

Abdominal wall scar endometriosis. A report of two cases with emphasis on diagnostic strategies

L. Rosseel¹, P. Buydens², T. Jager²

(1) UGent, Gent, Belgium ; (2) ASZ Aalst, Aalst, Belgium.

To the Editor,

We report two cases of young women with intermittent abdominal wall pain, and discuss the relevance of imaging techniques and the treatment of this disorder.

We present two patients, both young women (reproductive age), who were referred to a gastro-enterologist because of pain "in the abdomen". Since the pain was cyclic, they were first seen by their gynaecologist, who in both cases excluded "pain of gynaecological origin". Both patients complained of a shooting, burning pain in the left (patient A) and right lower quadrant (patient B). The pain worsened after exercise. On clinical examination of the abdomen, we palpated some nodules in the abdominal wall of patient A, however in patient B, we did not palpate a mass. In our opinion this could be due to the narrow circumscribed palpatory tenderness which elicited rectus abdominis muscle contraction during palpation. Carnett's test (i.e. elevation of both feet with extended legs) provoked spontaneous and palpatory pain [left (A) and right (B) lower quadrant].

Both our patients underwent a caesarean section respectively 3 and 7 years before. The pain was not located on top of this scar, but several centimeters away from it. Routine hematological and serum chemical laboratory tests were normal. Ultrasound of the abdominal wall showed in both cases a heterogeneous mass located at the site of the pain, with hypo- and hyperechoic components, with slightly irregular margins. Doppler sonography showed vascularisation within the lesion (Fig. 1). Abdominal CT scan showed an asymmetrical thickening of the rectus abdominis muscle due to a heterogeneous lesion with erratic contrast captation. MRI depicted an asymmetrical thickening of the rectus abdominis muscle in both cases. The T1-weighted and T2-weighted MRI images with fat suppression showed a heterogeneous lesion with hypo- and hyperintense components. The hyperintense foci on T1- and T2-weighted images represent bleeding. Gadolinium enhanced imaging revealed irregular captation of the contrast within the lesion, which confirms vascularisation of the lesion. In patient A the lesion measured about 5 to 2 centimetres on axial plane, while in patient B the anteroposterior diameter was about 1.7 centimetre.

On clinical and sonographical grounds the diagnosis of abdominal wall endometriosis (AWE) was made and the patients were referred for surgery. Both were

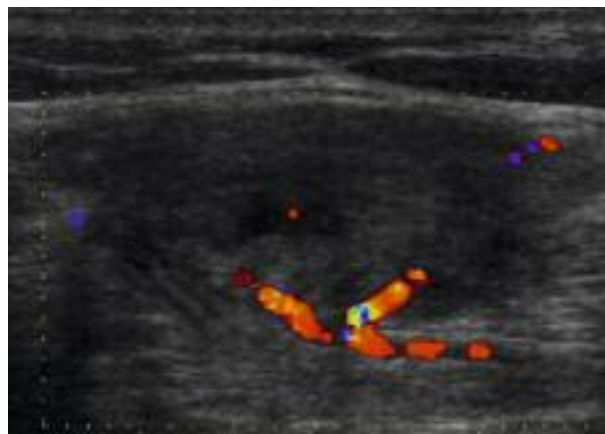


Fig. 1. — Ultrasound examination in patient A shows an oval, heterogeneous lesion with hypo- and hyperechoic components, slightly irregular margins, and presence of vascularity within the lesion.

treated by complete excision of the lesion on an outpatient basis. Anatomopathological examination of the excised lesion confirmed the diagnosis of abdominal wall endometriosis. It showed endometrial glands surrounded by endometrial stroma. There was also evidence of some old and recent bleeding foci and hemosiderin deposits. No other treatment was given and several months after the procedure the patients remain free of pain.

Abdominal wall scar endometriosis is a rare cause of sometimes longstanding abdominal pain. With a typical history and context, an ultrasound examination is the only imaging tool needed. CT, MRI imaging and fine-needle aspiration are sometimes misleading and always costly. They can be useful in an atypical setting. Our two cases were fairly typical. In both cases the shooting, burning pain was cyclic and more pronounced during menstruation. There was in both cases precise localized abdominal wall tenderness in the rectus muscle several centimetres away from the caesarian scar, and in one

Correspondence to : Liesbeth Rosseel, Kortrijksesteenweg 375, 9000 Gent, Belgium. E-mail : liesbeth.rosseel@UGent.be

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case a palpable mass. In both cases the diagnosis was suggested by ultrasound of the abdominal wall. CT and MRI were performed, but contributed nothing to the diagnosis. Fine-needle aspiration was not performed. Our patients underwent surgical treatment, which is the best option if possible.

Abdominal wall endometrioma appears to be a rather infrequent disease. In our community hospital the cases are scarce. An English PubMed search from January 1951 to August 2006 by John D. Horton *et al.* (1) identified 455 patients. Of all AWE cases 57% were associated with a caesarian scar and 11% with a hysterectomy scar. Twenty % have AWE that is not associated with a scar, these lesions are typically located at the umbilicus and the (90% right) groin and are not due to transplantation during operation. For these cases the diagnosis can sometimes be challenging, because the

differential diagnosis for abdominal wall endometrioma is large.

However, when a female patient of reproductive age presents with a history of cyclic pain, a scar of a hysterectomy or caesarean section, and a clinical examination showing wall pain (Carnett's test), and there is a mass palpated or demonstrated by ultrasound (hypo-echoic lesion with heterogeneous texture and internal vascularity) in the rectus abdominis muscle or at the scar site, then the differential diagnosis is very narrow and further imaging is useless.

Reference

1. HORTON J.D., DE ZEE K.J., AHNFELDT E.P., WAGNER M. Abdominal wall endometriosis : a surgeon's perspective and review of 445 cases. *Am. J. Surg.*, 2008, **196** : 207-212.