

## CASE REPORT



## Cesarean scar endometriosis: A case report

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## Abstract

Endometriosis is a chronic gynaecological disorder where presence of functional and morphological endometrial gland present outside the uterine cavity. Cesarean scar endometriosis is an unusual manifestation of extra pelvic endometriosis. Here, we report a case of caesarean scar endometriosis diagnosed after 6 years of cesarean delivery and was treated by surgical wide enbloc excision under spinal anaesthesia. Main aim is to increase awareness of this entity.

**Keywords:** Cesarean scar endometriosis (CSE); Surgical wide En Bloc excision; Sclerotherapy

## Introduction

Endometriosis is a condition where the functional and morphological endometrial glands and stromal structures are found outside the uterus. It mainly affects women in reproductive ages. Endometriosis occurs most often in pelvis, on the surface lining of the pelvic cavity, peritoneum, ovaries, posterior cul-de-sac, and uterosacral ligaments. Rarely, implants outside pelvis and named as extra pelvic endometriosis. Scar endometriosis an extremely rare site (incidence 0.03-3.5%) of extra pelvic endometriosis, is presence of endometriosis at or near previous surgery scar site as a painful discrete tumoral mass known as Endometrioma

or admixed with native tissue.<sup>(1,2)</sup> SE usually develops after General surgery and Obstetrics and Gynecological surgeries, most commonly after hysterectomy (1.08-2% cases) cesarean delivery (0.03-0.04% cases) and rarely after Appendicitis, Tubal ligation, Ectopic pregnancy, Inguinal herniorrhaphy, in laparoscopic trocar tract and needle tract after diagnostic amniocentesis and in perineal episiotomy incision.<sup>(3)</sup> Most of them present to surgeons because of similarity to hernia, lipoma, keloid and other anterior abdominal masses. The great variability of symptoms and clinical presentations as well as limited knowledge on disease can lead to delayed treatment, misdiagnosis, unnecessary intervention discomfort to the patient.

## Case details

A 28-year-old woman P2L2 Reported to Gynecology OPD with painful palpable mass at left angle of previous incision scar since 6 months. She delivered Full term alive healthy male baby by emergency LSCS for fetal distress and post-operative period uneventful. Within a year she conceived again and delivered a full term, alive healthy male baby by emergency LSCS for threatened scar rupture and post-operative uneventful. Patient presented with painful palpable swelling at left angle previous LSCS scar incision since 6 months. On examination palpable tender subcutaneous mass located 1cm above the left angle of LSCS incision site measuring approximately 2x 2 cm. Rest systemic examination uneventful. Sonography examination revealed ill-defined heterogeneous lesion measuring 24x 19 mm in the subcutaneous plane in lower abdomen on left side of the incision with minimal vascularity. Under spinal anaesthesia, Surgical wide en bloc excision performed and lesion was removed and defects repaired. Gross examination revealed irregular fibro fatty mass with brownish – black pigmented area with areas of congestion and hemorrhage. Histopathology examination revealed subcutaneous islands of endometrial glands with stroma noted along with congested blood vessels and areas of hemorrhage with dense lymphocytes infiltration in fibrosis without evidence of malignancy. HPE findings suggestive of Scar endometriosis. On follow up after 6 months she did not report any recurrence and was completely relieved of her symptoms.



Fig 2. USG finding



Fig 1. Clinical examination



Fig 3. Intraoperative findings

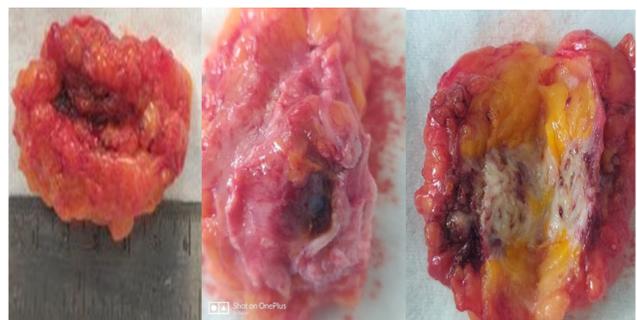


Fig 4. Gross examination

## Discussion

Abdominal wall endometriosis is largely related to previous history of surgery.<sup>(3)</sup> Endometriosis implants develop-

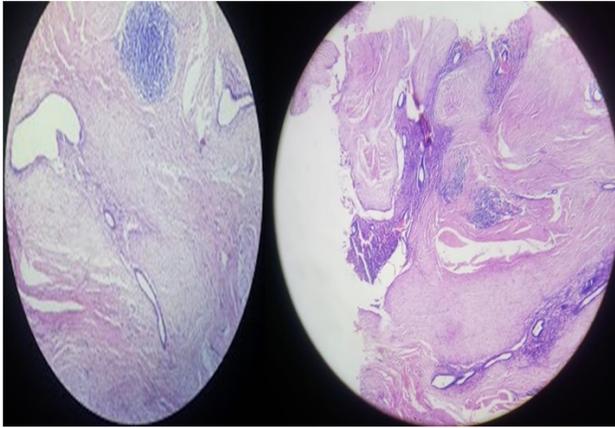


Fig 5. Microscopy

ing in the subcutaneous tissue of surgical scars occur most frequently after gynaecological and obstetrical procedures, including cesarean sections, hysterectomies, cystectomies, tubal ligations, and amniocenteses<sup>(1)</sup>. The pathogenesis of endometriosis is complex and CSE is believed to be the result of a mechanical iatrogenic implantation, through the direct inoculation of the abdominal fascia and/or subcutaneous tissue with endometrial cells during the surgical intervention, which, stimulated by estrogen, become active and expand.<sup>(4)</sup> Wang et al. examined the factors contributing to CSE and defined possible causes, including the easy separation and transport of endometrial cells by the amniotic fluid flowing into the pelvic cavity after hysterectomy; the large amount of endometrial cells liberated into the pelvis before hysterectomy closure and that can potentially be trapped in the wound; and the nurturing role of blood and hormones, after inoculation of the cells, allowing them to grow and develop into subcutaneous masses.<sup>(2)</sup> Endometriosis in cesarean scar is a rarely observed disease. There are a limited number of publications focusing on CSE, and most of them are case reports. It is difficult to perform well-controlled clinical trials in rarely observed disease. The common presentation of CSE includes palpable subcutaneous mass, typically accompanied by cyclic, noncyclic, or constant pain. Menstruation usually aggravates disease. The mass under a cesarean section scar and the symptoms in a cyclic manner fairly facilitate the diagnosis of the illness. Awareness of its typical clinical manifestation remains the mainstay for inter-

vention and diagnosis. Iatrogenic mechanical transplantations on incision scar during the operations are the most accepted pathogenesis.<sup>(2)</sup> To minimize endometriosis contamination, some authors recommend careful isolation of the wall incision and lavage with normal saline before closure of the wall.<sup>(5)</sup> The others hypothesized that failure to close the parietal and visceral peritoneum with sutures at time of cesarean section may markedly increase the postoperative occurrence of endometrioma in the skin incision scar.<sup>(6)</sup> Replacing instruments and needles with the new one is recommended when suturing other abdominal layers.<sup>(7)</sup> Medical management- Hormonal treatment offers temporary alleviation of symptoms, but recurrence is common after cessation of treatment.<sup>(8)</sup> Sclerotherapy used for endometriotic cysts has been reserved for those patients who have high surgical risk, are pregnant, or refuse surgical intervention. In the literature ultrasound-guided aspiration and sclerotherapy with 95% ethanol provides a valid alternative to surgery in treating endometrial cysts.<sup>(9)</sup> Intralesional ethanol injection may result in difficult-to-repair necrosis on the anterior muscles of the abdominal wall in large lesions. Also, in endometriosis foci extending into the intraperitoneal region, it may cause complications including chemical peritonitis and severe pain as a result of alcohol penetration into the peritoneum. According to Bozkurt M et al planned sclerotherapy by ultrasound-guided ethanol to the patient with intramuscular anterior wall endometriosis (AWE). Further investigations of large series are needed to compare the surgical operation with ethanol injection treatment. Hence complete wide excision with clear margins is both diagnostic and therapeutic and is accepted as treatment of choice in cesarean scar endometriosis.

## Conclusion

Endometriosis in Cesarean scar is rarely observed disease. Cesarean section is an apparent risk factor for the presence of endometriosis. To avoid unnecessary referrals, awareness of its typical clinical manifestations remains the mainstay for intervention. Medical treatment gives only partial relief and recurrence of the condition after cessation of medication. Preventive measures like exclusion of the decidua during the uterine closure, minimal tissue handling, and closure of parietal and visceral peritoneum can avoid iatrogenic inoculation of endometrial cells. Complete wide excision with clear margins is both diagnostic and therapeutic.

## References

- 1) Pas,alega M, Mirea C, Vilcea ID. Parietal abdominal endometriosis following cesarean section. *Romanian Journal of Morphology and Embryology*. 2011;52(1):503–508.
- 2) Wang PH, Juang CM, Chao HT, Yu KJ, Yuan CC, Ng HT. Wound endometriosis: risk factor evaluation and treatment. *Journal of the Chinese Medical Association*. 2003;66(2):113–119.
- 3) Mistrangelo M, Gilbo N, Cassoni P, Micalef S, Faletti R, Miglietta C, et al. Surgical scar endometriosis. *Surgery Today*. 2014;44(4):767–772. Available from: <https://dx.doi.org/10.1007/s00595-012-0459-3>.
- 4) Sasson IE, Taylor HS. Stem Cells and the Pathogenesis of Endometriosis. *Annals of the New York Academy of Sciences*. 2008;1127(1):106–115. Available from: <https://dx.doi.org/10.1196/annals.1434.014>.
- 5) Picod G, Boulanger L, Bounoua F, Leduc F, Duval G. Abdominal wall endometriosis after caesarean section: report of fifteen cases. *Gynecol Obstet Fertil*. 2006;34:8–13.
- 6) Minaglia S, Jr DRM, Ballard CA. Incisional endometriomas after cesarean section: a case series. *J Reprod Med*. 2007;52:630–634.
- 7) Wasfie T, Gomez E, Seon S. Abdominal wall endometrioma after cesarean section: a preventable complication. *Int Surg*. 2002;87:175–177.
- 8) Bats AS, Zafrani Y, Pautier P, Duvillard P, Morice P. Malignant transformation of abdominal wall endometriosis to clear cell carcinoma: case report and review of the literature. *Fertility and Sterility*. 2008;90(4):1197.e13–1197.e16. Available from: <https://dx.doi.org/10.1016/j.fertnstert.2007.08.080>.
- 9) Gatta G, Parlato V, Grezia GD, Porto A, Cappabianca S, Grassi R, et al. Ultrasound-guided aspiration and ethanol sclerotherapy for treating endometrial cysts. *La radiologia medica*. 2010;115(8):1330–1339. Available from: <https://dx.doi.org/10.1007/s11547-010-0586-0>.