

Rectus Abdominal Muscle Endometriosis After Cesarean Section: A Case Report

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Abstract

Endometriosis is defined as the presence of ectopic functioning endometrial tissue outside the uterine cavity. Parietal localization, especially the rectus abdominis muscle, is an extremely rare situation, developed usually on a previous surgical scar. It's a poorly known entity, that can be so painful and invalidating, often suffering from a long delay in diagnosis.

We report the case of a rectus abdominis endometrioma after a c-section in a patient enduring abdominal cyclic pain for a year and a half.

Keywords: Endometriosis; Rectus Abdominis Muscle; Cesarean; Case Report

Abbreviations

c-Section: Cesarean Section; MRI: Magnetic Resonance Imaging; Ptf: Poly Tetra Fluoro Ethylene; CT: Computed Tomography

Introduction

Parietal localization of endometriosis, whether in fat or muscle tissue (particularly the rectus abdominis muscle), is a rare entity, accounting for 1% to 4% of extra-genital sites [1]. It is mostly associated with surgical interventions: episiotomy, amniocentesis needle trajectory, c-section, uterine surgery or appendectomy scars [2,3]. But can rarely be primitive, and in most cases located at the umbilicus [4].

In its parietal manifestations, it takes the form of painful, cyclical mass developed near a pelvic surgery scar. The catamenial nature helps orienting the diagnosis, which will be supported by ultrasounds or MRI. While the confirmation is only provided after histological examination of the excised tissues.

In this work we report a case of anterior wall endometriosis, in the thickness of the rectus abdominis muscle, in a patient with history of 2 c-sections managed in our department.

Observation

A 30-year-old patient who had 2 c-sections, the last of which was 2 years ago, presented with cyclical, catamenial abdominal pain, localized to the right paraumbilical region, evolving for a year and a half. Clinical examination revealed a right par-umbilical mass, measuring 5 cm. There were no digestive, gynecological or urological symptoms.

Ultrasounds showed a well-limited, hypoechoogenic, solid and vascularized image of 5 cm in the thickness of the rectus abdominal muscle.

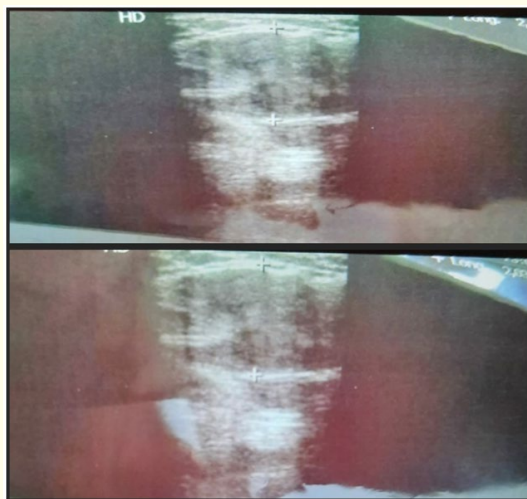


Figure 1: Ultrasounds showing a mass of 5 cm within the rectus abdominis muscle.

An MRI was practiced and showed a tissular mass within the rectus abdominis muscle lateralized to the right, in iso-signal T1 and hypersignal T2 with intense contrast uptake, measuring 6 cm in large diameter.

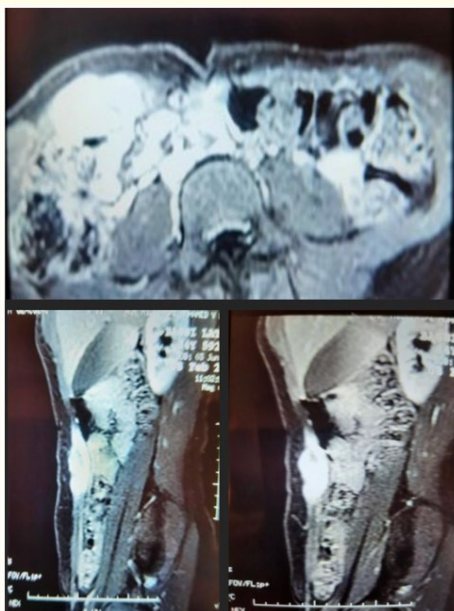


Figure 2: MRI showing the intra muscular mass in hypersignal T2 with intense contrast uptake.

The patient underwent total excision of the mass, as well as the posterior part of the fascia. A PTFE mesh was placed to seal the defect. Histological examination confirmed the endometrial nature of the lesion. The patient had no relapse at 3 years follow-up.

Discussion

Parietal endometriosis is most frequently reported in women of child-bearing age, with an average age of 35 for extra-pelvic localization [5]. This entity is thought to be due to direct grafting of endometrial cells onto the abdominal wall during uterine perforation or rupture, amniocentesis, episiotomy, gynecological laparoscopic procedures or after c-section [6]. It complicates 0.03 to 0.4% of c-sections, and affects both Pfannentiel and median laparotomy scars [7]. A study comparing both techniques showed no benefit of one over the other in preventing the occurrence of parietal endometriosis [8].

Classically, this pathology manifests itself as a parietal mass associated with pain, usually of a cyclic nature [9]. Asymptomatic parietal endometriosis is extremely rare (3%) [10].

Definitive diagnosis is made by pathologic tissue examination, but preoperative imaging with ultrasonography or MRI, along with clinical data, enables a presumptive diagnosis [11]. Ultrasound typically shows a well-limited, hypoechoic, vascularized solid image with a vascular pedicle penetrating the periphery of the lesion. While MRI offers a better assessment of normal tissue involvement, and can also detect recent bleeding, or hemosiderin residues resulting from previous bleeding. It generally shows an iso or low intensity signal in T1 and high intensity signal in T2, both with contrast uptake in the arterial phase [12].

As for the management, medical approach based on Continuous combined oral contraceptive pills, progestins, or Gonadotropin-releasing hormone agonists can relieve symptoms but has no impact on endometriotic volume, and the lesions rapidly recur when the treatment is interrupted, not to mention patients' exposure to the side effects of hormone-suppression or androgenic effects [13]. Therefore, surgery based on wide resection of the mass, with at least 1 cm margins is currently the standard treatment [14], that provides complete symptomatic relief in more than 90% of cases [15]. When extensive aponeurotic and/or muscular resection is proceeded, prosthetic reinforcement is essential to ensure proper abdominal wall tone.

After surgery, recurrence risk ranges from 4.3% to 11%, and can be minimized by ensuring adequate margins [16].

Conclusion

The rectus abdominis muscle is an unusual localization of endometriosis, a rare entity that generally occurs after abdomino-pelvic surgery, most often on a c-section scar.

The presence of a history of pelvic endometriosis, gynaecological or abdominal surgery, as well as the lesion's highly analgesic and catamenial character, help to orient the diagnosis.

The main diagnostic exam is ultrasound, which confirms the parietal origin of the lesion (typically intra-muscular) and eliminates differential diagnoses. CT scans and MRI can help guiding the diagnosis, but do not provide a definitive diagnosis, as only anatomopathological examination can provide confirmation.

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