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A Case Report of Scar Endometriosis

B Choey[1], HW Toh[2], JW Kwek[2], CS Tee[1]

INTRODUCTION

Scar endometriosis is a recognized clinical entity in gynecology, and case reports have estimated an incidence of about 0.03 – 0.15% worldwide. It is a rare clinical entity, and diagnosis is often difficult as the condition is often unsuspected and mimics several other surgical conditions. Scar endometriosis may develop following pelvic surgeries like appendicectomy, hysterectomy, caesarean section and hysterotomy. It has been postulated to be due to direct inoculation of endometrial cells into abdominal fascia and subcutaneous tissue. We report a case of a parous woman presenting with a painful nodule over her previous caesarean section scar.

CASE REPORT

A 36-year old Malay woman, para two, presented with a painful lump in the anterior abdominal wall near the site of her previous caesarean section scar. The pain was described to be cyclical in nature, and corresponds to her monthly menstrual cycles. There were no associated bowel symptoms. Her last caesarean section was 4 years ago. She had no other past medical or surgical history of note.

Clinical examination revealed a tender 4 cm ill-defined lump at the lateral aspect of the caesarean section scar. Cough impulse was negative, there were no visible pulsations and the lump was not reducible. There was no rebound or guarding. The rest of the abdominal examination was unremarkable.

Ultrasound scan of pelvis (figure 1) demonstrated a lobulated, hypoechoic mass in the left lower anterior abdominal wall, with irregular margins and peripheral finger-like projections from the mass. Resistive index was 6 (figure 2), with some vascular flow present within the mass. Computed tomography (figure 3) of the abdomen and pelvis confirmed the presence of a 3.1 x 2.2 cm, well-defined enhancing lesion, with spicules invaginating into the subcutaneous fat, located within the left lower anterior abdominal wall, superficial to and closely related to the ipsilateral rectus abdominis muscle, at the level of the Pfanensteil scar. The bowel loops and mesenteric fat were normal in appearance. There were no other significant findings to suggest an intra-abdominal cause.

Based on the clinical history and findings, together with radiological findings, the diagnosis of scar endometriosis was made. Differential diagnosis included a tumour arising from the rectus abdominis. The patient was counseled for, and underwent excision biopsy.

Intraoperatively, there was a 4cm indurated mass (figure 4) situated at the superior aspect of the previous Pfanensteil scar, with ill-defined margins. There was involvement of the rectus sheath and underlying muscle as well. The mass was excised with a surrounding margin of subcutaneous fat.

Histological examination showed multiple small islands of endometrial glands and stroma in a fibrous scar tissue. There was no evidence of malignancy. Findings were consistent with scar endometriosis. The patient remained well postoperatively.

DISCUSSION

Scar endometriosis is an uncommon entity, and therefore difficult to diagnose, often confused with other surgical conditions such as stitch granuloma, incisional hernia or diverticulitis. Endometriosis involving the abdominal wall is an unusual phenomenon that should be considered in the differential diagnosis of abdominal wall masses in women[1].

[1] *Department of Obstetrics & Gynecology, KK Women's and Children's Hospital*
[2]*Department of Diagnostic Imaging, KK Women's and Children's Hospital*

B Choey
Registrar

HW Toh
Registrar

JW Kwek
Consultant

CS Tee
Senior Consultant

Correspondence to:
Ben Choey Wei Yen
KK Women's and Children's Hospital
100 Bukit Timah Road
Singapore 229899Email: ben_choey@yahoo.com.sg

Scar endometriomas are believed to be the result of direct inoculation of the abdominal fascia or subcutaneous tissue with endometrial cells during surgical intervention and subsequently stimulated by estrogen to produce endometriomas. In clinical practice, its occurrence has been well documented in incisions of any type where there has been possible contact with endometrial tissue, including episiotomy, hysterotomy, ectopic pregnancy, laparoscopy, tubal ligation, and caesarean section[2, 3]. The presence of endometrial tissue can induce metaplasia of the surrounding fascial tissue to form an endometrioma.

Scar endometriosis most commonly occurs after uterine and tubal surgeries. The incidence after caesarean section is 0.03-0.4%[1]. The time interval between operation and presentation varies from 3 months to 10 years in different series[1]. It was four years in our case. Suspicion should be raised when a woman presents with post-operative abdominal lump[5].

A good surgical and gynecological history, a thorough examination, and appropriate imaging techniques (ultrasound, CT or MRI) will clinch the diagnosis. The presence of cyclical pain in an incisional mass associated with a cesarean section scar is almost pathognomonic for the condition. The intensity of pain and size of nodule vary with menstrual cycle.

Preoperative diagnosis can often be difficult and inaccurate [6,7] in cases where the clinical presentation is not classical, and may be assisted by appropriate imaging techniques and fine needle aspiration cytology. FNAC may be helpful in eliminating malignancy from the differential diagnosis, although the risk of FNAC track seeding of malignant cells is a concern. Caution should be exercised if incisional hernia is a possibility[8] . Sonographic and colour Doppler when combined with clinical data may substantially contribute to the preoperative diagnosis[9].

Scar endometriosis typically appears as hypoechoic, vascular, and solid, with some cystic changes. CT usually shows a solid, well-circumscribed mass.

The standard treatment of surgical scar endometriosis is wide local excision. Mesh placement may be required if the defect is large after rectus sheath has been excised[4, 10, 11, 12].

Hormonal treatment, with the use of progestogens, oral contraceptive pills, and danazol, is ineffective, as it does not ablate the lesion and only provides partial relief in symptoms. Moreover, long term compliance with medication is questionable given the side effects of amenorrhea, weight gain, hirsutism, and acne. Recently there has been a report of prompt relief of symptoms with the use of gonadotrophin agonist (Leuprolide acetate) though there was no change in the lesion size[13]. Malignant change of endometriosis in a caesarean scar (CS) is extremely rare[14]. Clear-cell carcinoma is the most common histological subtype, followed by endometrioid carcinoma[15]. Compared with endometriosis-associated ovarian carcinoma, the prognosis of malignant change in abdominal scar is dismal.

Recurrence may occur following excision, requiring re-excision[16]. Good technique and proper care during caesarean section may help in preventing endometriosis. Generous lavage of the abdominal wound before closure may reduce scar endometriosis occurrenceth[17].

CONCLUSION

The presence of cyclical pain in mass associated with a cesarean section scar is almost pathognomonic for the condition. Imaging techniques would be useful to confirm the diagnosis and exclude other differential diagnosis. A high index of suspicion is important in the diagnosis of this condition.

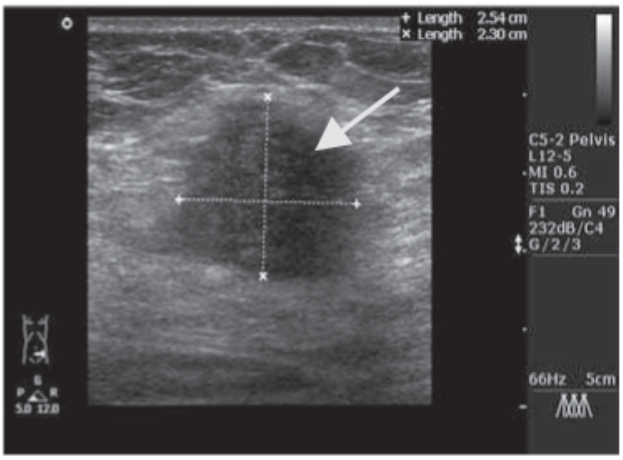

Figure 1:
Ultrasound pelvis showing lobulated, hypoechoic mass in the left lower anterior abdominal wall with irregular margins and peripheral finger-like projections from the mass. (**Red arrow)**

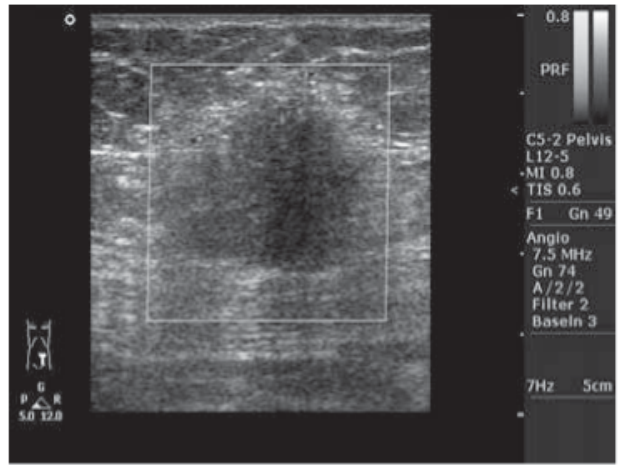

Figure 2:
Color Doppler of the mass with resistive index 6 and some vascular flow present within the mass.

Figure 3
CT pelvis showing a 3.1 x 2.2 cm well-defined enhancing lesion with spicules invaginating the subcutaneous fat in left anterior abdominal wall, superficial to and closely related to the ipsilateral rectus abdominis muscle (**Red arrow**)

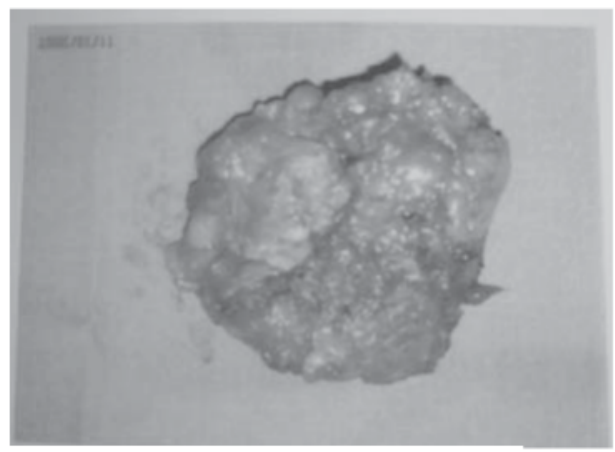

Figure 4:
4 cm nodule surgically removed from anterior abdominal wall

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