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STUDY OF SACROSPINOUS FIXATION FOR POSTHYSTERECTOMY VAULT PROLAPSE

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ABSTRACT: OBJECTIVE: To study the effectiveness of sacrospinous fixation for vault suspension in vault prolapse cases and to evaluate intra and post-operative complications associated with the procedure. **METHODS:** Twenty patients with vault prolapse were subjected to sacrospinous fixation and evaluated for postoperative complications. **RESULTS:** The intraoperative complication encountered was vascular injury. Postoperative complications were fever and urinary tract infection. In all patients vaginal length from hymen to vault was 4cm to 5cm. Recurrence was not noted in the follow up period of 6 months. **CONCLUSION:** Sacrospinous fixation is a safe, effective, and simple procedure in patients with post hysterectomy vault prolapse.

KEYWORDS: Sacrospinous fixation, post hysterectomy, vault , vaginal length, dyspareunia

INTRODUCTION: Vault prolapse is referred to the descent of vaginal vault/cuff scar below a point that is 2 cm less than the total vaginal length above the plane of hymen. Increase in life expectancy increases number of women presenting with vault prolapse. Due to catastrophes of childbirth, manual labour in early puerperium, nutritional deficiencies and successive pregnancies without adequate spacing, lack of post natal exercise, poverty the chances of early prolapse are increasing. In postmenopausal patients uterosacral and cardinal ligament complex is not able to support the vault so it increases chances of uterovaginal prolapse. Vault prolapse after hysterectomy has a reported incidence of 0.2 to 43%. Menopausal state characterised by oestrogen deficiency and loss of connective tissue strength is causative factor in development of vault prolapse. Improper correction or non-correction of enterocele during hysterectomy leads to vault prolapse in later life. Many operations by abdominal or vaginal route have been described to prevent or treat vault prolapse.^[1] Surgical procedure for vault prolapse can be done by abdominal, vaginal or laproscopic route. Abdominal methods are abdominal sacral colpopexy, high uterosacral ligament suspension. Vaginal procedures are McCall culdoplasty, high uterosacral ligament suspension, iliococcygeus fascia suspension, Sacrospinous ligament fixation.^[2]

MATERIAL & METHODS: The study was conducted from January 2011 to December 2013 in obstetrics and gynaecology department Bharati Vidyapeeth Deemed University Medical College & Hospital, Sangli. 20 patients with vault prolapse were studied. This study was done to evaluate the effectiveness of sacrospinous ligament fixation for vault suspension in patients of vault prolapse. Vaginal hysterectomy was done in 10cases (50%) for uterovaginal prolapse. Abdominal hysterectomy was done in 10 cases (50%) [For Menstrual abnormality, fibroid, and PID]. Age more than 70yrs and debilitated patients with vault prolapse were excluded from the study. Vaginal examination is done to identify the apical scar tissue resulting from the prior hysterectomy. A sim's speculum and anterior vaginal wall retractor helps in visualization of the apex. In most cases, the site

ORIGINAL ARTICLE

of the prior uterosacral cardinal ligament complex can usually be identified as dimples on the lateral edges of the apex. After all preoperative investigations and anaesthetic fitness patients were posted for surgery. In all patients high ligation of enterocele sac & cystocele repair was done. Bladder catheterized with Foleys catheter no14. During colpoperineorrhaphy, rectovaginal space was reached after separating the vagina from rectum. Right sacrospinous ligament was identified using ischial spine as landmark.^[2] Stitches were taken approximately 2.5-3 cm medial to ischial spine with polypropylene No.1 on a specially designed hook from below upwards. Care was taken to avoid injury to adjacent structure particularly pudendal vessel. Sutures are fixed to vaginal apex.^[2]

Perineorrhaphy procedure completed. Adequate vault suspension was ensured and vagina was packed for 24 hours. Foleys catheter was removed after 48 hrs. Residual urine was checked before discharge. Patients were discharged on 7th postoperative day. In all patients vaginal length from hymen to vault was measured. They were followed up after 6 weeks, 3 months and 6 months for dyspareunia, vault prolapse and stress incontinence.

RESULT AND OBSERVATIONS:

Age group	No. of patients
45yrs-50yrs	02
50yrs-55yrs	10
55yrs to 70yrs	08

Table 1: Age distribution of patients

In our study we had 20 patients. Two patients (10%) were from the age group 45 years to 50 years. Ten patients (50%) were from the age group 50 years to 55 years, eight patients (40%) were from 55 years to 70 years.

Post op complication	Present study (n=20)	Cruikshank ^[2] (n=48)
Fever	02 (10%)	04 (8%)
UTI	01 (5%)	03 (6%)
vascular Injury	01 (05%)	00

Table 2: Comparison of immediate postoperative complications

Late complications	Present study (n=20)	Cruikshank ^[2] (n=48)	De Lancey and Morley ^[3] (n=75)
Dyspareunia	02 (10%)	-	-
Vault prolapse	00	01 (2%)	03 (4%)
Stress incontinence	00	02(4.2%)	00

Table 3: Comparison of late complications

ORIGINAL ARTICLE

DISCUSSION: We have conducted study from January 2011 to December 2013. We involved 20 patients of vault prolapse after abdominal or vaginal hysterectomy. Our age group was from 45 years to 70 years. They were followed up after 6 weeks, 3 months and 6 months. In all cases high ligation of enterocele sac & cystocele repair was done to prevent the complications as recurrence. One patient [5%] had pudendal vessel injury. Ligation of the Internal Iliac artery helped to tackle the complication. She had no other complication in the immediate or late postoperative period. Vascular injuries observed in the study by David-Montefiore, Garbino, Hummel et al was 0.5-1%.^[3] One of Nichols's patient had rectal injury.^[4] There was no other significant intraoperative complication.

In our study fever was observed in two patients (10%) as one of the postoperative complications. It may be due to operative stress, intravenous fluids, wound infection, or urinary tract infection (UTI). In Cruikshank study fever was observed in 8% patients.^[5] UTI was seen in one patient (5%) in our study postoperatively which responded well to proper antibiotics given after culture and sensitivity test. In Cruikshank study UTI was present in 6% cases.^[5] Residual urine was 15cc to 20cc in all cases done on 5th postoperative day. Hospital stay was 7 days in all cases.

Twenty cases were followed for 6 months for complaints of dyspareunia, vault prolapse and urinary complaints. Two of our cases (10%) had dyspareunia after 3 months which got resolved by the end of 6th month. No patients had urinary stress incontinence. In our study no patient had vault prolapse even after 6months followup. Cruikshank et al noted 2% vault prolapse recurrence and 4.2% stress incontinence in his study.^[5] De Lancey and Morley et noted 4% recurrence.^[6] Sacrospinous fixation is a safer procedure if carried out with proper surgical skill.

CONCLUSION: Sacrospinous fixation is a safe and effective procedure which is indicated in vault prolapse as well as in uterovaginal prolapse with significant loss of vaginal supports. As this procedure is done vaginally, it has added advantage of less anesthetic risk and allows simultaneous repair of other defects. If performed meticulously complications are minimal. Adequate vaginal length can be achieved with this procedure.

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ORIGINAL ARTICLE

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