

# Endometriosis at the Vaginal Scar: A Case Report

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## ABSTRACT

Endometriosis is a chronic disease defined as the ectopic growth of functional endometrial glands and stroma outside the uterine cavity. Vaginal scar endometriosis is a rare form of extra-pelvic endometriosis following obstetric or gynaecological vaginal surgeries. Here, we present a case of a 50-year-old P2L2 (Normal Vaginal Delivery), status postvaginal hysterectomy, with complaints of mass/growth at introitus 4 years with cyclical nodular swelling and spotting per vagina every month. Local examination revealed a 2×3 cm nodule at the fourchette region. Wide local excision of the nodule with a free margin of 1 cm of the surrounding healthy tissue was done. The postoperative course was uneventful, and the patient remained asymptomatic during follow-up visits. It is necessary to create awareness and high suspicion among doctors for early diagnosis and treatment of such a rare form of extra-pelvic endometriosis to provide relief and a good quality of life for patients.

**Keywords:** Cyclical swelling, Extra-pelvic endometriosis, Surgical menopause, Vaginal fourchette, Vaginal hysterectomy

## CASE REPORT

A 50-year-old female patient presented with a mass/growth at the introitus for four years, associated with spotting every month. Cyclical swelling of the mass was noted. There was no history of vaginal discharge, bowel or bladder disturbances, abdominal mass, weight loss, or postmenopausal bleeding. Menstrual history was suggestive of surgical menopause. Obstetric history included two normal vaginal deliveries. The patient had undergone vaginal hysterectomy nine years prior. She was a known case of dyslipidaemia and bronchial asthma and is on treatment. There was no family history of gynaecological malignancy.

On examination, patient was conscious and oriented to time, place and person. She was stable with a pulse rate of 88 per minute, blood pressure of 130/80 mmHg, respiratory rate of 18 per minute, afebrile, with no evidence of pallor, jaundice, cyanosis, oedema, clubbing and lymph node enlargement.

On per abdominal examination, the abdomen was normal in size and shape, with a centrally placed inverted umbilicus. All quadrants moved equally with respiration. No dilated veins, sinuses or scar were present, and all hernial orifices were intact. On palpation, the abdomen was soft and non-tender, with no organomegaly. Percussion revealed a tympanic note, and bowel sounds were present on auscultation.

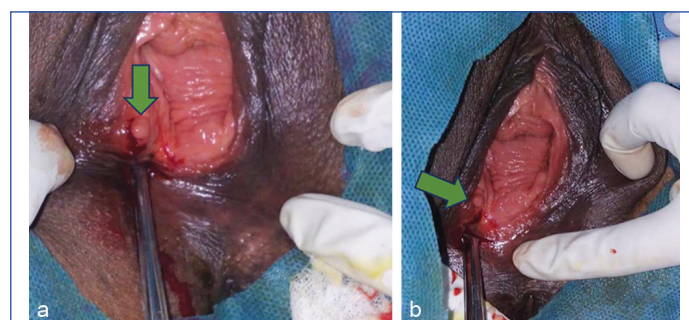
On per-vaginal examination, a nodule of size 2×3 cm at the vaginal fourchette region was seen, and on per-speculum examination vaginal vault was healthy, and no bleeding was noted.

Laboratory investigations were done which demonstrated Haemoglobin (Hb)-13.7 g/dL; Total Leucocyte Count (TLC)-8,400/cumm; Differential Leucocyte Count (DLC): neutrophils-68%, lymphocytes-23%, eosinophils-2%, monocytes-7%; Platelet count-2,32,000/cumm; Prothrombin Time (PT)-13.3 sec; International Normalised Ratio (INR)-0.88; activated Partial Thromboplastin Time (aPTT)-28.1 sec; Serum Creatinine (S. creatinine)-0.6 mg/dL; Serum Thyroid-Stimulating Hormone (S. TSH)-2.220 µIU/mL; Serum Triiodothyronine (S. T3)-1.04 ng/mL; Serum Thyroxine (S. T4)-7.41 µg/dL. Urine analysis was normal. Electrocardiogram (ECG) showed sinus rhythm.

Ultrasound of abdomen and pelvis was done, with the impression of uterus not visualised (postoperative status) and ovaries not visualised.

Following this, a clinical diagnosis of scar endometriosis was made based on the classic presentation of cyclical pain and/or cyclical swelling, nodule over the introitus and a previous history of vaginal hysterectomy. Patient was taken up for scar endometriotic tissue excision under spinal anaesthesia by wide local excision of the nodule with a free margin of 1 cm of the healthy tissue.

During the surgical intervention, a black coloured discharge with blood was drained from the mass [Table/Fig-1a,b]. The two cut-specimen tissues measuring 1×0.7×0.2 cm and 1×0.5×0.2 cm were sent for histopathological examination. We sutured and applied a vaginal pressure pad dressing to the wound. Postoperative course was uneventful and the patient was discharged on the postoperative day one with stable vitals and oral antibiotic and analgesic medications, and also advised to continue her medication for dyslipidaemia and bronchial asthma.



[Table/Fig-1a,b]: Scar endometriosis nodule at the vaginal fourchette.

She was advised to follow up in the OBG OPD after a week with the HPE report. The microscopic examination showed fibrocollagenous tissue lined by squamous epithelium. Sub epithelium showed focal areas of endometrial glands and stroma. The specimen features were consistent with endometriosis and thus confirmed the clinical diagnosis of ectopic endometriosis. During the last two postoperative follow-up visits, the patient reported no complaints of pain, bleeding, or swelling.

## DISCUSSION

Endometriosis is a chronic disease defined as the ectopic growth of functional endometrial glands and stroma outside the uterine cavity, causing inflammation, pelvic pain, heavy menstrual cramps, irregular

periods and infertility [1,2]. Based on the localisation of the growth, it's classified into pelvic and extra-pelvic endometriosis [3].

Vaginal scar endometriosis is a rare entity of extra-pelvic endometriosis, which occurs in previous surgical sites like caesarean sections, episiotomy, hysterectomy, and tubal ligation [4-6].

Scar endometriosis is highly suspicious in patients presenting with cyclical pain over the pelvic area, mass or nodule in the pelvic area and history of obstetric surgery- vaginal delivery either with or without the use of instrument, dilatation and curettage and gynaecological surgery- vaginal hysterectomy during which vaginal or perineal injuries (laceration) are commonly seen [7].

Although the exact aetiology of scar endometriosis is yet to be determined, one of the most suggested theories of mechanism of scar endometriosis is iatrogenic mechanical implantation of endometrial tissue into the subcutaneous or fascial layer of the wound during the surgical interventions [5]. In this case, apart from a history of a gynaecological procedure, the patient had no prior history of endometriosis or family history of the disease. The onset of symptoms five years after vaginal hysterectomy supports the theory of iatrogenic mechanical implantation rather than metaplastic, vascular, or lymphatic spread. Following this, the implanted oestrogen-dependent endometrial tissue then proliferates under oestrogen stimulation, leading to endometriosis [4,6]. In some studies, the average time period of presentation of the scar endometriosis were reported to be two years and 5.72 years following a surgical procedure [4,5].

Gunes M et al., reported a study where eleven patients with painful nodules arising at the sites of previous gynaecologic surgical scars were retrospectively analysed. The nodules demonstrated cyclical changes in size, with enlargement occurring during menstruation [5]. Mahendru R et al., reported a case of a 41-year-old woman who developed cyclical pelvic pain 2.5 years after Ward Mayo's

vaginal hysterectomy. The lesion was excised with a 1 cm margin, and histopathology confirmed endometriosis [1]. Goel P et al., identified six cases of scar endometriosis over 13 years, most commonly presenting with cyclical pain and swelling. Wide excision resulted in no recurrence during follow-up (9 months- 12 years) [4]. Bindra V et al., reported a case of a 28-year-old multiparous woman who had undergone two prior excisions of a perineal nodule at another hospital, where histopathology confirmed perineal scar endometriosis, but her symptoms persisted. Third time wide local excision with a 1 cm margin was performed [7].

## CONCLUSION(S)

Vaginal scar endometriosis is a rare and elusive diagnosis in menopausal women. Clinicians should have high suspicion of vaginal scar endometriosis even in menopausal women and not be limited to the reproductive age group women.

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### AUTHOR DECLARATION:

- Financial or Other Competing Interests: None
- Was informed consent obtained from the subjects involved in the study? Yes
- For any images presented appropriate consent has been obtained from the subjects. Yes

### PLAGIARISM CHECKING METHODS: [Jain H et al.]

- Plagiarism X-checker: Aug 28, 2025
- Manual Googling: Feb 14, 2026
- iThenticate Software: Feb 18, 2026 (7%)

### ETYMOLOGY: Author Origin

### EMENDATIONS: 6

Date of Submission: Jul 25, 2025

Date of Peer Review: Dec 04, 2025

Date of Acceptance: Feb 21, 2026

Date of Publishing: Jun 01, 2026