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Case Report

Scar endometriosis: a case report of this uncommon entity

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ABSTRACT

Scar endometriosis is an infrequent type of extra pelvic endometriosis that is associated with obstetrical and gynecological surgeries. Incidence of scar endometriosis is 0.03-0.1%. It is mostly confused with other dermatological or surgical conditions like stitch granuloma, dermoid, abscess and delays the diagnosis. The symptoms are nonspecific like pain over incision site during menstruation. Scar endometriosis is seen commonly following surgeries like caesarean deliveries, hysterectomies, hysterotomies, laparoscopic surgeries, episiotomy and amniocentesis tract. We present here a case of abdominal wall endometriosis in a woman who has undergone caesarean delivery six years prior to her current presentation. The epidemiology, pathogenesis, clinical features, diagnosis, treatment and methods of prevention of this somewhat rare condition are discussed

Keywords: Scar endometriosis, Caesarean scar, Extra pelvic endometriosis, Abdominal wall endometriosis

INTRODUCTION

Endometriosis is defined as the presence of endometrial-like stroma and glands outside the uterine endometrium.¹ It generally occurs in the pelvic sites such as the ovaries, posterior cul-de-sac, uterine ligaments, pelvic peritoneum, bowel and rectovaginal septum.

The exact prevalence of endometriosis is unknown, but estimates range from 2 to 10% within the general female population.

Extra pelvic endometriosis can be found in unusual places like in the nervous system, thorax, urinary tract, gastrointestinal tract, and in cutaneous tissues unless its most frequent location is the abdominal wall which is also called as AWE.² The main cause of extra pelvic implants is obstetric and gynaecological procedures performed during gestation. AWE is the commonest presentation after caesarean delivery. There are various theories concerning the scar endometriosis. One of them is the direct implantation of the endometrial tissue in scars during the operation.³ Scar endometriosis is difficult to

diagnose as the symptoms are vague pain over scar site during menstruation and can result in unnecessary procedures, delayed or misdiagnosis leading to emotional and physical distress to the patient.

CASE REPORT

A 25 years old female presented in December 2021 with complaints of pain and swelling over the caesarean scar site in the last 3 years every month during menstruation. She had previous one full term caesarean delivery 6 years back and one spontaneous abortion 4 years back.

On examination, there was a 2×2 cm wide, tender, immobile mass located in the subcutaneous plane beneath the caesarean scar more towards the right.

Transabdominal ultrasound was suggestive of a well-defined cystic lesion along the scar tissue towards the right measuring 10×4 mm and at a depth of 8 mm. No abnormalities noted in the uterus and adnexa. Based on characteristic history and examination findings, behind the most probable choice of endometriosis, other possibilities

like hematoma, granuloma, desmoid tumour were considered.

MRI pelvis was done which showed the presence of 5×8 mm size T1 hyperintense, T2 hypointense peripherally enhancing nodular lesion in the subcutaneous plane in the hypogastrium on the right side which was abutting the rectus sheath. Differential diagnosis of scar endometriosis and stitch granuloma was made at this point.



Figure 1: Chocolate like material seen in the layers of subcutaneous tissue.

The mass was undertaken for mass excision on the day 1 of her menses for better delineation of the mass.

Intraoperative finding confirmed the presence of a 2×2 cm mass in the subcutaneous plane which was extending up to the rectus sheath. Presence of chocolate like material seen which exuded on excision. No extension of the mass beneath the rectus sheath noted. The rectus muscle was free of the lesion. Mass was excised with 1 cm free margin all around and sent for histopathological examination.

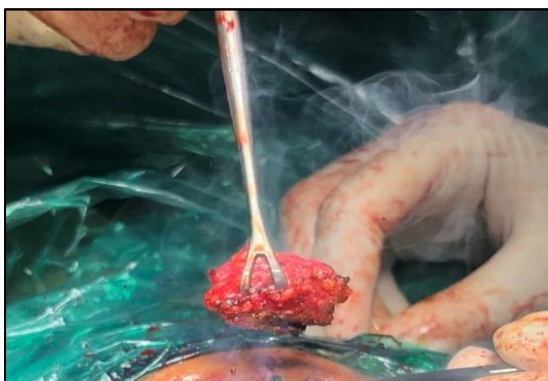


Figure 2: Mass excised with 1 cm free margin all around.

The defect in the rectus sheath was closed with Prolene 1-0 in continuous non locking manner and the other layers of the abdomen were closed with Vicryl 1-0 in continuous manner.

Intraoperative and post operative period was uneventful. The patient was advised GnRH analogues (Leuprolide

11.25 mg) on discharge for a duration of 3 months to prevent recurrence of the symptoms. Histopathological examination was consistent with scar endometriosis. No evidence of atypia/malignancy noted.

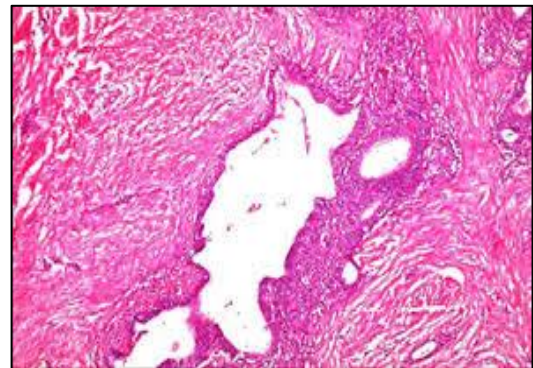


Figure 3: Histopathology of excised scar tissue.

DISCUSSION

Scar endometriosis usually follows previous abdominal surgery, especially early hysterotomy and caesarean section. Incisional endometriosis after caesarean section was found to be 0.08% of incidence of scar endometriosis.⁴ Ectopic pregnancies, salpingostomy puerperal sterilization, laparoscopy, amniocentesis, appendectomy, episiotomy, vaginal hysterectomies, and hernia repair are the other surgical factors for scar endometriosis.⁵⁻⁷ The reported incidence after mid trimester abortion is about 1% also after caesarean sections ranging from 0.03% to 0.45%.⁸ Frequency of scar endometriosis increases by induced number of caesarean section and laparoscopy performed in recent years.⁹

Direct mechanical implantation seems to be the most plausible theory for scar endometriosis. During caesarean section, endometrial tissue might be seeded into the wound, and under the same hormonal influences these cells proliferates.¹⁰ The endometrial tissue may have certain abilities that make implantation and transplantation during pregnancy. According to this hypothesis, the strongest risk factor for development of scar endometriosis is early hysterectomy like for hysterectomies for abortion.¹¹

Clinical diagnosis of scar endometriosis can be made by a careful history and physical examination. The patients present with a mass near the previous surgical scars, accompanied by increasing colicky-like pain during the menstruation.¹² Usually, there is a history of a gynaecologic or obstetric surgery preceding the event.

Furthermore, scar endometriosis is a rare entity, the highlight of this case is the long distant duration from the previous caesarean sections. The interval between the previous caesarean sections and symptoms was 3 years. Scar endometriosis can be easily confused with other surgical conditions like hematoma, neuroma, hernia, stitch

granuloma, abscess, scar tissue, neoplastic tissue, or even metastatic carcinoma, which are a simple excuse to refer the patient to the general surgeon. Often, the diagnosis of endometriosis is not suggested until after histology has been performed.¹³ Correct preoperative diagnosis is achieved in 20% to 50% of these patients.¹⁴

Ultrasonography is the best and most commonly used investigational procedure for abdominal masses, given its practicality and lower cost. The mass may appear hypoechoic and heterogeneous mass with messy internal echoes. Sensitivity and specificity of MRI in diagnosing endometriomas to be 90%–92% and 91%–98%, respectively.¹⁵ MRI is also a useful modality for presurgical mapping of deep pelvic endometriosis. Infiltration of abdominal wall and subcutaneous tissues is much better assessed by MRI.¹⁶

Histology is the hallmark of diagnosis. It is satisfied if endometrial glands, stroma, and hemosiderin pigment are seen.¹⁷

Malignancy must be excluded as there are 1% chances of scar endometriosis being malignant.¹⁸ Local wide excision, with at least a 1 cm margin, is accurate treatment choice of scar endometriosis also for recurrent lesions although recurrences are rare. Medical therapy with danazol, progesterone, and GnRH is given post excision to reduce the recurrences of symptoms.¹⁹ The incidence of concomitant pelvic endometriosis with scar endometriosis has been reported to be from 14.3% to 26%.²⁰ Ideally, all patients must be examined for concomitant pelvic endometriosis. At this point, postoperative follow-up with a gynaecologist is preferable. Long term follow-up of our patient is advised to look for any recurrence in symptoms.

CONCLUSION

It is important to have a differential diagnosis of this entity as the number of caesarean deliveries and other gynaecological procedures are on the rise. Methods to prevent scar endometriosis should be found. Certain studies of high-jet saline solution before wound closure and repair of peritoneum at the time of caesarean section as a preventive measure can be done.

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