

Review Article

Prevention and treatment of vault prolapsedAstha Mulani¹, Rohit Jain², Haresh Doshi, Roshni Modi³¹Senior Resident, Department of Obstetrics & Gynaecology, Civil Hospital, Asarwa, Ahmedabad, Gjarat, India.²Professor, Department of Obstetrics & Gynaecology, Civil Hospital, Asarwa, Ahmedabad, Gjarat, India.³Junior consultant, Department of Obstetrics & Gynaecology, Civil Hospital, Asarwa, Ahmedabad, Gjarat, India.***Corresponding author**

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Abstract: The aim of this study is to evaluate Preventive measures of vault prolapse and study possible technical aspects & complications of different surgical procedures for vault prolapse. This is a Prospective study from 2011 to 2013 at a tertiary care centre. Patients who required hysterectomy for different indications as well as those who had undergone hysterectomy in past & now developed vault prolapse were enrolled for the study. Total 100 patients which comprised of 48 patients of hysterectomy & 50 patients of post hysterectomy vault prolapse & 2 patients of LeFort colpocleisis were studied. Abdominal sacrocolpopexy is considered gold standard procedure for vault prolapse, it is an abdominal surgery & carries all disadvantages of laparotomy, while sacrospinous fixation can be done vaginally which is technically easy & less time consuming. Post-hysterectomy vault prolapse is of great concern to patient & gynecologist as well. sacrospinous fixation through the vaginal route is a surgery which can be done by gynecologist of average skill with no major complications.

Keywords: vault prolapse, sacrospinous fixation, sacro-colpopexy

INTRODUCTION

Vaginal vault prolapse refers to descent of the upper part of vagina which is distinct from an enterocele, where the bowel bulges through the upper part of posterior vaginal wall. In present study we considered vault prolapse is as of post hysterectomy vaginal vault prolapse.

The rate of vaginal vault prolapse after hysterectomy which was done due to other than uterine prolapse is only 1.8% [1], while the incidence after hysterectomy due to uterine prolapse is reported to be 11.6% [1], but aging of the population will further increase the number of women affected. This significant difference clearly indicates that if the ligaments were too weak to support the uterus, they are often also too weak to support the vaginal vault. The incidence is definitely on the rise, due to the extended longevity of women. In fact Barrington and Edwards [2] state that the incidence after vaginal hysterectomy seems to have increased fivefold. More elderly women now desire active sexual life and seek remedy for their vault prolapse. It is widely believed that vault prolapse is more common after vaginal hysterectomy than after abdominal hysterectomy. But Morely and DeLancey [3] state that vault prolapse results equally often after vaginal or abdominal hysterectomy.

AIMS & OBJECTIVES:

- To study etiological factors for vault prolapse
- To evaluate preventive measures for vault prolapse
- To study possible technical aspects & complications of different surgical procedures for vault prolapse

MATERIALS & METHODS:

Present study was carried out in tertiary hospital (Civil Hospital, Asarwa, Ahmedabad) over a period of 26 months from June 2011 to August 2013.

Patients who required hysterectomy for different indications as well as those who had undergone hysterectomy in past & now developed vault prolapse were enrolled for the study.

Total 100 patients which comprised of 48 patients of hysterectomy & 50 patients of post hysterectomy vault prolapse & 2 patients of LeFort colpocleisis were studied.

Out of 100 patients,

- 24 patients were operated for vaginal sacro-spinous fixation for vault prolapse

- 24 patients were operated for abdominal sacro-colpopexy for vault prolapse
- 2 patients were operated via abdominal sling operation (William Richardson sling) for vault prolapse
- 11 patients were operated for VH + U/L sacro-spinous fixation
- 1 patient was operated for VH + LeFort operation
- 21 patients were operated for VH + McCall cul-do-plasty
- 5 patient were operated for AH + McCall cul-do-plasty
- 10 patients were operated for TLH
- 2 patients were operated for LeFort operation only

RESULTS

Table-1: Parity & Prolapse

Parity	Vault prolapse (50)	Vagino-uterine prolapse (28)	Non prolapse (22)
0	-	-	2
1	-	-	2
2	10	4	5
3	15	8	5
≥ 4	25	16	8
Total	50	28	22

Table-2: Preventive Procedures for Vault Prolapse

Category	Route	No. of cases
With Hysterectomy	Vaginal	33
With Hysterectomy	Abdominal	5
With Hysterectomy	Laparoscopic	10
Direct LeFort	Vaginal	2

Table-3: Cure Rate of Abdominal Sacro Colpopexy

Author	Patients [n]	Follow up period [months]	Cure rate %
Valaitis et al. [8]	41	3-91	88.00
Ham et al. [9]	45	9.8-80	93.00
Baessler et al. [10]	33	12-48	100.00
Present study	24	9 -12	100.00

Table-4: Cure Rate of Vaginal Sacrospinous Fixation

Author	Patients[n]	Follow up	Cure rate%
Hardman et al. [11]	125	0.5-5 years	96.00
Elkins et al. [12]	14	3-6 months	86.00
Nichols et al. [13]	163	2 years	97.00
Present study	24	9-12 months	94.73

Table-5: Cure Rate Of Mccall's Culdoplasty

Author	Patients[n]	Follow up	Cure rate%
Given et al. [14]	50	2-22 years	96.00
Baber et al. [15]	46	3.5months-3.4 years	90.00
Present study	26	3 months- 2 years	92.30

Table-6: Cure Rate of Laparoscopic Uterosacral Suspension

Author	Patients[n]	Follow up [months]	Cure rate %
Milkose et al. [16]	17	6.3	88.00
Carter et al. [17]	8	6	100.00
Seman et al. [18]	10	24	100.00
Present study	10	3-9	100.00

DISCUSSION

According to international continence society, post-hysterectomy vaginal vault prolapse means-

descent of vaginal cuff scar below a point that is 2 cm less than the total vaginal length above the plane of the hymen.

A condition that occurs in women who have previously undergone hysterectomy, in which, the ligaments which normally hold the upper vagina in place, have torn or weakened and allow the upper vagina to fold down into itself, or to protrude through the vaginal opening.

According to the institute for female pelvic medicine & reconstructive surgery: displacement of the top of the vagina after a hysterectomy from its normal position.

Vault prolapse is usually associated with anterior (cystocele or urethrocele) or posterior (rectocele or enterocele) compartment defect. Pelvic muscle exercises (PMEs) and vaginal support devices (pessaries) are the main nonsurgical treatments for patients with pelvic organ prolapse. According to K. Richter et al. [4], women who had 4 or more vaginal deliveries have 12 times more risk of genital prolapse. From the literature, it appears that vaginal delivery causes damage to the supportive fascia & ligaments as well as pudendal nerve promotes the development of pelvic organ prolapse.

Out of 78 total cases of prolapse [vaginouterine + vault prolapse], 41 patients had home deliveries. There were total 50 cases of vault prolapse in present study. The high percentage of cases of vaginal hysterectomy i.e. 72.72% (8/11) simply points that supports of uterus were already weak as hysterectomy in all these cases were done for prolapsed.

Dällenbach et al. [5] conducted a case control study involving 114 women who required vault prolapse surgery after initial hysterectomy and found that risk factor included preoperational prolapse grade 2 or more, and history of vaginal delivery. Utku Özcan et al. [6] from their experience of 54 cases of sacrospinous fixation for treatment of vault prolapse reported one case of rectal injury. Three of their cases had SUI in post operative period.

While Lovatsis et al. [7] did a large study of 200 cases of sacrospinous fixation for vault prolapse & reported no major complications. Nine of their cases had SUI in post operative period. They also reported 6.1% cases of groin pain. Maher et al had 14% groin pain in his study & we had 18.18% cases of groin pain in sacrospinous fixation group but they were all done as preventive procedure along with vaginal hysterectomy in present study. Abdominal sacrocolpopexy is considered gold standard procedure for vault prolapse, it is an abdominal surgery & carries all disadvantages of laparotomy, while sacrospinous fixation can be done vaginally which is technically easy & less time consuming.

Sacro-spinous fixation is safe & effective, with successful result in >90% of cases & also with rare major complications. The procedure is very simple & has advantages of avoiding laparotomy, facilitating other vaginal repairs needed during the same operation, preserving vaginal functions & shortening the time necessary for anesthesia & surgery. Lefort can be comparatively easy & straight forward procedure for prevention & treatment of vault prolapse if sexual function is not required.

CONCLUSION

Post-hysterectomy vault prolapse is of great concern to patient & gynecologist as well. Sacrospinous fixation through the vaginal route is a surgery which can be done by gynecologist of average skill with no major complications. Other surgeries for prevention & treatment for vault prolapse are equally effective but one should consider the fact that abdominal surgeries done have obvious disadvantages of laparotomy over surgeries done through vaginal route. Laparoscopic surgeries for vault prolapse require considerable laparoscopic skill & experience.

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