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Original Article

Vaginal Prolapse Post-hysterectomy and its Management in Women Attending in BMIMS, Pawapuri

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Abstract

Introduction: Reducing maternal morbidity which causes untold suffering to many women is not accorded comparable priority. One of the common but often hidden gynecological problems is vaginal prolapse including uterine prolapse. Prolapse of the vaginal vault and other adjacent structures occur through the vaginal wall to a variable degree after hysterectomy. The surgical options for the correction of vault prolapse lie between the vaginal and the abdominal approach. The experience of the surgeon influences the choice of operation.

Aims and Objectives: The aim of this study was to evaluate risk factors of vaginal prolapse after hysterectomy (total abdominal hysterectomy [TAH] or vaginal hysterectomy [VH]) such as hysterectomy itself, no of vaginal deliveries, parity, and age. Overviews of operative modalities for vaginal prolapse after hysterectomy performed at our institution.

Materials and Methods: The present retrospective study was carried out in the Obstetrics and Gynecology department of BMIMS, Pawapuri. A total of 14 cases were selected for study among women with complain of something coming down from her vagina after a hysterectomy visited the outpatient department of the Obstetrics and Gynecology department from June 2021 to July 2022.

Results: Of the 14 patients of post-hysterectomy vaginal prolapse, 13 points had a history of TAH and only one of VH. Eight women had vault repair by abdominal sacrocolpopexy (ASC) procedure. Of eight women, four had major vault prolapse alone and the other four had major vault prolapse associated with either cystocele or rectocele, or both. In three women along with sacrocolpopexy for vault prolapse, posterior colporrhaphy was done for rectocele. In our study, 86% point had 3 or more vaginal deliveries. The maximum number of patients (78%) between 30-50 years age group.

Conclusion: ASC has proven to be superior to other techniques. The choice of surgical approach depends on the preference and experience of the gynecologist. The procedure and experience of a gynecologist are important in the repair of vaginal prolapse after TAH or VH to reduce recurrence.

Keywords: Vault prolapse, Abdominal Sacrocolpopexy, Anterior colporrhaphy, Posterior colpoperineorrhaphy

INTRODUCTION

Vaginal prolapse is a common health problem; however, severe morbidity is rare. However, it can have a marked effect on quality of life. One of the common often hidden gynecological morbidities is vaginal prolapse which includes uterine prolapse also. Vaginal prolapse post-hysterectomy includes vault prolapse, cystocele, enterocele, and rectocele mainly. Prolapse of the vaginal vault and other adjacent structures occurs through the vaginal wall to a variable degree.

There are many surgical procedures that have been described using an abdominal or vaginal approach. The choice of procedure is often dependent on the individual surgeon's choice and experience. The ideal procedure should have a low risk of morbidity and mortality but should also have long-term durability.

A detailed history, clinical evaluation, and physical examination are required to plan appropriate management.

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The maintenance of normal anatomy is dependent on pelvic floor support which is itself dependent on the functional and the structural integrity of the striated muscle of the pelvic floor and the surrounding connective tissues.

The etiology of prolapse is multifactorial, advancing age, parity, and collagen weakness are all quoted as significant predisposing factors. Pathophysiological mechanisms that have been proposed include pelvic floor denervation, direct trauma to pelvic floor musculature, and degeneration of collagen and defect in the endopelvic fascia.[1-4] Concomitant surgery at pelvis organ prolapse (POP) repairs is common with approximately 50% of patients having more than one procedure during POP repair.[5,6] Approximately 50% of parous women will have some degree of prolapse and only 10–20% of these seek medical help.[7]

Aims and Objectives

The aim of this study was to evaluate risk factors of vaginal prolapse after hysterectomy (total abdominal hysterectomy [TAH] or vaginal hysterectomy [VH]) such as hysterectomy itself, no of vaginal deliveries, parity, and age.

Overviews of operative modalities for vaginal prolapse after hysterectomy performed at our institution.

MATERIALS AND METHODS

The present retrospective study was carried out in the Obstetrics and Gynaecology department of BMIMS, Pawapuri. A total of 14 cases were selected for study among women with complaints of something coming down from her vagina after a hysterectomy visited the outpatient department of the Obstetrics and Gynecology department from June 2021 to July 2022. Post-hysterectomy vaginal prolapse was diagnosed mainly based on history taking and per-vaginal examination. Before surgery, written informed consent was taken from all the patients.

Inclusion Criteria

Women more than 30 years of age with major vaginal prolapse after hysterectomy were included in the study.

Exclusion Criteria

The following criteria were excluded from the study:

Women more than 30 years of age with minor vaginal prolapse. Women with serious illness or not fit for anesthesia.

RESULTS

The most common complain of patient were incomplete emptying of urinary bladder [Table 1]. Eight women had vault repair by abdominal sacrocolpopexy (ASC) procedure. Of eight women, four had major vault prolapse alone and the other four had major vault prolapse associated with either cystocele, rectocele, or both. In three women along with sacrocolpopexy for vault prolapse, posterior colpoperineorrhaphy (PCR) was done for rectocele. In one patient along with sacrocolpopexy, bilateral adnexal cyst removal was done in the same setting. In our study, three women had only cystocele or rectocele, or enterocele or its combination without vault prolapse. Of the total of 11 women with vault prolapse, three women had vault prolapse with cystocele and rectocele. Both anterior colporrhaphy (ACR) and PCR were done in four patients, out of these, three patients had vault prolapse also, but due to lack of proper management and inexperience in vault repair surgery either by abdominal or vaginal approach, only anterior and posterior colporrhaphy was done in our department. All three patients had recurrence during follow-up visits. Of the 14 patients of vaginal prolapse, 13 patients had a history of TAH and only one of VH, high number of abdominal hysterectomies could be due to male surgeons preferring to do TAH rather VH in our area [Table 2]. No major complication occurred during sacrocolpopexy in any patients.

DISCUSSION

The incidence of prolapse which required surgical correction following hysterectomy is 3.6 person-year of risk. The cumulative risk rises from 1% in 3 years post-hysterectomy to 5% in 15 years post-hysterectomy. The risk of prolapse following hysterectomy is 5.5 times in women whose initial hysterectomy was for genital prolapse as opposed to other reasons. Some studies reported an incidence of up to 43%.[8,9] Marchionni *et al.* after following up with 2670 women over 9–13 years (mean 11 years) also concluded that the incidence of vaginal vault prolapse was low when a hysterectomy is performed in the absence of a defect in the pelvic support.[10] By analyzing the different risk factors for developing severe pelvic organ prolapse, the previous surgery to correct prolapse was the single greatest risk factor.[11]

Conservative management will include pelvic floor exercises and pessaries. Their role in vault prolapse management is unclear and there is no evidence to suggest that pelvic floor exercise is helpful.[12] Women who had

Table 1: Clinical spectrum and symptomatology

Symptom of patient	Frequency (%)
UTI	4 (28)
SUI	1 (7)
Bowel disturbance	1 (7)
Incomplete emptying of UB	2 (14)
Total	8 (56)

Table 2: Types of hysterectomy (in the past) in patients of vaginal prolapse

Types of hysterectomy	Frequency (%)
TAH	13 (93)
VH	1 (7)
Total	14 (100)

TAH: Total abdominal hysterectomy, VH: Vaginal hysterectomy

Table 3: Distribution of parity

Parity	Frequency (%)
0	0
1–2	2 (14)
3 or more	12 (86)
Total	14 (100)

Table 4: Distribution of age

Age (years)	Frequency (%)
30–39	5 (35.7)
40–49	6 (42.8)
50–59	2 (14.2)
>60	1 (7)
Total	14 (100)

Table 5: Types of prolapse after hysterectomy

Total number of cases	Frequency (%)
Major vault prolapses	4 (28)
Major vault prolapses with cystocele, rectocele, or enterocele	7 (50)
Cystocele, rectocele, enterocele, or its combination	3 (22)
Total	14 (100)

Table 6: Complication during procedures

Intraoperative complication	Number of cases (%)
Hemorrhage	2 (14)
Nerve injury	0
Hematoma	0
Total	2 (14)

4 or more vaginal deliveries have 12 times more risk of genital prolapse.[13] In our study, 86% patients had three or more vaginal deliveries [Table 3]. From the literature, it appears that vaginal delivery causes damage to the pudendal nerve and promotes the development of pelvic organ prolapse. There are suggestions that instrumental vaginal delivery, especially forceps delivery increases the risk.[14] Furthermore, it was demonstrated that cesarean section can avoid the pudendal nerve damage caused by vaginal delivery.[15] Despite the absence of damage to the pudendal nerve at cesarean section, MacLennan *et al.*[16] showed that there was no significant difference in pelvic floor dysfunction between cesarean section and vaginal delivery. Many literatures show an increasing prevalence of pelvic organ prolapse in the aged population.[17] It has been shown that there is a 12% increase in the incidence of severe pelvic organ prolapse with each year of advancing age or roughly, a doubling of the incidence for every decade of life.[11] In our study, 78% patient of vaginal prolapse were in the 30–50 years age group [Table 4]. More number of cases in the lower age group which could be due to hysterectomy performed relatively more in the earlier age group in our area.

Table 7: Surgical management

Surgical procedure	VP with or without cysto/recto/enterocele	Cysto/recto/enterocele
Sacro colpopexy	8	
ACR	0	
PCR	3	2
ACR+PCR	3	1
Enterocele repairs		1

ACR: Anterior colporrhaphy, PCR: Posterior colpoperineorrhaphy

The role of anatomic failure in published studies varies significantly. Beer and Kuhn reviewed the literature and found that the failure rate ranged from 3% to 37%.[18] In our study, three women had a recurrence of vault prolapse which was due to wrong repair done by an inexperienced surgeon in the form of ACR and PCR as corrective measures for associated rectocele and cystocele. No operative procedure was done for vault prolapse. Coexistent pelvic floor defects which may be a cystocele, rectocele, or enterocele are present in 72% of patients with vault prolapse.[19] In our study, 64% of VP cases are associated with cystocele, rectocele, or enterocele [Table 5].

The previous authors have reported severe and occasionally life-threatening hemorrhage from the preexisting sacral vessels when sutures were placed in the hollow of the sacrum.[20,21] To reduce this risk, the operative technique was, therefore, modified and sutures placed more proximally over the sacral promontory. The most common complication in the form of mild hemorrhage occurred in two points which responded to compression during surgery [Table 6]. Our points had the lowest complication rates compared with the previous studies which could be due to the small sample size.

ASC has proven to be superior to other techniques in terms of restoration of the normal vaginal axis and maintenance of vaginal capacity.[22,23] Contrary to previous reports, the point of sacral attachment does not affect the vaginal axis and attachment to the sacral promontory allows effective restoration of vaginal support, while maintaining both vaginal capacity and coital function.[24,25] A consistent cure rate of more than 90% has been reported,[26] with some studies reporting up to 95%.[27] It is further associated with a lower rate of recurrent prolapse and dyspareunia[28] which makes it a popular choice among surgeons, especially in fit patients. In the present study, eight (100%) patients who underwent sacrocolpopexy for vault prolapse had no recurrence of vaginal vault prolapse 6–12 months after the procedures [Table 7].

A national wide Swedish cohort study has demonstrated that 3.2% of women after hysterectomy complained of urogenital prolapse as compared to 2.0% of controls. To prevent vault, prolapse corrective measures should be taken at the time of hysterectomy, particularly at point at risk. Suturing the cardinal and uterosacral ligaments to the vaginal cuff at the time of hysterectomy is effective in preventing post-hysterectomy vaginal vault prolapse following both abdominal and vaginal hysterectomy. McCall culdoplasty at the time of VH is effective in preventing subsequent PHPV. Abdominal sacrocolpopexy (ASC) is considered the gold standard treatment for apical prolapse. Numerous studies have shown that ASC has a high success rate and long-term durability.[29]

Despite several surgical approaches developed to restore apical support, there is no guideline for which an apical support procedure should be performed; currently, choice of surgical approach depends on the preference and experience of the surgeon.

CONCLUSION

Advancing age and parity (3 or more) is an important risk factor for vaginal prolapse after hysterectomy. History of TAH is common among women with vault prolapse, cystocele, and rectocele as opposed to VH. ASC has proven to be superior to other techniques. The choice of surgical approach depends on the preference and experience of the gynecologist. Proper procedure and experience of a gynecologist are important in the repair of vaginal prolapse after TAH or VH to reduce recurrence. Corrective measures should be taken during hysterectomy (TAH or VH) to prevent vaginal prolapse in patients at risk.

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