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Case Report

Episiotomy scar endometriosis misdiagnosed as a stitch granuloma eight years after vaginal delivery: a case report

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ABSTRACT

Endometriosis of an episiotomy scar is an uncommon form of extrapelvic endometriosis in which endometrial-like tissue implants within a perineal obstetric scar and undergoes cyclical hormonal change. It is often misdiagnosed, because the classical triad of previous episiotomy, a tender perineal nodule, and cyclical pain is complete in only about half of cases, and because the swelling mimics common perineal conditions such as suture granuloma, abscess, or Bartholin cyst. We report a 32-year-old woman, para 2, with an eight-year history of a painful swelling at her left episiotomy site. The cyclical nature of the pain had been overlooked at several earlier consultations, and she had been treated empirically with antibiotics for a presumed antibioma without benefit. Pelvic ultrasound was normal, and a working diagnosis of stitch granuloma was made. At operation a firm mass of 4 by 3 cm was found over the left labia minora; on incision it released thick chocolate-brown fluid, an appearance typical of an endometriotic cyst. The lesion was excised completely with a 1 cm margin of healthy tissue, and histopathology confirmed endometriosis. Recovery was uneventful and she remained free of recurrence at 12 months. Scar endometriosis should be considered in any reproductive-age woman with a long-standing painful perineal lump at an episiotomy site, even when cyclical symptoms are not reported spontaneously. A directed menstrual history and complete surgical excision with a healthy tissue margin are the keys to diagnosis and cure.

Keywords: Episiotomy scar, Extrapelvic endometriosis, Perineal endometriosis, Scar endometriosis, Stitch granuloma, Vulval mass

INTRODUCTION

Endometriosis is defined as the presence of functional endometrial glands and stroma outside the uterine cavity and affects about 5 to 10% of women of reproductive age.¹ The pelvis is the usual site, especially the ovaries, uterosacral ligaments, and pouch of Douglas, while extrapelvic disease accounts for only around 12% of cases.² Implantation of endometriosis in a surgical scar is well recognised within the extrapelvic group. The anterior abdominal wall after caesarean section is by far the commonest location; perineal implantation in an episiotomy scar is much rarer and is reported in only 0.03 to 0.15% of vaginal deliveries.^{2,3}

Recognition is characteristically delayed. Diagnostic delay is well documented in endometriosis generally, with systematic reviews reporting a mean interval of several years between symptom onset and diagnosis.⁴ In scar endometriosis the delay is compounded by the rarity of the condition and by its overlap with common benign perineal lesions.

The classical triad of a previous episiotomy, a tender perineal nodule, and cyclical pain is present in only about half of reported cases.^{5,6} The condition is therefore often mistaken at first presentation for a suture granuloma, perianal abscess, Bartholin cyst, haematoma, neuroma, hernia, or a soft-tissue tumour.^{3,7} The reported interval

between the obstetric event and presentation ranges from one month to 14 years.^{6,8}

Although endometriosis is benign, malignant transformation within a scar endometrioma occurs in about 0.3 to 1% of cases, most often as clear cell carcinoma meeting Sampson's criteria for endometriosis-associated malignancy.^{7,9} This uncommon but serious outcome is a further reason to excise these lesions completely and confirm the diagnosis histologically rather than treat them empirically.

We describe a case of episiotomy scar endometriosis in a 32-year-old woman that presented eight years after vaginal delivery and was treated first as an antibioma and then as a presumed stitch granuloma. The finding of chocolate-brown fluid on incision of the mass was the first clue to the correct diagnosis, which was later confirmed on histology. We discuss the pitfalls that delayed recognition, the features that should raise suspicion, and the principles of surgical treatment.

CASE REPORT

A 32-year-old woman, para 2, with two previous normal vaginal deliveries and tubal sterilisation, presented to the outpatient department with a painful swelling over the left side of the vulva of eight years' duration. The symptoms had begun a few months after her second vaginal delivery, which had been complicated by a left mediolateral episiotomy. She had consulted several practitioners over the intervening years and had obtained only short-term relief from analgesics. There was no fever, purulent discharge, per-vaginal bleeding, abnormal vaginal discharge, urinary symptom, or constitutional complaint. On direct questioning she reported that both the pain and the size of the swelling increased around menstruation, but this cyclical pattern had not been noted at any previous visit.

Her obstetric history comprised two uncomplicated vaginal deliveries, each with a left mediolateral episiotomy, followed by tubal sterilisation. There was no history of other gynaecological surgery, dilatation and curettage, or known endometriosis.

On examination there was a 2 by 2 cm firm, mildly tender swelling at the left lower vulva at the episiotomy site, with no overlying skin change, discharge, or fluctuation. The initial impression was an antibioma or stitch granuloma. A five-day course of empirical antibiotics with serratiopeptidase and diclofenac was prescribed, and the patient was reviewed after one menstrual cycle. At review the swelling was unchanged in size and still tender. Pelvic ultrasound reported a normal study. Excision was planned after the next menstrual cycle.

Under spinal anaesthesia, and after written informed consent, the perineal mass was excised. At operation a firm mass of 4 by 3 cm was palpable over the left labia minora

beneath the old episiotomy scar; it was larger than the 2 by 2 cm swelling felt in the clinic, reflecting its deeper extent (Figure 1).

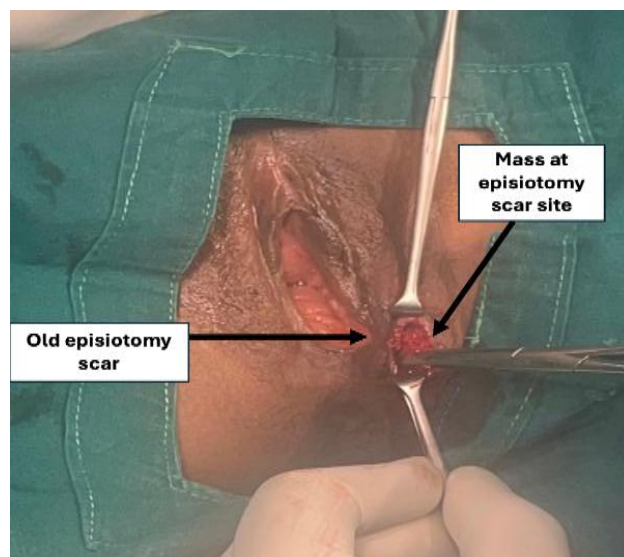


Figure 1: Intraoperative photograph in the lithotomy position showing the firm, well-defined 4 by 3 cm mass at the site of the previous left mediolateral episiotomy.

A skin incision was made over the most prominent part of the mass and the overlying skin was raised in a healthy plane. During mobilisation the capsule was inadvertently opened and thick chocolate-brown fluid escaped, an appearance strongly suggestive of an endometriotic cyst rather than a granuloma or antibioma. The mass was excised completely together with about a 1 cm margin of macroscopically healthy tissue. The cavity was irrigated with normal saline, haemostasis was secured, and the wound was closed in layers. The specimen was sent for histopathology (Figure 2).

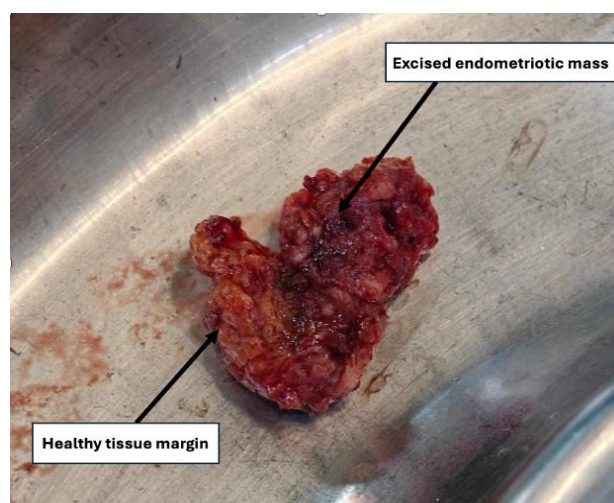


Figure 2: Excised specimen showing the complete mass with an approximately 1 cm margin of surrounding healthy tissue.

The patient recovered well and was discharged on the first postoperative day on oral antibiotics for five days with serratiopeptidase and diclofenac. Histopathology showed endometrial glands and stroma surrounded by fibrous tissue with haemosiderin-laden macrophages, confirming endometriosis of the episiotomy scar (Figure 3); there was no atypia or malignancy. She was reviewed on day 5 for the report and on day 30 for wound assessment, by which time the site had healed and she was asymptomatic. She was advised to report any new perineal swelling or cyclical pain. At the last review, 12 months after surgery, she remained asymptomatic with no clinical evidence of recurrence.

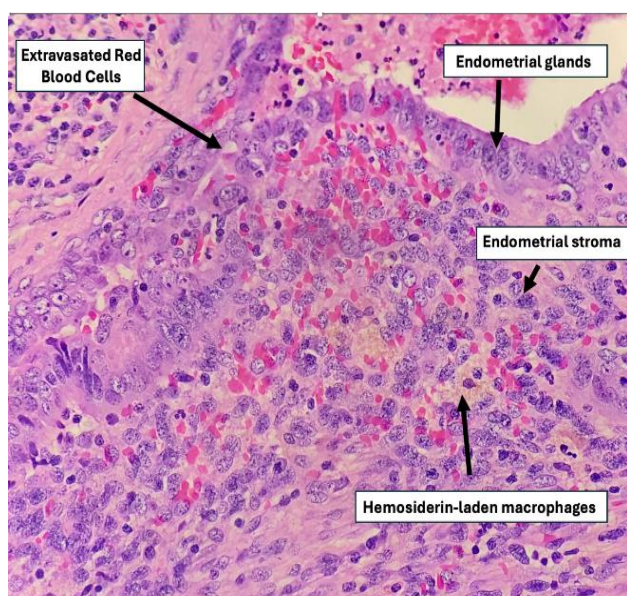


Figure 3: Photomicrograph of the excised mass showing an endometrial gland lined by columnar epithelium, adjacent endometrial-type stroma, and haemosiderin-laden macrophages with extravasated red blood cells, confirming endometriosis of the episiotomy scar (haematoxylin and eosin, original magnification $\times 400$).

Arrows indicate the glandular epithelium, endometrial-type stroma, haemosiderin-laden macrophages, and extravasated red blood cells.

DISCUSSION

Episiotomy scar endometriosis is an uncommon form of extrapelvic endometriosis, reported in 0.03 to 0.15% of vaginal deliveries.^{2,3} The most widely accepted explanation is direct mechanical implantation of viable endometrial or decidual cells into the perineal wound at delivery, with later hormone-driven growth; this iatrogenic mechanism was supported experimentally by Ridley and Edwards in 1958.^{7,8} The same process underlies the commoner abdominal-wall endometriosis seen after caesarean section, and the two share clinical behaviour, histology, and management.⁹ Coelomic metaplasia, lymphovascular spread, and immunological factors have

been proposed for the rare cases that arise without any perineal trauma.^{5,6} In our patient the close temporal and anatomical link between the episiotomy and a mass at the same site fits direct implantation.

When all three components of the classical triad (previous episiotomy, a tender scar nodule, and cyclical pain) are present, the positive predictive value approaches 100%, yet the triad is complete in only about half of patients at first presentation.^{5,10} Cyclical symptoms are often absent or, as here, simply not elicited unless a menstrual history is specifically taken.^{5,11} The latent interval between delivery and symptom onset is variable, with a median of roughly 30 months and a range of one month to 14 years.^{5,12} This non-specific picture, the rarity of the condition, and the diagnostic delay that characterises endometriosis in general together explain why the diagnosis is so often missed.⁴

The differential diagnosis of a mass at a perineal obstetric scar is wide and includes suture granuloma, perineal or perianal abscess, Bartholin cyst or abscess, epidermal inclusion cyst, lipoma, fibroma, haematoma, neuroma, inguinal or perineal hernia, Gartner duct cyst, and soft-tissue tumours such as angiomyofibroblastoma or aggressive angiomyxoma; in older women, anoperineal melanoma and other malignancies also need to be excluded.^{3,6,13} Of all these, a swelling and pain that vary with the menstrual cycle is the single most useful pointer to endometriosis, and it should be sought in every reproductive-age woman with a persistent perineal lump, even when the patient does not mention it.

Imaging supports but rarely establishes the diagnosis. Transperineal high-frequency ultrasound is the usual first investigation and typically shows a hypoechoic or heterogeneous solid mass with fine internal echoes, ill-defined margins, and variable peripheral vascularity on colour Doppler.^{3,13,14} These appearances overlap with granulomas, abscesses, and other soft-tissue lesions, and a normal pelvic ultrasound, as in our patient, does not exclude the diagnosis because the lesion lies in the perineum rather than the pelvis. Magnetic resonance imaging is the preferred modality when scar endometriosis is suspected, particularly for defining the extent of the lesion and any involvement of the anal sphincter before surgery.^{3,13,15} MRI was not performed in our patient because the swelling was thought clinically to be a stitch granuloma with no sign of deep or sphincter involvement and excision had already been planned, so imaging was unlikely to change management. Where MRI is not available, the diagnosis rests on clinical suspicion, ultrasound, and ultimately histopathology.

Histopathology remains the diagnostic gold standard. The defining features are ectopic endometrial glands and endometrial-type stroma, usually with haemosiderin-laden macrophages and surrounding fibrosis, reflecting repeated cyclical microhaemorrhage.^{5,7} All of these were present in our specimen (Figure 4) and confirmed the diagnosis while

excluding malignancy. Because clear cell carcinoma and other malignancies can rarely arise within long-standing scar endometriosis, histological examination of the excised tissue is mandatory and should not be replaced by simple drainage or curettage.^{7,9}

A useful feature of this case was the release of thick chocolate-brown fluid when the mass was incised. Although not pathognomonic, this appearance is characteristic of endometriotic cysts and is well described in both pelvic and extra pelvic disease.^{11,12} When preoperative imaging is inconclusive, this finding should alert the surgeon to endometriosis and prompt a change from simple drainage or curettage to formal excision with a healthy margin, as was done here.

Complete excision with about a 1 cm margin of healthy tissue is the definitive treatment and is both diagnostic and curative.^{3,5,12} In the pooled analysis by Maillard et al, almost all patients underwent surgery and the overall recurrence rate was 10.2% over a median follow-up of 10 months.⁵ Completeness of excision largely determines outcome, and incomplete excision is followed by recurrence in about a third of cases.¹⁰ When the anal sphincter is involved, sphincteroplasty or staged repair may be needed and preoperative MRI becomes essential.^{3,5} Our patient had a wide local excision with a 1 cm margin; the sphincter was not involved, primary closure was achieved, and there was no recurrence at 12 months.

The place of adjunctive hormonal treatment is less clear. Gonadotropin-releasing hormone analogues, progestins, combined oral contraceptives, and danazol have been used before surgery to shrink large lesions or after surgery to reduce recurrence.^{5,12} Pooled data suggest that postoperative hormonal therapy does not reliably lower recurrence after complete excision and is most useful for large lesions, incomplete excision, or coexisting pelvic endometriosis.^{5,12} As our patient had none of these, hormonal therapy was not given.

A few simple intrapartum steps may reduce iatrogenic implantation: protecting the perineal wound with a swab during the third stage of labour, irrigating the wound with saline before closure, and using separate instruments and sutures for the uterus and perineum.^{11,14} The absolute benefit has not been quantified, but these measures are easy to adopt and are recommended in published reviews.^{11,14} The main practical lesson from our case is that a menstrual history should be taken in any reproductive-age woman with a lump at an old obstetric scar, whatever the duration of symptoms. A short antibiotic course is reasonable if infection is genuinely suspected, but a tender lesion that does not settle and remains symptomatic after menstruation should prompt early excision with histopathology rather than repeated empirical treatment.

The main limitation of this report is that dedicated perineal MRI was not obtained before surgery, because scar endometriosis was not suspected clinically. The diagnosis

was nonetheless established by the characteristic operative findings and confirmed on histopathology after complete excision.

CONCLUSION

Endometriosis in an episiotomy scar is uncommon and easily missed. It should be considered in any reproductive-age woman with a long-standing painful perineal lump at a previous obstetric scar. A directed menstrual history, careful examination, and a high index of suspicion matter more than imaging, since pelvic ultrasound may be normal and the classical triad is often incomplete. Recognising the characteristic chocolate-brown fluid at operation allows what was planned as drainage of a granuloma to become a definitive excision. Complete excision with a healthy tissue margin and histological confirmation is both diagnostic and curative. Wider awareness of this condition among obstetricians and primary care physicians should reduce diagnostic delay and the morbidity of repeated ineffective treatment.

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