Post Hysterectomy Vaginal Cuff Dehiscence and Evisceration: A Growing Challenge for the Gynaecologists

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DOI: https://doi.org/10.62830/mmj1-04-16a

Abstract:

Advances in medical technology and increased human life expectancy have led to a rise in gynaecological surgeries, typically hysterectomy surgeries. In developed or developing countries, 20%-40% of women undergo hysterectomy by the age of 60 years. The number of hysterectomies performed have increased manifold in the past 2-3 decades which in turn has resulted in an escalating number of complications such as infections, venous thromboembolic episodes, genitourinary (GU) and gastrointestinal (GI) tract injury, bleeding, nerve injury, and vaginal cuff dehiscence. Vaginal vault dehiscence is a rare but a typically morbid complication. It affects the woman's quality of life by imparting negative effects associated with vaginal bleeding or discharge, pain, pressure, and changed bowel habits. Here we discuss a case of a post-hysterectomy patient with vaginal vault evisceration, with protrusion of bowel loops through the vagina, requiring immediate surgical management.

Key words: Vaginal Cuff Dehiscence, Evisceration, Hysterectomy.

Introduction

Vaginal cuff dehiscence, a rare complication of hysterectomy, is the full or partial separation of the edges of the vaginal cuff. Evisceration is dehiscence of the vaginal cuff with prolapse of abdominal contents. After dehiscence, there is a direct connection between the peritoneal cavity and the vagina, causing a wide range of signs and symptoms from minimal vaginal discharge to profuse bleeding and gastrointestinal evisceration. The presence of these symptoms in a recent post-operative hysterectomy patient warrants immediate evaluation. These complications typically happen within days but may occur up to months or years following hysterectomy. The incidence of this condition as reported in the literature is 0%-7% and appears to be higher after laparoscopic and robotic approaches compared with vaginal and abdominal approaches.[1-5] Uccella *et al.*[1] previously reported the incidence to be 0.13% when the procedure is performed by the vaginal approach, 0.2% when performed abdominally, and 0.64% when performed by the laparoscopic approach. Risk factors are ill-defined and include factors that influence wound healing, as well as mechanical factors such as early resumption of sexual activity, trauma, and increased intra-abdominal pressure.[5-9]

Because of the related bowel, urinary, and sexual problems, prolapse affects the lives of the patients. Hence, it is crucial to carefully evaluate and guide the patient before planning the treatment.

Case Report

A 46-year-old post-menopausal woman presented to Max Super-Speciality Hospital, Mohali with chief complaints of something coming out of her vagina for two hours, associated with severe pain in the lower abdomen and pelvic area. The patient started experiencing these symptoms after lifting heavy weights. There was no history of vaginal discharge, constipation, indigestion or urinary symptoms. Patient was apparently well prior to this episode and was able to carry out her routine daily activities on her own. The patient had a surgical history of total laparoscopic hysterectomy with bilateral salpingo-oophorectomy for uterine leiomyoma four months ago. Intraoperative findings were suggestive of densely adherent bladder separated by sharp dissection followed by closure of vault. Postoperatively, on subsequent follow up visits in the out-patient department (OPD), the patient had developed a urinary tract infection for which

she was treated with antibiotics on an OPD basis. The patient had two parities with first being a home vaginal delivery in a squatting position and the second a lower segment caesarean section procedure performed thirteen years ago. This patient was at risk due to several factors, including increasing age, lifestyle, and a history of previous surgeries.

On examination, all the vital parameters were within normal limits. The patient was obese with a body mass index (BMI) of 31 kg/m^2. Moreover, on local examination, vault dehiscence with intestinal protrusion was found without any discharge or erosion (Figure 1). Intestinal loops (3-4 inches in length) were found lying at the introitus with visible peristalsis.

Figure 1: Vault dehiscence with intestinal protrusion.

The patient was taken up for an emergency laparotomy. A midline infra-umbilical vertical incision was made, the layers of abdomen separated, and the bowel loop was reduced through the vaginal vault. It was observed that the vault was healthy but partially open. After separating the bladder from the anterior wall of the vault and ensuring bladder integrity, vault closure was done using interrupted sutures. The post-operative period was uneventful and the patient was discharged on postoperative Day 2 in a satisfactory condition.

On subsequent follow up visits, the patient is recovering well.

Discussion

The vaginal cuff is the upper portion of the vagina that opens up into the peritoneum and is sutured shut after the removal of the cervix and uterus during a hysterectomy. The vaginal cuff is created by suturing together the edges of the surgical site where the cervix was attached to the vagina. This is accomplished by bringing the edges of the vagina together and suturing them together and to the uterosacral ligaments to prevent prolapse. The vaginal cuff has a tendency to partially or completely dehisce or open up. A further complication that can accompany the dehiscence of the vaginal cuff is evisceration or the movement of intestines into the vagina.

Limited data exists about the effect of different approaches to colpotomy creation, suture materials, or suturing techniques on the risk of vaginal cuff separation. The increased risk in laparoscopic and robotic procedures likely arises from differences in either laparoscopic suturing technique due to a magnified view that could induce the surgeon to include an insufficient amount of tissue in closure and insufficient tension maintained on the suture or the use of electrosurgical energy for colpotomy. Excessive energy application for colpotomy may lead to devascularisation and poorer wound healing. The risk appears reduced when the cuff is closed vaginally, regardless of hysterectomy approach.

Cuff dehiscence can occur after defecation, sexual intercourse, and other actions that increase intra-abdominal pressure although most cases occur spontaneously. Other risk factors include prior or current radiation therapy, immunosuppressive medications, corticosteroid use, tobacco use, vaginal atrophy, and cancer.[10]

Small partial vaginal cuff dehiscence may be managed conservatively, but the patient is at risk for full thickness separation. Surgical examination with repair should be performed if there is a doubt for integrity of the closure. Intravenous fluid hydration and broad-spectrum antibiotics should be started immediately. In cases of evisceration, protruding contents must be carefully inspected for injury. If there is evidence of trauma or ischaemia, or if bowel contents cannot be easily reduced, consultation with a surgeon with experience in bowel repair should be obtained to determine if bowel repair or resection is necessary. The vaginal cuff can be closed either abdominally or vaginally, with interrupted or figure-of-8 delayed absorbable sutures incorporating the full thickness of the vagina.

Given the high risk of subclinical infection, continuation of broad-spectrum antibiotics for at least 24 hours postoperatively is reasonable. Antibiotics should be continued until any clinically apparent infection has been fully treated.

Therefore, there is no general agreement on the management of vault dehiscence, but there is a consensus on the need to assess and evaluate individual cases and the peculiar circumstances of different patients, as it has been found to produce effective results.

Conclusion

There is a paucity of high-quality papers evaluating vaginal dehiscence and possible prevention strategies in the current literature. Early diagnosis and prompt management of vaginal cuff dehiscence or evisceration are crucial in preventing further complications and promoting healing. However, there is currently no standard recommendation for the ideal method of surgical repair following vaginal cuff dehiscence or evisceration. The available scientific evidence on the approach (vaginal, abdominal, or laparoscopic) to repairing vaginal cuff dehiscence does not indicate a preferred method. Several factors influence the choice of management, including the patient's vital stability, suspicion of intra-abdominal organ damage, presence of bowel evisceration, ability to evaluate bowel health, ability to adequately visualise and reapproximate vaginal tissue, surgeon availability, and the potential need for additional intensive care. Since no single method demonstrates superiority, the experienced surgeon decides on the closure technique based on their judgement of how to achieve optimal tissue approximation, strength of repair, and the ability to identify additional issues.

Parampreet Kaur Ghuman, Gaganpreet Kaur. Post Hysterectomy Vaginal Cuff Dehiscence and Evisceration: A Growing Challenge for the Gynaecologists. MMJ. 2024, December. Vol 1 (4).

DOI: https://doi.org/10.62830/mmj1-04-16a

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