CASE REPORT

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Beyond the Scar: Diagnostic Complexity in A Case of Post-Hysterectomy Vault Endometriosis: A Case Report

ABSTRACT

Background: Vault endometriosis is a rare cause of post-hysterectomy vaginal bleeding and often presents years after surgery, posing a diagnostic challenge.

Case Presentation: A 50-year-old woman with a history of total laparoscopic hysterectomy with bilateral salpingectomy (TLH+BS) presented with brownish pervaginum spotting. Ultrasonography revealed a small vascular lesion at the vaginal vault. Laparoscopic excision of the vault nodule was performed. Histopathology confirmed vault endometriosis. Postoperatively, the patient was treated with a gonadotropin-releasing hormone (GnRH) agonist, with complete resolution of symptoms.

Conclusion: Vault endometriosis, though rare, should be considered in women presenting with post-hysterectomy vaginal bleeding. Laparoscopic excision with adjunctive hormonal therapy provides excellent outcomes.

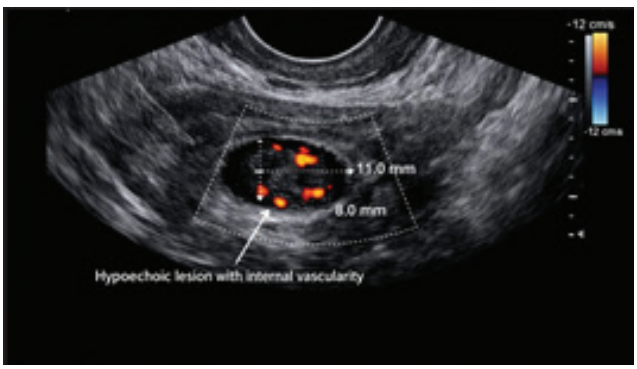
Key words: Vault endometriosis, Post-hysterectomy bleeding, Vaginal vault, Laparoscopy, GnRH agonist

INTRODUCTION

Endometriosis is a chronic inflammatory condition characterized by the presence of active endometrial tissue outside the uterus. The site of involvement includes the peritoneum, visceral layer of organs like uterus, ovaries, bladder, bowel, and also a few rare places like the diaphragm, lungs or surgical scar site. The overall incidence of endometriosis in reproductive age group women is around 6 to 11 percent. However, these numbers can be quite misleading, as many women remain unidentified due to its vague presentation and delayed diagnosis. Deep endometriosis is a type of endometriosis involving more than 5 mm of visceral peritoneum in depth. It commonly occurs at the bladder, rectum, ureter, or vault. Deep endometriosis more often requires surgical management for the alleviation of symptoms related to it. For vaginal vault endometriosis, the exact mechanism of occurrence is not clear but it could be attributed to inadvertent deposition of endometrial tissue during vault excision at the time of hysterectomy or due to inadequate removal of endometriotic tissue at vault or uterosacral ligament, which over the time increases to cause symptoms associated with this condition. The patient presents with irregular pv spotting, pelvic pain, painful intercourse, pain during micturition or passing stools. Here we present a rare case of vaginal vault endometriosis who presented with irregular vaginal bleeding after Total Laparoscopic Hysterectomy done 8 years ago.

CASE REPORT

A 50-year-old women with previous two normal vaginal deliveries came in September 2025 to our centre with irregular bleeding per vagina and pain in lower abdomen on and off since 3 years. She had undergone a total laparoscopic hysterectomy 8 years ago for abnormal uterine bleeding at another hospital. There were no significant complications, prolonged hospital stay, or need for blood transfusion after her previous surgeries. She didn't have any written/printed record of her prior surgeries, and our description is based on the history given by her orally. On per speculum examination, there was a dark, altered red mass of 2x3 cm at the right side of the vault. Per vaginally the consistency of the mass was firm to hard with tenderness in pouch of Douglas (POD). Transvaginal ultrasonography revealed an 11 × 8 mm hypoechoic lesion with internal vascularity along the posterior aspect of the vaginal



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vault stump. B/L ovaries were atrophic thus not visualised CA-125 was done which was found to be 200 IU/ml.

Based on the clinical and imaging findings, a provisional diagnosis of vault pathology was made.

The patient was posted for laparoscopic excision of vault endometriosis. 4 port entry was made. Dense omental adhesions were present at vault. Bilateral ovaries were small and atrophic. There was e/o small 2x3 cm hard mass at the posterior aspect of the vault. Adhesiolysis was done. Excision of nodule at the vault was done. Cystoscopy was done where no mass was seen within bladder cavity. Vault closure was done by Vicryl no.1. Sample was sent for histopathological examination (HPE). Hemostasis was checked. Pneumoperitoneum was released. Ports were closed.

Postoperative period was uneventful. Foley's catheter was removed on post-operative day 2.

The patient was discharged on post-operative day 3 and was asked to follow up in OPD after a week. Postoperatively, the patient received Inj. Leuprolide (GnRH agonist) She had complete resolution of symptoms and remained asymptomatic on follow-up.

The HPE report showed evidence of endometriosis with microscopic section showing presence of endometrial glands and stroma.

DISCUSSION

Vault endometriosis, being a rare condition, has no surgical management guidelines at present. Few case reports and series have provided evidence for need of primary surgical management in these cases. Laparoscopic surgery remains the mainstay for diagnosis, assessment and treatment of the condition. The surgery for vault endometriosis can be very challenging because of the presence of dense adhesions due to both endometriosis and previous surgery. Attempt of medical management in such cases can increase the fibrosis and adhesions without any actual alleviation of the macroscopic disease. The history narrated by the patient in our case gave no complaints related to endometriosis prior to her hysterectomy surgery. Also, her ovaries were preserved in the first surgery. The recurrence could be due to endometriosis left behind in the ovaries or on the peritoneum, which might have been missed during the primary surgery . Few studies also stressed on postoperative use of gonadotropin agonists/ antagonists for 3 months for suppression and prevention of recurrence of disease but this needs to be studied more with long term follow up with patients. Few cases reported development of fistulous tract to the vault from the endometriotic ovaries left behind after hysterectomy leading to development of vault endometriosis. Few cases have also reported to incomplete excision of ovaries leading to remnant ovarian syndrome in endometriosis leading to above condition. Thus origin of vault endometriosis is multifactorial.

The differentials of post hysterectomy bleeding include atrophic vaginitis, vaginal vault granuloma or carcinoma, infiltrating ovarian carcinoma, cervical stump carcinoma, vaginal carcinoma, prolapsed fallopian tubes, fallopian tube carcinoma or estrogen secreting tumour elsewhere in the body. These patients usually present with irregular vaginal bleeding with or without infectious discharge, cyclical or non-cyclical pelvic pain and dyschezia or painful micturition depending on site of visceral organ involvement. The mainstay of diagnosis remains imaging either in the form of ultrasound or MRI. Ultrasound remains the first line imaging modality in pelvic endometriosis. Ultrasound (TVS or TRUS) detects POD nodules, ovarian endometriomas, bladder nodules as well as deep colonic nodules and involvement of rectosigmoid area. with high specificity and sensitivity. MRI helps in knowing the extent of the disease and is commonly used for prediction of extrapelvic diseases & for planning the surgery

The mean time of development of symptoms was longer in our study which may indicate towards effect of lifestyle in development of endometriosis. All the surgical steps should be standard when dealing with such cases with adhesiolysis of bowels, dissection of ureter, opening up of the retroperitoneal spaces and excision of all macroscopic disease. This includes shaving off of any superficial bladder or rectal serosal surfaces. In case of deeply infiltrating cases there might arise need of bowel resection and anastomosis or bladder reconstruction with or without ureteric reimplantation. The dissection of the vault should be done to achieve a disease free margin of at least 1-2 cm to prevent recurrence.

CONCLUSION

Vault endometriosis,a rare condition and is challenging. Proper history taking, physical examination and imaging needs to be done before the operation. Minimally invasive surgery remains the gold standard for diagnosis and management of the disease. In such cases of deep endometriosis, the role of medical management becomes negligible . Surgery remains the mainstay management of such condition.

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