

HIDDEN WITHIN THE SCAR: A CASE SERIES OF EPISIOTOMY SCAR ENDOMETRIOSIS

Dr. Mukku Sindhuja^{1*}, Dr. Nithya R², Dr. Niveditha P³, Dr. T. S. Meena⁴

^{1*}Junior Resident, Department of Obstetrics and Gynaecology, Sree Balaji Medical College and Hospital, Chromepet, Chennai – 600044, Tamil Nadu, India, Email: mukkusindhujareddy@gmail.com, ORCID iD: 0009-0000-2002-5940

²Associate Professor, Department of Obstetrics and Gynaecology, Sree Balaji Medical College and Hospital, Chromepet, Chennai – 600044, Tamil Nadu, India, Email: nithyajipmer@gmail.com, ORCID iD: 0000-0002-5063-3039

³Assistant Professor, Department of Obstetrics and Gynaecology, Sree Balaji Medical College and Hospital, Chromepet, Chennai – 600044, Tamil Nadu, India, Email: nivedithap41@gmail.com, ORCID iD: 0009-0003-9328-6027

⁴Professor and Head of Department, Department of Obstetrics and Gynaecology, Sree Balaji Medical College and Hospital, Chromepet, Chennai – 600044, Tamil Nadu, India, Email: meenats@gmail.com, ORCID iD: 0009-0000-7879-6254

ABSTRACT

Background: Episiotomy scar endometriosis is a rare form of extrapelvic endometriosis resulting from implantation of endometrial tissue into an episiotomy wound during vaginal delivery. Owing to its rarity and nonspecific presentation, diagnosis is frequently delayed or mistaken for other benign perineal conditions.

Case Presentation: We report a case series of three women aged 29–35 years who presented 5–6 years after vaginal delivery. All patients complained of cyclical perineal pain associated with a palpable scar swelling that worsened during menstruation. Lesion sizes ranged from 2 × 1 cm to 4 × 3 cm. One patient was initially diagnosed with hidradenoma papilliferum, while another received repeated treatment for presumed recurrent perianal abscess, illustrating the diagnostic challenges associated with this condition. Ultrasonography was normal in one patient, whereas magnetic resonance imaging accurately demonstrated lesion extent in two patients, including deep bulbospongiosus muscle infiltration in one case. All patients underwent complete surgical excision, with perineal muscle reconstruction required in one patient. Histopathological examination confirmed the presence of endometrial glands and stroma in all cases. Postoperative recovery was uneventful, with complete symptom resolution and no recurrence during follow-up.

Conclusion: Episiotomy scar endometriosis should be considered in every woman presenting with cyclical perineal pain and a previous history of episiotomy. Careful clinical evaluation, appropriate imaging for assessment of disease extent, complete surgical excision, and histopathological confirmation remain the cornerstone of successful management. This case series highlights the importance of increased clinical awareness to facilitate early diagnosis and avoid unnecessary delays in treatment.

Keywords: Endometriosis; Episiotomy; Perineal scar; Scar endometriosis; Extrapelvic endometriosis; Surgical excision

INTRODUCTION

Endometriosis is a chronic, estrogen-dependent inflammatory disorder characterized by the presence of functional endometrial glands and stroma outside the uterine cavity. It is one of the most prevalent benign gynecological disorders affecting women of reproductive age and is associated with chronic pelvic pain, dysmenorrhea, dyspareunia, infertility, and a substantial reduction in quality of life. Although the disease most commonly involves pelvic organs such as the ovaries, pelvic peritoneum, uterosacral ligaments, and rectovaginal septum, endometrial tissue may occasionally implant in extrapelvic locations, including the gastrointestinal tract, urinary tract, lungs, abdominal wall, and surgical scars. Scar endometriosis is a rare form of extrapelvic endometriosis that develops following obstetric or gynecological procedures due to the inadvertent implantation of viable endometrial cells into surgical wounds during tissue repair. These ectopic endometrial cells subsequently proliferate under cyclical hormonal stimulation, producing localized inflammation, fibrosis, and recurrent cyclical pain. [1]

Endometriosis represents a significant global public health problem. According to the World Health Organization, approximately 190 million women and girls of reproductive age worldwide, corresponding to nearly 10% of this population, are affected by endometriosis. The disease imposes considerable physical, psychological, social, and economic burdens because of chronic pain, impaired fertility, repeated healthcare utilization, and decreased productivity. Despite its high prevalence, delayed diagnosis remains common, with many women experiencing symptoms for several years before receiving a definitive diagnosis. [2] Among the various forms of scar endometriosis, scar endometriosis is an uncommon entity occurring after obstetric and gynecological surgeries (Post caesarean accounts for 0.03-0.4% and Post hysterotomy accounts for 1.08-2%), whereas episiotomy scar endometriosis is exceptionally rare, with an estimated incidence of approximately 0.01–0.06% following vaginal delivery with episiotomy. It usually develops months to years after vaginal delivery with episiotomy and typically presents as a painful perineal nodule that becomes more symptomatic during menstruation. Because of its rarity and nonspecific presentation, it is frequently mistaken for perianal abscess, suture granuloma, epidermoid cyst, hidradenoma papilliferum, anal fistula, or soft tissue tumors, resulting in repeated medical treatment or unnecessary surgical procedures before the correct diagnosis is established. Recognition of the characteristic

clinical history, particularly the presence of cyclical pain associated with a previous episiotomy scar, is essential for early diagnosis. Imaging modalities such as ultrasonography and magnetic resonance imaging aid in determining lesion extent, whereas histopathological examination following complete surgical excision remains the gold standard for definitive diagnosis. Reporting additional cases is important to improve clinician awareness, facilitate early recognition, and optimize management of this uncommon but clinically significant condition.

Case Presentations

Case 1

A 31-year-old woman, Para 1 live 1 (P1L1), presented with complaints of recurrent pain and swelling over the episiotomy scar for the past 5 years, with symptoms consistently aggravating during menstruation. She had undergone a full-term normal vaginal delivery with a left mediolateral episiotomy 6 years earlier. There was no history of dysmenorrhea, dyspareunia, dysuria, dyschezia, abnormal vaginal discharge, or other menstrual complaints. Her medical, surgical, and family histories were unremarkable. On local examination, a 1 × 2 cm pedunculated keratinized warty growth was observed at the 5 o'clock position of the introitus adjacent to the posterior fourchette. The lesion bled on touch but showed no induration, tenderness, or discharge. Pelvic examination was otherwise normal, and ultrasonography of the abdomen and pelvis revealed no abnormalities. Dermatology consultation suggested hidradenoma papilliferum, and the differential diagnoses included episiotomy site granuloma, scar endometriosis, perineal abscess, and genital wart. The patient underwent wide local excision under spinal anesthesia. Histopathological examination demonstrated hyperplastic stratified squamous epithelium with multiple endometrial glands and compact stroma associated with hemorrhage within the subepithelial tissue and skeletal muscle bundles, confirming the diagnosis of episiotomy scar endometriosis. The postoperative period was uneventful with satisfactory wound healing and complete symptom resolution.



Figure 1. Clinical photograph showing a 1 × 2 cm fleshy pedunculated mass arising from the posterior fourchette adjacent to the episiotomy scar (Case 1).



Figure 2. Intraoperative view demonstrating a 1 × 2 cm keratinized warty lesion at the 5 o'clock position of the introitus before excision (Case 1).



Figure 3. Intraoperative photograph after complete wide local excision of the episiotomy scar lesion (Case 1).

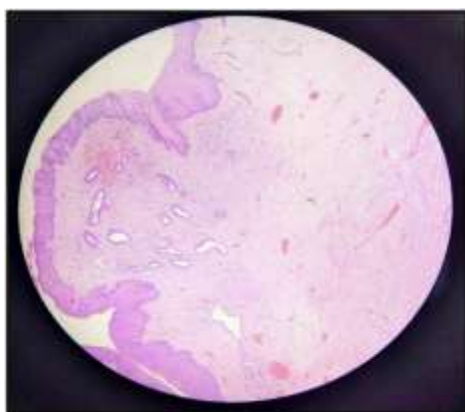


Figure 4. Histopathological section (low-power view, H&E stain) showing stratified squamous epithelium with underlying endometrial glands and endometrial stroma, consistent with scar endometriosis.

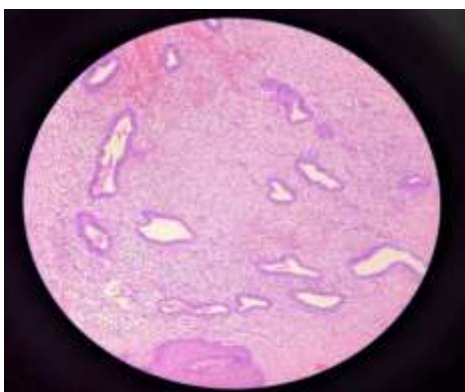


Figure 5. Histopathological section (higher-power view, H&E stain) demonstrating endometrial glands and surrounding stroma with hemorrhagic changes, confirming episiotomy scar endometriosis.

Case 2

A 35-year-old multiparous woman (P3L3) presented with a painful swelling over the perineal region that had gradually increased in size over the preceding 8 months. She had undergone a vaginal delivery with episiotomy 6 years earlier. The pain was cyclical in nature, becoming more severe during menstruation. Before presentation, she had received repeated courses of antibiotics for presumed recurrent perianal abscess without clinical improvement. On examination, a firm, tender swelling measuring 3×2 cm was identified beneath the episiotomy scar without any overlying skin changes, discharge, or fistulous opening. Magnetic resonance imaging (MRI) of the pelvis demonstrated a localized lesion confined to the subcutaneous tissue of the episiotomy scar. Fine-needle aspiration cytology (FNAC) was suggestive of endometriosis. The patient subsequently underwent complete surgical excision of the lesion. Histopathological examination confirmed scar endometriosis, revealing ectopic endometrial tissue within fibrous scar tissue. The postoperative recovery was uneventful, and the patient experienced complete resolution of symptoms.

Case 3

A 29-year-old woman (P1L1) presented with severe cyclical perineal pain for 2 years, associated with significant difficulty while sitting and walking. She had delivered vaginally with a right mediolateral episiotomy 5 years previously. The patient noticed a progressively enlarging painful swelling at the episiotomy scar, with symptoms consistently worsening during

menstruation. She also complained of dyspareunia, which adversely affected her daily activities. Physical examination revealed a 4 × 3 cm hard, tender mass fixed to the underlying tissues adjacent to the episiotomy scar. MRI of the pelvis demonstrated infiltration of the lesion into the bulbospongiosus muscle, indicating deep perineal involvement, while pelvic ultrasonography showed a normal uterus and ovaries with no evidence of pelvic endometriosis. Considering the muscular infiltration, the patient underwent wide local excision along with reconstruction of the involved perineal musculature. Histopathological examination revealed endometrial glands and stroma associated with fibrosis and areas of hemorrhage, confirming the diagnosis of episiotomy scar endometriosis. The patient recovered well postoperatively with complete relief of symptoms and no recurrence during follow-up.

Table 1. Comparison of Clinical Characteristics of the Three Cases of Episiotomy Scar Endometriosis

Variable	Case 1	Case 2	Case 3
Age (years)	31	35	29
Obstetric status	P1L1	P3L3	P1L1
Previous delivery	Vaginal delivery with left mediolateral episiotomy	Vaginal delivery with episiotomy	Vaginal delivery with right mediolateral episiotomy
Interval from delivery	6 years	6 years	5 years
Main symptom	Cyclical pain with scar swelling	Painful perineal swelling	Severe cyclical perineal pain and swelling
Menstrual association	Present	Present	Present
Lesion size	2 × 1 cm	3 × 2 cm	4 × 3 cm
Imaging findings	Ultrasound normal	MRI: Subcutaneous scar lesion	MRI: Bulbospongiosus muscle infiltration
Preoperative diagnosis	Hidradenoma papilliferum/Scar endometriosis	Scar endometriosis (FNAC suggestive)	Deep scar endometriosis
Surgical management	Wide local excision	Complete surgical excision	Wide local excision with perineal muscle reconstruction
Histopathology	Scar endometriosis	Scar endometriosis	Scar endometriosis
Outcome	Complete recovery	Complete recovery	Complete recovery

DISCUSSION

Episiotomy scar endometriosis is a rare manifestation of extrapelvic endometriosis resulting from the implantation of viable endometrial tissue into the episiotomy wound during vaginal delivery. Despite its characteristic clinical presentation, delayed diagnosis remains common because the condition is frequently mistaken for more common benign perineal lesions. The present case series included three reproductive-aged women (29–35 years; mean age 31.3 years) who presented 5–6 years after vaginal delivery with episiotomy. All patients (100%) had cyclical perineal pain associated with a palpable scar swelling, while lesion sizes ranged from 2 × 1 cm to 4 × 3 cm. Histopathological examination confirmed episiotomy scar endometriosis in all three patients following complete surgical excision, with complete postoperative recovery observed in every case.

Delayed presentation following vaginal delivery has been consistently described in the literature. Dadhwal et al. reported a patient presenting several years after episiotomy with cyclical pain and a painful perineal nodule, emphasizing that the association between previous episiotomy and cyclical symptoms is the most important diagnostic clue.[3] Our findings closely parallel this observation, as all three patients developed symptoms 5–6 years after delivery and demonstrated the classical clinical triad of previous episiotomy, cyclical pain, and scar swelling. Unlike the single case described by Dadhwal et al., our series demonstrates similar clinical characteristics across three independent patients, reinforcing the reproducibility of this presentation.

Diagnostic difficulty remains one of the major challenges in managing this condition. Botezatu et al. highlighted that episiotomy scar endometriosis is frequently misdiagnosed because of its rarity and recommended MRI for accurate assessment of lesion extent before surgery.[4] Similar challenges were encountered in our series, where 66.7% (2/3) of patients were initially misdiagnosed. Case 1 was clinically suspected to have hidradenoma papilliferum, whereas Case 2 received repeated antibiotic therapy for presumed recurrent perianal abscess before definitive diagnosis. MRI accurately demonstrated a localized subcutaneous lesion in Case 2 and deep muscular infiltration in Case 3, facilitating appropriate surgical planning, whereas ultrasonography remained normal in Case 1 despite histologically proven disease.

The characteristic clinical presentation reported by Thirupathi et al. included cyclical perineal pain associated with a gradually enlarging scar nodule, with complete surgical excision providing definitive treatment.[5] Comparable findings were observed in our patients, all of whom experienced cyclical pain with progressively enlarging lesions measuring 2 × 1 cm to 4 × 3 cm. Complete surgical excision resulted in complete symptom resolution in all cases, supporting the effectiveness of surgical management reported in previous studies.

Similarly, Kaur et al. emphasized that cyclical pain remains the most valuable clinical feature distinguishing episiotomy scar endometriosis from abscesses, granulomas, epidermoid cysts, and other benign perineal conditions.[6] Our experience supports this observation, as two patients were initially managed for alternative diagnoses before referral for definitive treatment. These findings highlight that failure to recognize the cyclical nature of symptoms continues to contribute to delayed diagnosis and unnecessary medical treatment.

Deep infiltration requiring more extensive surgery has been reported by Mishra et al., who described successful management of perineal scar endometriosis following complete surgical excision after histopathological confirmation.[7] In our series, one patient (33.3%) demonstrated MRI evidence of bulbospongiosus muscle infiltration, necessitating wide local excision with reconstruction of the involved perineal musculature, while the remaining two patients had lesions confined to the scar or subcutaneous tissue. Nevertheless, complete excision achieved excellent clinical outcomes in all three patients.

The complementary role of imaging and histopathological examination has also been emphasized by El Amrani et al., who reported that MRI accurately delineates lesion extent and assists preoperative planning, whereas histopathology remains the gold standard for definitive diagnosis.[8] Our findings are in agreement with these observations. MRI successfully identified the depth of disease in patients with suspected deep involvement, and histopathological examination demonstrated endometrial glands and stroma associated with hemorrhage and fibrosis in 100% of cases, confirming the diagnosis following surgical excision.

Overall, our case series adds to the limited literature on episiotomy scar endometriosis by demonstrating a consistent pattern of delayed presentation (5–6 years), universal cyclical pain (100%), lesion sizes ranging from 2 × 1 cm to 4 × 3 cm, frequent initial misdiagnosis (66.7%), histopathological confirmation (100%), and excellent postoperative outcomes following complete surgical excision (100%). These findings reinforce the need for a high index of clinical suspicion in women presenting with cyclical perineal pain after vaginal delivery with episiotomy. Early recognition, appropriate use of MRI in suspected deep lesions, complete surgical excision with adequate margins, and histopathological confirmation remain the cornerstone of successful management.

CONCLUSION

Episiotomy scar endometriosis is a rare but important cause of cyclical perineal pain in women with a history of vaginal delivery and episiotomy. Because of its nonspecific presentation, the condition is frequently misdiagnosed, leading to unnecessary treatments and delayed definitive management. This case series demonstrates that a detailed obstetric history, recognition of the characteristic cyclical nature of symptoms, and appropriate imaging—particularly MRI for suspected deep lesions—facilitate early diagnosis. Histopathological examination remains the gold standard for confirmation, while complete surgical excision with adequate margins provides excellent clinical outcomes and symptom resolution. Increased awareness among gynecologists and surgeons is essential to improve timely diagnosis and optimize patient outcomes.

REFERENCES

1. Consoli RJ, Carlson K. Endometriosis. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2026 [cited 2026 Jul 21]. Available from: <https://www.ncbi.nlm.nih.gov/books/NBK567777/>
2. World Health Organization. Endometriosis [Internet]. Geneva: World Health Organization; 2025 [cited 2026 Jul 21]. Available from: <https://www.who.int/news-room/fact-sheets/detail/endometriosis>
3. Dadhwal V, Sharma A, Khoiwal K, Nakra T. Episiotomy scar endometriosis. *Med J Armed Forces India*. 2018;74(3):297-299. doi:10.1016/j.mjafi.2017.06.004. PMID:30093779. PMCID:PMC6081211.
4. Botezatu R, Turcu-Duminica A, Ciobanu AM, Gica N, Peltecu G, Panaitescu AM. Episiotomy scar endometriosis. Case presentation. *Maedica (Bucur)*. 2021;16(4):713-716. doi:10.26574/maedica.2020.16.4.713. PMID:35261676. PMCID:PMC8897786.
5. Thirupathi K, Rengaraj N. An episiotomy scar site endometriosis: a rare case report and review of literature. *Int J Reprod Contracept Obstet Gynecol*. 2022;11:1849-1852. doi:10.18203/2320-1770.ijrcog20221958.
6. Kaur N, Goel B, Huria A. Episiotomy site scar endometriosis: a case report and review of literature. *New Indian J Obstet Gynaecol*. 2022;8(2):318-320. doi:10.21276/obgyn.2022.8.2.32.
7. Mishra SR, Randive A, Desai GS. Perineal scar endometriosis post forceps vaginal delivery. *J Obstet Gynaecol India*. 2024;74(5):466-468. doi:10.1007/s13224-023-01870-9. PMID:39568967. PMCID:PMC11573930.
8. El Amrani A, et al. Perineal endometriosis on an episiotomy scar: diagnosis based on clinical, radiological, and hormonal criteria (case report). *Pan Afr Med J*. 2025. PMCID:PMC12318870.