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CASE REPORT

Sacrohysteropexy followed by successful pregnancy and eventual reoperation for prolapse

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Abstract A multitude of uterine-sparing prolapse repairs exist in the literature, but little is published on subsequent pregnancy and long-term success following a repair. A 35-year-old gravida 2 para 2 underwent laparoscopic sacrohysteropexy and suburethral sling for stage III prolapse and stress urinary incontinence. She conceived 6 months post-procedure. Her antepartum course was complicated by third trimester pelvic pressure—successfully managed with a pessary. She delivered via cesarean section at term. At 12 months postpartum she had no signs of prolapse. Two years postpartum, she reprolapsed and underwent robotic assisted laparoscopic supracervical hysterectomy, sacrocolpopexy, and perineorrhaphy. Two years postoperatively she remained without any prolapse symptoms. Laparoscopic sacrohysteropexy is a reasonable surgical option for patients with pelvic organ prolapse considering future pregnancies.

Keywords Sacrocolpopexy · Pregnancy · Prolapse · Sacrohysteropexy · Sacrouteropexy

Introduction

Traditionally, uterovaginal prolapse is surgically treated with a hysterectomy combined with a pelvic support repair [1, 2]. Future fertility desires and patient preference for uterine preservation have caused surgeons to develop techniques that allow for uterine conservation. Although there are a multitude of uterine-sparing prolapse repairs in the medical literature, there has been very little published on subsequent pregnancy and long-term success following such a repair [1, 3].

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Case

A 35-year-old gravida 2 para 2 presented with stage III pelvic organ prolapse (POP) and stress urinary incontinence (SUI). She was experiencing significant vaginal pressure and heaviness and had stopped exercising as a result. Even though she had decreased her activity level, her stress incontinent episodes were occurring multiple times a day requiring usage of three to four absorbent pads each day. She had been performing pelvic floor strengthening exercises at home but had seen little improvement in her symptoms. She tried multiple different pessaries, but they either fell out or were uncomfortable. Due to the extent of prolapse, completion of sexual intercourse was difficult and she was afraid that getting pregnant would not be feasible.

Her obstetric history was unremarkable. She underwent two previous uncomplicated vaginal deliveries. On examination her pelvic floor muscle strength measured 2 on a scale of 0 to 5. Prolapse measurements were performed using the pelvic organ prolapse quantification (POP-Q) system. POP-Q measurements were Aa +3, Ba +5, C +3, Ap +1, Bp +1, D +1, GH 5, PB 2, and TVL 11, indicating stage III POP. Bimanual exam revealed a normal-sized uterus and cervix and no palpable adnexal masses.

On urodynamic studies, performed with support of her prolapse, she demonstrated SUI with a leak point pressure of 159 cmH_2O and no evidence of detrusor overactivity. She had a normal bladder capacity and voided with a normal mechanism. Her postvoid residual was <10 ml.

Because she wanted more children and failed pessary management, she was offered pelvic floor therapy versus surgery. Theoretical concerns with fertility-sparing surgery were addressed including difficulty with conception, surgical failure after pregnancy, surgical failure requiring repeat surgery, as well as future pregnancy delivery mode requiring cesarean section given mesh placement. In addition, theoretical antepartum concerns were addressed including pelvic pain given possible tethering of mesh, urinary retention, and lower urinary tract symptoms or damage. The patient elected to proceed with sacrohysteropexy.

She underwent laparoscopic sacrohysteropexy, suburethral sling, and perineorrhaphy. Procedure steps were as follows: peritoneum overlying the sacral promontory was incised and carried down the right pericolic gutter to the cul-de-sac. Presacral dissection was performed exposing the anterior longitudinal ligament. The rectovaginal space was dissected to the perineal body. A lightweight polypropylene mesh 5×15 cm was placed from the most distal portion of the vagina to the base of the internal cervical os using interrupted 3-0 nonabsorbable sutures. The anterior anatomy was left intact. Nonabsorbable sutures were used to fasten the mesh to the anterior longitudinal ligament. A delayed absorbable monofilament suture was used to both cover the mesh while at the same time creating a "neo-cul-de-sac." Knots on the vagina and sacrum were tied extracorporally. There were no intraoperative complications, estimated blood loss 50 ml, and operative time 174 min.

Postoperatively she did well. Her prolapse symptoms resolved, and she denied any further urinary incontinence. Although we counseled her to avoid conception for 12 months, she presented at 6 months pregnant. Her POP-Q measurements were Aa −1, Ba −1, C −9, Ap −1, Bp −1, D −10, GH 4.5, PB 2.5, and TVL 11 indicating stage II POP, however asymptomatic. Her antepartum course remained uncomplicated. She developed mesh-related pelvic pain in the late third trimester which resolved with placement of a pessary.

She underwent an uncomplicated scheduled cesarean section at term and delivered a 9-lb baby. Intraoperatively the uterine fundus was exteriorized without difficulty. No evidence of any prior surgery was seen. Her postpartum course was unremarkable, and she remained asymptomatic for awhile.

At her 1-year postpartum visit, her POP-Q measurements were Aa −2, Ba −2, C −7, Ap −2, Bp −2, D −9, GH 4.5, PB 2.5, and TVL 11 and she remained asymptomatic. However, by her 2-year postpartum visit, she had reprolapsed with similar symptoms to original presentation. She had a distal rectocele and distal cystocele with the following POP-Q measurements: Aa 0, Ba 0, C −7, Ap 0, Bp 0, D −8, GH 4.5, PB 2, and TVL 11, indicating stage II POP. Given her symptoms and childbearing completion, she desired definitive surgical management.

She underwent a robotic supracervical hysterectomy, sacrocolpopexy, and perineorrhaphy. Intraoperatively, the previous mesh was found well secured at the sacrum and posterior cervix. The proximal posterior vaginal wall was well supported. Therefore, she underwent a supracervical hysterectomy and placement of anterior vaginal wall mesh. The lightweight polypropylene mesh measured 4×5 cm and was fastened to the vagina using polytetrafluoroethylene suture. This mesh extended from the trigone distally and was fastened proximally to the original mesh at the level of the cervix. Postoperatively she did well, and at 2 year follow-up remained asymptomatic with POP-Q measurements Aa −2, Ba −2, C −7, Ap −2, Bp −2, D −9, GH 4.5, PB 2.5, and TVL 11.

Discussion

Many patients desire definitive surgical management prior to childbearing completion. In examining laparoscopic approaches to uterine-sparing surgery, success rates for laparoscopic sacrohysteropexy have been reported as high as 80% [4]. However, there are few reports that include patients that became pregnant after their operation.

We performed a Pubmed literature search from January 1990 through June 2011 with key words "Pregnancy & Sacrohysteropexy," "Pregnancy & Hysteropexy," "Pregnancy & Uteropexy," "Pregnancy & Colposacropexy," "Pregnancy & Sacrohysteropexy," as well as "Pregnancy & uterine sparing surgery." We found no literature discussing antepartum, intrapartum, or the long-term postpartum course of patients after uterine-sparing prolapse repair. In a recent review on hysteropexy, out of 92 patients that underwent hysterosacropexy, there were 3 subsequent cesarean deliveries [1]. Only one case report has been published documenting 12 month follow-up after cesarean delivery [5]. In their report, the patient initially underwent laparoscopic sacrohysteropexy for POP-Q stage II prolapse, subsequently conceived, and 12 months post-cesarean delivery was asymptomatic [5]. With regard to this special population of patients, our case suggests that long-term follow-up beyond 1 year is necessary when determining success rates.

Evidence on safety/efficacy of uterine-sparing surgery for POP followed by subsequent pregnancy is limited. Our case illustrates that pregnancy following laparoscopic sacrohysteropexy can offer patients improved quality of life and minimal antepartum or intrapartum concerns. Our patient had no significant antepartum complications, and her third trimester pelvic pressure was successfully treated with a pessary. She remained without recurrence for 2 years postpartum which highlights the need for further follow-up beyond 1 year and proper preoperative patient counseling.

Conflicts of interest None.

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