

Caesarean Scar Endometrioma: Awareness in the Light of Increasing Caesarean Section Rates!

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Abstract

Caesarean scar endometriosis is a rare condition with a reported incidence of 0.03-1.7 percent. We present a case report and review on scar endometrioma after caesarean section. A 30-year old woman presented with a cyclic painful subcutaneous nodule at the right lateral edge of her caesarean section surgical scar for 3 years. She had undergone an elective caesarean section four years prior to presentation. Pre-operative diagnosis was scar endometrioma. The mass was completely excised and pathology confirmed endometriosis. Postoperatively, a GnRH-agonist was prescribed to prevent recurrence. No recurrence was found at six-month follow-up.

Introduction

Endometriosis is a disorder affecting as many as 8 to 15 per cent of all menstruating women. It is defined as aberrant or heterotopic growth of glands and stroma identical to the lining of the uterus. Endometriosis is usually confined to the pelvis, but it can proliferate in extrapelvic sites like pleura, skin, extremities, lung, spleen, gallbladder, stomach, kidney and abdominal wall.¹ The term endometrioma is applied to endometriosis appearing as a circumscribed mass. Abdominal wall endometriomas are usually a secondary process in scars after laparotomies.

Case Report

A 30-year old woman presented with a three-year history of a painful subcutaneous nodule at the right end of her previous Pfannestiel caesarean scar.

Her first pregnancy was seven years before, generally uneventful during the prenatal period and resulted in an emergency caesarean section in a South African hospital for failure to progress in labour. The puerperium was normal. She opted for an elective caesarean section at term in the second pregnancy four years later in South Africa. She developed deep vein thrombosis in the puerperium following the delivery. Her periods were regular, with no dysmenorrhoea. There was no past history of pelvic infection or endometriosis. She was on the oral contraceptive pill.

She discovered a firm subcutaneous nodule on the right lateral end of the Pfannestiel scar a year after her last caesarean section. This nodule gradually increased in size from < 1cm to 3-4 cm over a 3-year period. It enlarged and became very tender during her menstrual periods when the overlying skin of the nodule would develop a dark brown hue. There were no associated gastrointestinal symptoms. Her primary care doctor recorded an initial impression of a suture granuloma.

Examination revealed a firm, tender subcutaneous nodule, about 3cm by 4cm in size, at the right end of the intact Pfannestiel scar. This was adherent to the

underlying tissue. There was no cough impulse. A diagnosis of an endometriotic nodule in the scar was considered pre-operatively due to the classical presentation and no pre-operative imaging was deemed necessary.

Under general anaesthesia, the firm nodule, which was densely adherent to the rectus sheath, was completely excised and sent for histology. It contained areas with chocolate-coloured deposits.

She was commenced on a 3-month course of a gonadotropin releasing hormone (GnRH) analogue, Goserelin 3.6mg administered parenterally every 4 weeks to suppress any residual lesions or deposits. Her symptoms had completely resolved at the 6-month follow-up consultation.

Pathology Report:

Macroscopic: Haemorrhagic scar tissue up to 4 cm in diameter.

Microscopic: The clinical impression is exactly correct and in these scarred soft tissues from the abdominal wall are discreet endometrial glands set within typical cortical stroma. Some had haemorrhagic areas, but there is no malignancy.

Discussion

This is a classical case of scar endometrioma after elective caesarean section in a pre-menopausal woman with no previous history of endometriosis. Abdominal wall endometriosis usually occurs in previous caesarean section scars.¹ The aetiopathogenetic mechanism of this location may be explained by a dissemination of endometrial tissue during caesarean section.

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Endometrioma in a surgical scar is rare and appears in 0.1 per cent of women who have undergone caesarean section; 25 per cent of these women have concomitant pelvic endometriosis. Endometrioma in a scar can present as a painful swelling on the scar that worsens during cough and effort, with the patient's complaints resembling those of a postoperative hernia occurring in a scar. It can also mimic other lesions of the abdominal wall, such as suture granulomas, haematomas, abscesses, and tumours.²

The most frequent clinical presentation of the disease is that of a palpable subcutaneous mass near surgical scars associated with cyclic pain and swelling during menses. Cyclical symptoms such as pain and swelling, in relation to surgical scars, which worsen at the time of menstruation, are nearly pathognomonic of scar endometriosis.³

Caesarean section performed before spontaneous onset of labour may substantially increase the risk of occurrence of scar endometriomas. In a retrospective study of 81 Polish women who had surgical removal of endometriomas after caesarean sections, the frequency of endometriomas was higher following caesarean sections performed before onset of labor in comparison to caesarean sections following spontaneous onset of labour, a difference that was shown to be statistically significant⁴.

Pre-operative imaging has been suggested as an aid to diagnosis. However, the contribution of imaging studies to the diagnosis of scar endometriosis is unclear⁵. Sonography may show lesions that are hypoechoic, vascular, and solid, with some cystic changes. Imaging findings of a solid mass near a caesarean section scar strongly suggest its diagnosis⁶. Imaging is also useful in excluding hernia and metastatic malignancy, and in

delineating the extent of the mass. Colour Doppler findings, when properly combined with clinical data, may substantially contribute to the correct pre-operative diagnosis of abdominal wall endometriomas⁷. Fine-needle aspiration biopsy (FNAB) can also be a valuable diagnostic aid in the evaluation of these subcutaneous abdominal masses as it can provide a rapid and accurate pre-operative diagnosis⁸.

Scar endometrioma is usually diagnosed definitively by histology after surgical excision. Histological diagnosis can also be a matter of some difficulty, as sometimes it is necessary to differentiate from adenocarcinoma, pseudomyxoma peritonei and metastatic carcinoma.

Wide local excision remains the treatment of choice⁹. The surgical treatment has to be sufficiently wide to avoid recurrence⁵. Wide excision of damaged rectus abdominis muscle and the surrounding tissues may occasionally be required. Preoperative hormonal therapy (with GnRH analogues) may be used in cases of large endometriotic masses to reduce the size of the surgical defect, but surgical excision remains the treatment of choice¹⁰. Postoperative GnRH-analogues may also be prescribed to prevent recurrence.

Is this complication of caesarean section scars preventable at all? Though the occurrence of abdominal wall scar endometrioma after caesarean section has been reported several times in the literature, steps to prevent this complication have not been delineated. It has been strongly recommended that, at the conclusion of the procedure of caesarean section, the abdominal wall wound be cleaned thoroughly and irrigated vigorously with high-jet saline solution before closure but there are no proper clinical trials to support this approach¹¹.

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