

DOI: <http://dx.doi.org/10.18203/2320-1770.ijrcog20194884>

Original Research Article

Long term follow-up study for abdominal sacrocolpopexy/sacrohysteropexy

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Received: 01 September 2019

Accepted: 04 October 2019

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ABSTRACT

Background: Pelvic organ prolapse is common in women and 7-9% undergo surgical repair. Abdominal sacrocolpopexy and sacrohysteropexy is the most durable operation for vault prolapse and Nulliparous prolapse respectively. The objectives of this study were to describe Anatomic and symptomatic outcomes up to 5 years after abdominal sacrocolpopexy or sacrohysteropexy.

Methods: This study was conducted in ASCOMS hospital for a cohort of patients who underwent abdominal sacrocolpopexy (ASC) or sacrohysteropexy (ASH) in 2 years (2013-2015) and follow up done for a period of 5 years from 2015-2019. These patients were evaluated for subjective and objective outcomes following ASC and ASH. women completed questionnaires and were examined in gynaecology clinic. Prospective follow up study using standardised examination with pelvic organ prolapse quantification system (POP-Q) and questionnaires

Results: In the present study, there was low incidence of intraoperative and postoperative complications as well as long term complications were significantly low. The anatomical cure rate and patient satisfaction rate was both 100%.

Conclusions: Abdominal sacrocolpopexy for vault prolapse and sacrohysteropexy for Nulliparous prolapse is safe and effective method and is considered gold standard for treatment of Apical compartment prolapse.

Keywords: Uterovaginal prolapse, Nulliparous prolapsed, Sacrocolpopexy, Sacrohysteropexy, Vault prolapse

INTRODUCTION

Pelvic organ prolapse (POP) occurs when the uterus or vaginal walls bulge into or beyond the vaginal introitus. It is common in women and 7-19% undergo surgical repair.^{1,2} The true incidence of vault prolapse is unknown. However, there is perception that the number of procedures being performed for vaginal vault prolapse is increasing. Numerous surgical procedures are described for the management of vault prolapse. However, Abdominal sacrocolpopexy has better anatomical outcome.³

Abdominal sacropexy is a well-known technique in POP treatment and is considered the Gold standard for treatment of apical compartment prolapse.⁴ Abdominal sacrocolpopexy proposed by Lane in 1962 has been most

widely studied and been shown to be reliable and durable with success rate of 78-100%.⁵⁻⁸ It involves attaching the vaginal apex to the sacral anterior longitudinal ligament reinforced with a synthetic mesh graft.

Little is known about long-term durability, complications, and pelvic floor symptoms after abdominal sacrocolpopexy/sacrohysteropexy. The few studies assessing outcomes beyond two years are limited by small sample sizes, inconsistent outcome assessment, potentially biased examiners, and non-standardized follow-up.⁵ Authors describe a long term follow up of a series of patients from our unit, with outcome measures of examination for prolapse using the pelvic organ prolapse quantification system (POP-Q).⁹ Subjective questioning regarding prolapse, urinary and bowel symptoms and sexual function.

Operative procedure

For abdominal sacrocolpopexy, the abdominal cavity was entered through a midline or Pfannenstiel incision. After distinguishing the vaginal vault, its covering peritoneum was dissected. To attach the mesh, a sufficiently broad area was exposed in the superior aspects of pubocervical and rectovaginal fascia. Then the peritoneal layer over the promontory was incised vertically. The loose areolar tissue were gently dissected to the posterior cul-de-sac, avoiding damage to the rectum and the ureter. A Monofilament polypropylene mesh was attached using non-absorbable sutures. The mesh was reperitonealized. In patients with the uterus preserved, a transverse incision at the posterior surface of the uterus, where the sacrouterine ligaments are attached, was performed for a sacrohysteropexy.

METHODS

The cohort study was done in the department of obstetrics and gynaecology in ASCOMS hospital Jammu from 2013-2019. 12 patients with vault prolapse and Nulliparous prolapse who underwent abdominal sacrocolpopexy (ASC) or sacrohysteropexy (ASH) from January 2013 to January 2015 were included in this study. Parameters recorded include age, parity, BMI, previous pelvic surgery, concomitant surgical procedure, duration of surgery, estimated blood loss, duration of hospital stay, postoperative minor and major complications and long-term complications.

The extent of uterine or vaginal prolapse was assessed by gynaecological examination and ultrasound and authors used the POP quantification system (POP-Q) for prolapse assessment. In order to assess the influence of pressure, the patients were examined in both sitting and lying position; the assessment was important to avoid an under correction and overcorrection.

ASC and ASH were carried out using polypropylene mesh with reperitonealization of mesh in all patients. Intraoperative and postoperative complications were recorded. Patients were evaluated for quality of life and assessment of sexual, urinary and bowel function on visual analog scale at 3 months, and 6 months for short term and medium-term outcomes respectively. Long term assessment was performed after 6 months for 5 years which included reassessment of medium-term outcomes and any reoccurrence or surgery done for vault prolapse. For long term outcomes, patients were interviewed personally, telephonically or by post. The data were collected entered into Microsoft excel for calculating mean, median, frequency and its percentages.

Inclusion criteria

- Symptomatic uterine or vaginal vault prolapse patients with POP-Q stage 2 and above

- Symptoms include a sensation of pressure on the vagina and perineum, seeing and feeling of a bulge/protrusion in the distal vagina, chronic pelvic pain, dyspareunia and other sexually related problems or associated lower urinary tract symptoms including urgency, frequency, urinary retention and incontinence.

Exclusion criteria

- Patients having a contraindication for surgery
- Pelvic inflammatory disease
- Patients who had undergone pelvic radiotherapy
- Patients with compromised immune status interfering with recovery
- Patients who were lost after surgery for follow-up.

RESULTS

In our study, total of 12 patients were operated from January 2013 to January 2015. In our present study, the mean age for sacrohysteropexy in nulliparous patients and sacrocolpopexy in vault prolapse patients was 30.25 and 59 years respectively with minimum age being 28 and maximum age being 65 years (Table 1). 8 patients were post-menopausal (Table 2). The mean parity was 2.5 for sacrohysteropexy and 3.9 for sacrocolpopexy (Table 3).

Table 1: Age wise distribution of cases.

Age-group	Number	Percentage
<35 years	4	33.33%
35-45 years	3	25%
>45 years	5	41.67%

Table 2: Distribution of cases according to menstrual status of women.

Menstrual status	Number	Percentage
Perimenopausal	4	33.3%
Postmenopausal	8	66.6%

Table 3: Parity wise distribution of cases.

Parity	Number	Percentage
0	4	33.3%
1	1	8.33%
2	1	8.33%
3	2	16.67%
4	2	16.67%
5	1	8.33%
6	1	8.33%

The average BMI of the patients were 26.83 kg/m². Only one patient had cesarean and the rest had all previous vaginal deliveries whereas 4 patients were nulliparous (Table 4). 7 patients in the study presented with sensation

of something coming out of the vagina and 5 patients had urinary symptoms which included voiding difficulty and incomplete evacuation of bowel and bladder (Table 5).

Table 4: Distribution of cases according to routes of delivery.

Route of delivery	Number	Percentage
Vaginal delivery	7	58.33%
Cesarean delivery	1	8.33%
Nulliparous	4	33.3%

Table 5: Chief complaints of patients.

Chief complaint	Number	Percentage
SCOPV	7	58.33%
Urinary complaints	5	41.67%

SCOPV: Something coming out per vaginum.

Mean operative time was 97.80 minute (83-130) with average blood loss of 72.9 ml (60-90). Inpatient stay post-operatively was on average 3.25 days (2-5). In our study 4 patients underwent sacrohysteropexy for correction of nulliparous prolapse and 8 patients underwent sacrocolpopexy for correction of vault prolapse (Table 6).

Table 6: Distribution of cases according to diagnosis.

Diagnosis	Number	Percentage
Nulliparous prolapse	4	33.3%
Vault prolapse	8	66.6%

Table 7: Intraoperative complications.

Intraoperative complications	Number	Percentage
Haemorrhage	1	8.33%

Table 8: Postoperative complications.

Postoperative complications	Number	Percentage
Bowel symptoms	1	8.33%

Intraoperatively one patient had haemorrhage due to injury to the median sacral vessels which settled on applying pressure (Table 7). Among the post-operative complication 1 patient developed bowel symptoms in the form of nausea, vomiting and paralytic ileus, all settled on the conservative treatment (Table 8).

Table 9: Long term complications.

Long-term complications	Number	Percentage
Dyspareunia	1	8.33%

On long-term follow-up, 1 patient showed dyspareunia which settled in few months (Table 9). All patients

showed anatomical cure with no incidence of recurrence of cystocele, rectocele or vault prolapse. All 12 patients got relieved from symptoms. No mesh complication was found during the follow up period.

DISCUSSION

Abdominal sacrocolpopexy (ASC) is considered as excellent procedure in the surgical management of apical prolapse, ASC is a retroperitoneal interposition of a suspensory synthetic, autologous, or allograft prosthesis between the vaginal vault and the sacral promontory.¹⁰ It allows more global support of vagina and distribution of tension over a large area. ASC has been superior to other techniques in terms of restoration of normal vaginal axis and maintenance of vaginal capacity.¹¹ Sacrocolpopexy is a reliable procedure that effectively and consistently resolves vaginal vault prolapse.

No major intraoperative and postoperative complications were encountered in our study except one patient had hemorrhage, 1 patient had postoperative bowel symptoms in the form of nausea, vomiting and paralytic ileus, all settled on the conservative treatment, long term complication in the form of dyspareunia in 1 patient which settled in few months. Rani et al, in their study reported that out of 16 patients 1 had hemorrhage and vault abscess, 1 patient had stress urinary incontinence and mixed incontinence, whereas none of the patient had any bowel or sexual complaints. These results are comparable as reported in literature.

Authors found 100% success rate of sacropexy, similar results were obtained by Rani, et al, Nygaard et al, in the review of 2178 patients reported a success rate of 78-100%. They reported 4.9% rate of stress urinary incontinence and 3.4% of patients had mesh erosion. Weidner et al, reported 2 cases of sacral osteomyelitis and hemorrhage from presacral veins had been reported in 1-2.6% patients. Higgs et al. found 90% success rate with 3% recurrence rate on long term follow-up, 12% patient reported reduced vaginal capacity with dyspareunia and subject satisfaction rate was 78% which is 100% in our study. To sum up, sacrohysteropexy/sacrocolpopexy is a cost effective and safe procedure with high anatomical cure and patient satisfaction rate and low intra-operative and postoperative complications as well as recurrence rates.

CONCLUSION

Sacrocolpopexy/sacrohysteropexy is a reliable procedure that effectively and consistently resolves vaginal vault prolapse and uterine prolapse with lower perioperative morbidity, shorter hospital stay and allows a long-term anatomical restoration. It provides excellent apical support with lower rate of recurrence.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: The study was approved by the Institutional Ethics Committee

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Cite this article as: Puri S, Jaggi R, Sunil I. Long term follow-up study for abdominal sacrocolpopexy /sacrohysteropexy. *Int J Reprod Contracept Obstet Gynecol* 2019;8:4511-4.