

An Unusual Case of Cyclical Pain – A Rare Case Report

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ABSTRACT

Endometriosis is a benign condition of female reproductive system marked by ectopic localization of functional endometrial glands and stroma beyond the uterus. Post-episiotomy endometriosis is an uncommon clinical entity, occurring in about 0.3-1% of women. Although the exact etiology remains uncertain, several pathogenetic mechanisms have been proposed. A case of 31-year female (P1L1) with five-year history of recurrent swelling and menstruation-related pain at the previous episiotomy site is reported. On local examination, 2 x 1 cm pedunculated, keratinized warty lesion was identified at the episiotomy site. Clinical differentials included Bartholin cyst and Hidradenoma papilliferum. Histopathological evaluation revealed endometrial glands as well as stromal elements, establishing the diagnosis of endometriosis at the episiotomy site.

Keywords: *Episiotomy scar endometriosis (ESE), Ultrasonography (USG), Computed topography (CT), Magnetic resonance imaging (MRI), Gastrointestinal tract (GIT).*

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INTRODUCTION

Endometriosis is a benign disorder marked by the implantation of functional endometrial glands as well as stroma at extrauterine locations - pelvis being the most common site of involvement.[1] It mainly occurs within reproductive-age female population. Its estimated prevalence ranges from 0.03-1.7%, while rates in general population have been reported to range widely from 0.7% to 44%. The pelvis represents the most frequent site of endometriosis, particularly ovaries, round ligaments, uterosacral ligaments, although extrapelvic involvement-bladder, GIT, lungs, and skin - may occur, especially following obstetric or gynaecological interventions.[2] Surgical scar endometriosis constitutes nearly 1% of all endometriosis cases, among which perineal scar endometriosis shows reported frequency of 0.3-1%. [3]

CASE REPORT

A 31-year female, P1L1, with history of normal vaginal delivery in 2019 with left mediolateral episiotomy, presented with recurrent swelling and pain at the episiotomy scar site for the past five years. She delivered in 2019 and began experiencing pain a year later. The symptoms were intermittent and characteristically exacerbated during menstruation, indicating a cyclical pattern. Initially, the pain was tolerable, and she did not seek medical evaluation, managing episodes with

occasional analgesics. However, due to progressive worsening and increased severity of pain, she was admitted in January 2026 for further evaluation and management. On local examination, a 2 × 1 cm pedunculated keratinized warty growth was noted at 5 o'clock position of the introitus, adjacent to the posterior fourchette (Figure 1). The lesion was mildly tender, bled on touch, and there was no associated discharge. The cervix and vagina appeared healthy with no abnormal findings. USG Abdomen & Pelvis shows no significant abnormality. Clinically, the differential diagnoses included Bartholin cyst and Hidradenoma papilliferum.



Figure 1: Clinical image showing pedunculated keratinized warty growth was noted at 5 o'clock position of the introitus

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The lesion was surgically removed by wide local excision. The specimen was submitted for histopathological analysis. Microscopy demonstrated revealed stratified squamous epithelium with underlying subepithelium exhibited multiple foci of tubular and irregularly shaped endometrial glands lined by stratified columnar epithelium, surrounded by compact endometrial-type stroma with areas of haemorrhage (Figure 2A,2B,2C). Underlying skeletal muscle bundles were also identified (Figure 2D). These histomorphological features are consistent with post-episiotomy scar endometriosis.

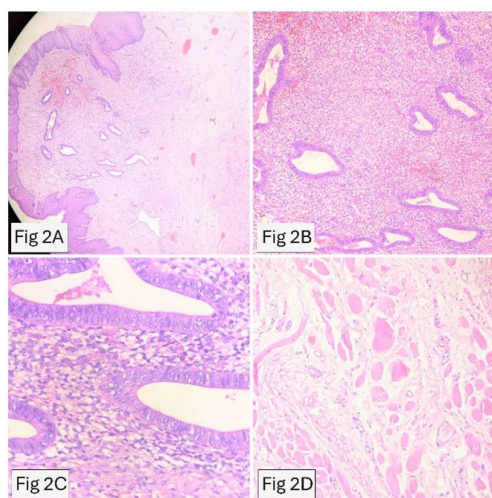


Figure 2: A) Microscopy shows stratified squamous epithelium with underlying subepithelium revealed presence of endometrial glands and stroma [H & E, 100x]. B) Microscopy shows focus of tubular irregularly shaped endometrial glands, surrounded by compact endometrial stroma [H & E, 100x]. C) Microscopy shows endometrial glands lined by stratified columnar epithelium [H & E, 400x]. D) Microscopy shows underlying skeletal muscle bundles [H & E, 100x].

DISCUSSION

Endometriosis was first described by Rokitansky in 1860 as the ectopic presence and proliferation of endometrial tissue beyond the uterine cavity., most commonly in pelvis; later, Allen reported extragenital endometriosis in 1896; Scheckele documented the earliest case of perineal endometriosis in 1923. [2] It commonly occurs following vaginal delivery but may also develop at vulvar sites such as previous Bartholin gland excision scars. ESE is a rare condition, affecting approximately 0.3% to 1% of women. [4]

The exact pathogenesis of scar endometriosis remains unclear, although the implantation theory is the most widely accepted explanation, wherein endometrial cells from the uterine cavity are transplanted to a surgical site during obstetric or gynaecological procedures. In cases of episiotomy scars, these cells may be deposited into the perineal tissues during vaginal delivery, particularly when perineal trauma is present.[5] An alternative hypothesis is reverse menstrual flow, characterized by the backward

passage of menstrual endometrial fragments through fallopian tubes with implantation on peritoneal surfaces., explaining the predilection of lesions for the pouch of Douglas, ovaries, and uterus. However, cases of perineal endometriosis without prior vulvovaginal trauma have been described, suggesting lymphovascular spread of endometrial tissue from retrograde menstruation to distant sites such as lungs, GIT, perineum, vagina - referred as metastatic or dissemination theory. Another hypothesis suggests that pluripotent peritoneal mesothelial cells undergo metaplasia, leading to the development of endometrial tissue. [4]

The typical presentation includes cyclical pain and swelling that intensify during menstruation, with occasional bleeding from the lesion, although non-cyclical symptoms may also occur. [6] The differential diagnosis of this condition includes suture granuloma, abscess, hematoma, keloid lesions, sebaceous cyst, desmoid tumor, and malignancy. [2] Therefore, diagnosis primarily depends on strong clinical suspicion, supported by meticulous history-taking and careful physical examination.[6]

USG and CT have limited utility in the evaluation of ESE. But transperineal USG using high-resolution 7.5 MHz linear transducer can be performed, typically demonstrating a hypoechoic vs anechoic lesion of subtle internal echoes observed at scar site, sometimes showing perilesional vascularity. MRI is the imaging modality of choice due to its excellent contrast resolution. It not only aids in diagnosis but also precisely defines the extent of lesion and its relationship to adjacent structures. [7]

Histopathological evaluation remains the definitive method for diagnosis and is confirmed by the presence of endometrial glands as well as stroma with or without hemosiderin pigment.[1] Few reports in the literature describe malignant transformation in scar endometriosis, although such occurrences are rare.[5]

Management of episiotomy scar endometriosis primarily involves complete or wide local excision of lesion with atleast 1 cm margin of adjacent normal tissue. This approach plays key role in minimizing relapse, even if primary sphincteroplasty is required in cases involving the anal sphincter. Despite complete excision, recurrence rate of approximately 3.3% has been reported. Hormonal therapy may be considered preoperatively for large lesions or those with sphincter involvement to reduce lesion size and potentially lower recurrence risk. Delayed surgical intervention may result in progression of the disease with extension into anal sphincter.[8]

CONCLUSION

Episiotomy site endometriosis is an uncommon form of scar endometriosis that should be suspected in women exhibiting menstrual related pain and swelling at previous episiotomy site, particularly post vaginal delivery. Although uncommon, delayed diagnosis may lead to

progressive enlargement and possible involvement of adjacent structures such as the anal sphincter. A high index of clinical suspicion, supported by appropriate imaging and confirmed by histopathology demonstrating endometrial glands, stroma, and hemosiderin pigment, is essential for accurate diagnosis. Wide local excision with adequate margins remains the treatment of choice to minimize recurrence. Early recognition and timely surgical management are crucial to prevent complications and ensure favourable outcomes.

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