



Abdominal Wall Endometriosis in an Abdominoplasty Patient

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Endometriosis is defined as the presence of endometrial glands and stroma at extrauterine sites. It commonly occurs in sites such as the bladder, ovaries, pelvic cul-de-sac, bowel, or pelvic peritoneum but has been reported as distant as an upper limb [1]. Cutaneous endometriosis or abdominal wall endometriosis has been extensively described at the incisional scar of Caesarean sections up to 11 years post-operatively [2, 3]. Abdominal wall endometriosis distant to the incisional site is a rare condition and has only been described once before in the literature. The cause is believed to be direct implantation of endometrial tissues intra-operatively. Usually patients complain of pain at the site during menstruation. We describe the case of a 32-year-old female who attended for an abdominoplasty who was found to have an abdominal wall deposit of endometriosis 2–3 cm superior to the right lateral edge of the Caesarean scar.

The patient had had two uncomplicated Caesarean sections: the first was 5.5 years prior with twins, and the

second was eighteen months prior to her presentation. She was known to have a wide rectus diastasis, which had had some minor improvement with core exercises and Pilates. Over the month preceding presentation to the senior author, she had developed pain in her right lower abdominal wall at the time of menstruating. She had no prior history of endometriosis. The pain was severe enough for her to present to her local emergency department and then subsequently to her local general practitioner. She underwent two ultrasound examinations which reported a tender area measuring $2.2 \times 0.8 \times 1$ cm in size with appearances suggestive of a small hernia, most likely a Spigelian hernia with no change in size with Valsalva. The radiologist suggested a CT scan to provide more clarification. A biopsy was not indicated as it was believed to be a hernia.

On initial consultation with us, she presented for an abdominoplasty to treat her abdominal wall and skin laxity and for possible repair of the hernia to improve her pain. Physical examination revealed her to be slim with excess, stretched, atrophic skin of her lower abdomen and around her umbilicus. Her Caesarean section scar was well healed, and there was an impression of fullness in her right iliac fossa, without any obvious mass or hernia (Fig. 1a). Clinically she had a rectus diastasis of around 4 cm. A computed tomography (CT) scan was ordered prior to surgery which showed no hernia, but some inflammation and stranding in the subcutaneous tissue of the right lower abdomen (Fig. 2). This corresponded to the area of pain. The scan also confirmed widening of the linea alba measuring 40 mm in width below the level of the umbilicus. She wished to proceed with an abdominoplasty with rectus diastasis repair, with a plan to excise the area of concern and send this for histological examination.

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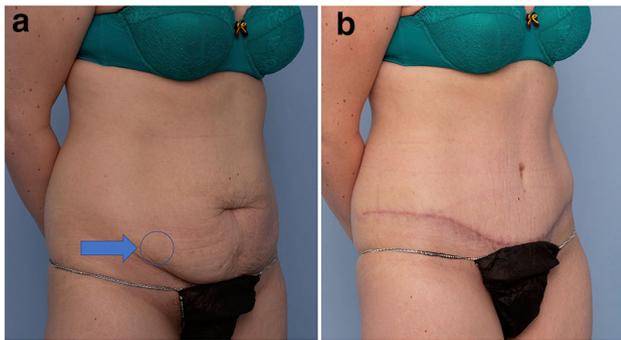


Fig. 1 **a** Patient prior to surgery. It demonstrates the laxity of skin and an arrow points to the area of pain. **b** Patient 4 months after surgery. We believe it demonstrates an excellent outcome in terms of both functional and aesthetic change

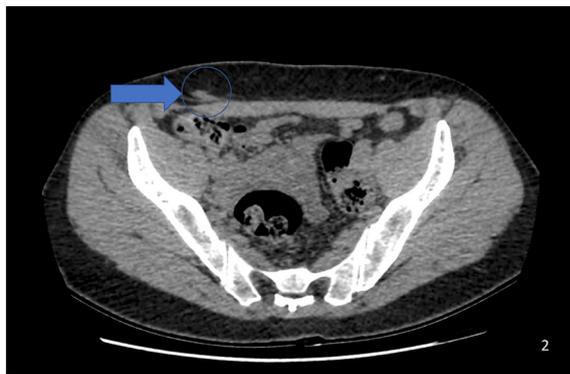


Fig. 2 One image from the CT scan which shows the area of pain

At the time of surgery, a firm mass was located on the right abdominal wall. It was densely adherent to the underlying fascia and contained within scar and abdominal wall subcutaneous adipose tissue. The abdominoplasty was performed without issue, and she made an excellent recovery.

Histopathological examination revealed endometriosis, characterized by several endometrial glands surrounded by endometrial stroma, deep to the subcutaneous fat, within the fibrous fascia layer, associated with fibrosis, extravasated red blood cells and hemosiderin-laden macrophages (Fig. 3). There was no evidence of malignancy and excision appeared complete.

No recurrence of any pain has been reported within a 4-month follow-up period. The patient is satisfied with the improvement of her abdominal wall strength and also her appearance (Fig. 1b).

This is the second case to be reported in the literature of distant abdominal wall endometriosis [4] and the only one to have occurred within the context of a patient seeking an abdominoplasty. Women seeking correction of abdominal wall defects and skin laxity have often had a previous Caesarean section. Whilst the scar of a Caesarean section is now commonly transverse rather than vertical, the muscle underneath is still separated vertically along the midline and

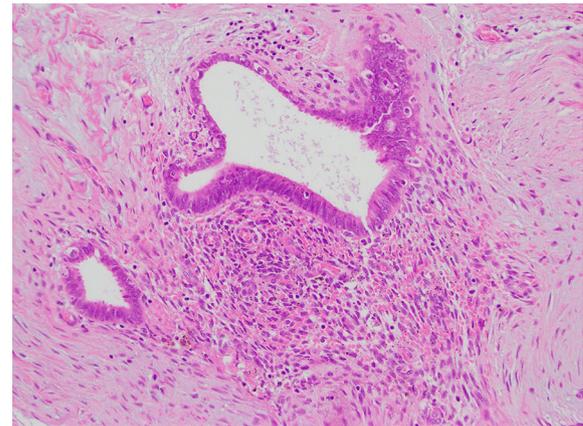


Fig. 3 Endometriosis: endometrial glands surrounded by endometrial stroma with extravasated erythrocytes and haemosiderin laden macrophages (Haematoxylin and Eosin stain, $\times 200$ magnification)

therefore fascia, muscle and adipose tissue may come into contact with the uterus and endometrium during the extraction of the neonate. Suspicion of an abdominal wall endometriosis should prompt an ultrasound scan. This case serves to inform aesthetic surgeons who perform abdominoplasties of the potential increasing incidence of abdominal wall endometriosis within the context of increasing Caesarean sections worldwide. A history of a mass that is painful at the time of menstruation should alert the surgeon to the possibility of an abdominal wall focus of endometriosis.

Compliance with ethical standards

Conflict of interest The authors declare that they have no conflict of interest.

Informed consent Informed consent was obtained in verbal and written form from the patient.

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