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A SCAR THAT MENSTRUATES: THE ENIGMA OF EPISIOTOMY SITE ENDOMETRIOSIS

Obstetrics & Gynaecology

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ABSTRACT

Background: Episiotomy scar endometriosis is an uncommon form of extrapelvic endometriosis that occurs following vaginal delivery. It results from iatrogenic implantation of endometrial tissue into the perineal wound during episiotomy repair. Due to its rarity and nonspecific presentation, diagnosis is often delayed or mistaken for more common perineal pathologies. **Case Presentation:** A 26-year-old woman P1L1 presented with pain and swelling in the left perineal region for six months, which worsened cyclically with menstruation. She had a history of vaginal delivery with a left mediolateral episiotomy one year earlier. On examination, a firm, tender nodule measuring 1 cm was palpated at the episiotomy scar. Ultrasonography revealed a multiloculated cystic lesion with internal echoes, and MRI confirmed a well-defined lesion without sphincter involvement. Wide local excision was performed under spinal anesthesia, and histopathology revealed endometrial glands and stroma with hemosiderin-laden macrophages—confirming endometriosis. Postoperatively, the patient remained asymptomatic and showed no recurrence at the three-month follow-up. **Conclusion:** Episiotomy scar endometriosis, though rare, should be suspected in reproductive-age women presenting with cyclical perineal pain and a scar nodule following vaginal delivery. Clinical awareness and imaging are key to diagnosis, and complete wide local excision remains the definitive treatment. Early recognition prevents recurrence and preserves perineal function.

KEYWORDS

Episiotomy Scar Endometriosis, Perineal Scar Endometriosis, Extrapelvic Endometriosis, Scar Endometrioma, Cyclical Perineal Pain

INTRODUCTION

Endometriosis is a benign, estrogen-dependent, chronic inflammatory disorder defined by the presence of endometrial glands and stroma outside the uterine cavity (1). It most commonly affects pelvic organs such as the ovaries, peritoneum, and rectovaginal septum; however, extrapelvic manifestations involving surgical scars, the abdominal wall, or perineum are increasingly reported (2, 3).

Scar endometriosis refers to implantation of viable endometrial cells within surgical scars, typically following obstetric or gynecological interventions such as cesarean section, laparotomy, or episiotomy (4, 5). Among these, episiotomy scar endometriosis is extremely rare, with a reported incidence between 0.03% and 0.15% of all deliveries involving episiotomy (3, 6, 7).

The most accepted pathophysiological mechanism is iatrogenic mechanical transplantation of endometrial cells during vaginal delivery and episiotomy repair, which later proliferate under hormonal influence (6, 8). Other proposed theories include lymphatic or hematogenous spread and coelomic metaplasia (5, 9).

Clinically, the condition is characterized by a tender perineal nodule, cyclic pain synchronized with menstruation, and a history of vaginal delivery with episiotomy—a diagnostic triad described as having near-perfect predictive value (3, 6). Misdiagnosis is common due to its rarity, often being mistaken for perineal abscess, granuloma, or Bartholin cyst (2, 4, 9). Imaging modalities such as high-resolution ultrasonography and magnetic resonance imaging (MRI) assist in delineating lesion extent and evaluating sphincter involvement (1, 4, 9). Complete wide local excision with histopathological confirmation remains the definitive treatment (2, 3, 5).

Case Report

A 26-year-old woman, para 1 living 1, presented with pain and swelling in the left perineal region for six months, worsening cyclically with menstruation. She had a history of vaginal delivery one year prior with a left mediolateral episiotomy. On examination, a tender, firm, 1 cm nodule was palpated near the left episiotomy scar. The overlying skin was healthy, and there was no discharge or induration. Vaginal mucosa was intact.

Imaging

Ultrasonography of the perineal region revealed a complex multiloculated cystic lesion with internal echoes and no intralesional vascularity. MRI confirmed a well-defined, multi-loculated lesion measuring 1 × 0.5 × 0.5 cm in the left perineal region, without extension into the anal sphincter.

Surgical Management

Wide local excision was performed under spinal anesthesia. A well-circumscribed mass was excised with a 1 cm margin of healthy tissue and sent for histopathological examination (HPE).

Histopathology

Sections showed endometrial glands and stroma surrounded by hemosiderin-laden macrophages—features diagnostic of endometriosis.

Follow-up

The patient remained asymptomatic at three-month follow-up, with no signs of recurrence or sphincter dysfunction.

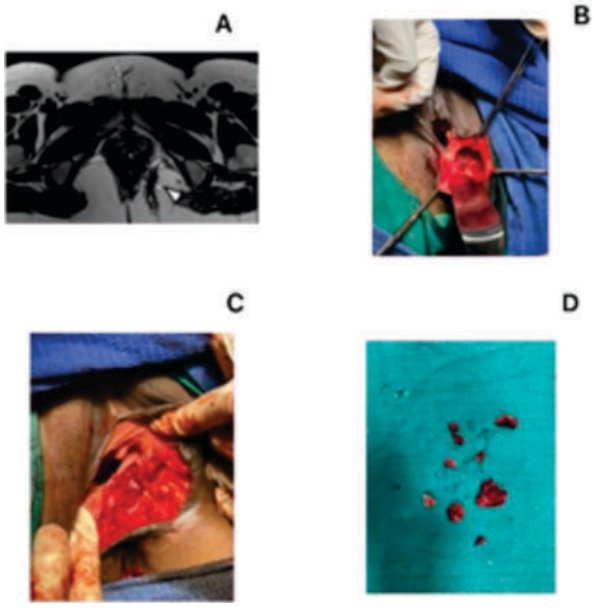

Figure 1: A-MRI showing well-defined, multi-loculated lesion measuring 1 × 0.5 × 0.5 cm in the left perineal region, without extension into the anal sphincter; B&C – Wide local excision; D-Specimen sent for HPE

DISCUSSION

Episiotomy scar endometriosis represents an uncommon but clinically important manifestation of extrapelvic endometriosis. Most affected women are of reproductive age and present months to years after vaginal delivery with episiotomy (1,2,4). The mean latency period ranges from 2 to 240 months, as noted by Leite et al., highlighting its slow progression and potential for delayed recognition (7).

The underlying etiopathogenesis is primarily explained by the mechanical implantation theory, where viable endometrial cells from the uterine cavity are inoculated into incised perineal tissues during

childbirth or episiotomy repair (6,8). These cells survive and proliferate under cyclical hormonal stimulation, forming endometriotic nodules within the scar. Gruber et al. emphasized that scar endometriosis, though often associated with cesarean sections, can also follow perineal trauma such as episiotomy, making it a neglected obstetric complication (5).

The clinical triad of a prior episiotomy, cyclical perineal pain, and a tender perineal mass is considered pathognomonic (1,6). Zhu et al. demonstrated that the predictive value of these three features approaches 100% when all are present (6). The pain typically worsens during menstruation due to cyclic bleeding and inflammation within the ectopic endometrial tissue (3,9).

Imaging is useful in surgical planning. Ultrasonography reveals a hypoechoic or cystic lesion with internal echoes, while MRI offers superior soft-tissue contrast, defining the lesion's relationship to the anal sphincter and ruling out deep invasion (1,4,9). Maillard et al. highlighted MRI as the investigation of choice in complex cases involving vulvo-perineal extension (9).

The definitive diagnosis rests on histopathological confirmation showing endometrial glands, stroma, and hemosiderin-laden macrophages (1–3). Wide local excision remains the treatment of choice, with a minimum margin of 1 cm of healthy tissue to minimize recurrence (2–4,7). In cases with anal sphincter involvement, en bloc resection with sphincteroplasty may be necessary (6,9). Hormonal therapy (e.g., GnRH agonists, progestins) may be used as an adjunct or preoperative measure to reduce lesion size, though it is not curative (5,9).

Recurrence after complete excision is rare, with reported rates ranging from 0% to 3.3% (3,7). However, delayed or incomplete excision can lead to chronic pain, sphincter dysfunction, or recurrence (1,8). Malignant transformation, though extremely rare, has been reported in long-standing perineal endometriosis, underscoring the need for early diagnosis and definitive management (5,9).

Our case findings and outcomes align with published literature: early diagnosis based on classical clinical features, imaging-guided evaluation, and wide local excision resulted in complete symptom resolution and no recurrence at follow-up.

CONCLUSION

Episiotomy scar endometriosis is a rare but distinct sequela of vaginal delivery. Awareness of the classic triad—cyclic perineal pain, palpable scar nodule, and prior episiotomy—is key to early diagnosis. Ultrasonography and MRI are invaluable for preoperative assessment, while wide local excision remains the curative treatment. Early recognition prevents progression, recurrence, and sphincteric complications, offering an excellent prognosis when managed promptly and adequately.

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