risk of kinking the ureters during plication.<sup>8</sup>

Laparoscopic sacrohysteropexy is a variant of the abdominal method with suspension of uterus to sacral promontory via a mesh. Laparoscopic sacrohysteropexy has been reported to have a high success rate. In a prospective observational study of 51 women undergoing laparoscopic sacrohysteropexy, the procedure had an objective success rate of 98%, with no recourse to hysterectomy. Also subjective improvement in prolapse symptoms and sexual wellbeing were noted. In this study two patients were reported to have abdominal discomfort and colicky pain and underwent a second laparoscopy. Intraoperatively; adhesions between bowel and the mesh were found in both patients. After this finding, authors performed complete peritonisation of the mesh to prevent adhesions.<sup>9</sup> In our case, we also performed complete peritonisation of the mesh.

Often symptoms of the patient doesn't correlate well with severity of the prolapse.<sup>10</sup> However women with most bothersome symptoms seek surgical solutions so patient satisfaction is an important criteria as well as objective success determined by pelvic examination. Laparoscopic sacrohysteropexy has a high rate of patient satisfaction. In a retrospective study, analysing the subjective outcome of laparoscopic sacropexy, a subjective success rate of 85% was shown 24 months after surgery. There was significant reduction in urinary incontinence, dyspareunia, foreign body sensation in vagina and prolapse symptoms with the exception of bowel symptoms.<sup>11</sup> We administered a questionnaire preoperatively and at the sixth month postoperatively and there was a marked improvement in our patient's symptoms and quality of life.

Many women want to retain their uterus for continuation of fertility. In the literature, there are reports of successful pregnancies after laparoscopic sacrohysteropexy. A 31 year old woman who underwent laparoscopic sacrohysteropexy for second degree prolapse was reported to have an uncomplicated pregnancy except pain increasing after 34<sup>th</sup> week of gestation and she delivered a healthy baby with elective cesarean section at 36<sup>th</sup> week of gestation. Intraoperative examination of the mesh showed no deterioration and she had no prolapse symptoms one year after delivery.<sup>12</sup>

Laparoscopic sacrohysteropexy is an effective, safe and conservative procedure for the treatment of uterine prolapse. It may be an appropriate method for patients who haven't completed their family or don't want to undergo major surgery or for women who demand uterine preservation.

### Laparoskopik Sakrohisteropeksi: Uterovajinal Prolapsus İçin Uterin Süspansiyon Tekniği

Pelvik organ prolapsusu, pelvik organların pelvik taban disfonksiyonu sebebiyle normal pozisyonundan aşağı yer değiştirmesi olarak tanımlanır. Bir kadının pelvik organ prolapsusu sebebiyle yaşam boyu ameliyat olma riski %11'dir.

Uterovajinal prolapsus tedavisinde uterus koruyucu bir cerrahi prosedür olan laparoskopik sakrohisteropeksi vakası ve 6 aylık takibi sunulmuştur.

Yirmialtı yaşındaki hasta kliniğimize ele gelen kitle ve sarkma hissi şikayetleriyle başvurdu. Hastanın pelvik muayenesinde ikinci derece uterus desensusu olduğu saptandı. Hastaya laparoskopik sakrohisteropeksi uygulandı. Hastanın postoperatif 1. ve 6. aydaki kontrollerinde hastanın asemptomatik olduğu görüldü. Hastanın pelvik muayenesinde desensusu olmadığı saptandı.

Laparoskopik sakrohisteropeksi uterovajinal prolapsus tedavisinde uygulanabilecek etkili, güvenli ve konservatif bir tedavi seçeneğidir.

**Anahtar Kelimeler:** Laparoskopik sakrohisteropeksi, Uterus prolapsusu, Meş, Uterus süspansiyonu

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