CASE REPORT

Endometriosis of the rectus abdominis muscles: a rare case of dual location
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Abstract
Endometriosis of the abdominal wall is a rare entity, the etiopathogenesis remains unclear. It most often occurs after gynecological or obstetric surgery. We report the case of a patient with a dual localization of endometriosis in the abdominal wall, the diagnosis was made by abdominal CT scan. The treatment was surgical. The pathology study confirmed the diagnosis of parietal endometriosis. The postoperative course was uneventful with a favorable outcome for 2 years without recurrence. Through our case, we will discuss the characteristics of this entity in order to understand the interest of an early diagnosis and management to deduce possible means of prevention during each gynecological or obstetric surgery.

INTRODUCTION
Endometriosis corresponds to the presence of functional endometrial tissue in an ectopic situation outside the uterine cavity. The most common locations are pelvic [1]. The abdominal wall location is rare [2]. The rectus muscles location is very exceptional [1]. Few case reports have been published to date since its first description in 1984 by Amato and Levitt [3]. The etiopathogenesis remains imprecise [4]. The originality of this work is the double localizations of extrapelvic endometriosis. The aims of this work are to discuss through our observation the clinical characteristics, the treatment and the evolution of these lesions from a review of the literature to deduce possible means of prevention.

OBSERVATION
A 31-year-old women, with no history, presents 4 years after a cesarean (incision of Pfannenstiel), two masses one at the level of the left iliac fossa above cesarean scar, and the second one in the lower left rectus muscle gradually increasing in volume, and painful at the time of menstruation. The abdomen examination found an irregular wall tumor of 2 cm, firm, painful, at the level of the left iliac fossa and another of 5 cm in the rectus muscle without cutaneous erythema. An abdominal CT revealed a subcutaneous masse of 2.1 × 1.7 cm in the left iliac fossa and another mass involving the rectus muscle and fascia without traversing the peritoneum (Fig. 1). Elective surgery was performed. During surgery, the two masses were observed, the excision was performed including a 10-mm safety area of each them (Fig. 2). Hemostasis was achieved by ligation of the vascular pedicle entering at the periphery of the mass. Due to a significant defect in the aponeurosis, a polypropylene mesh was used (Fig. 3). Pathology examination confirmed the presence of foci of cystic and hemorrhagic endometriosis (Fig. 4). The postoperative course was uneventful. The patient had a favorable outcome for 2 years without recurrence.

DISCUSSION
Endometriosis of the abdominal wall is a rare entity. It represents 0.03–2% of extragenital endometriosis [5]. Due to its
asymptomatic nature, the exact prevalence is unknown [6]. The incidence after cesarean section is 0.03–0.4% [7]. The endometriosis etiopathogenesis can be explained by three theories [8]: the transplant theory is based on the migration of endometrial fragments by the tubal reflux; the theory of coelomic metaplasia evokes the possibility of transformation of epithelium coelomic cells in endometriotic metaplasia—the exact stimulus triggering this transformation is unknown; and finally, the metastatic theory evokes the possibility hematogenous or lymphatic dissemination.

Anterior abdominal wall endometriosis is classically manifested like our case with a localized, tense and painful tumor, increased at menstrual period, on or near a scar of gynecological surgery [9]. The interval time between operation and presentation varied. In our case it was 4 year, in the literature it is between 3 months and 10 years [7]. There are many differential diagnoses such as eventration, hematoma, granuloma, abscess, lymphadenopathy, lipoma, neurofibroma, sarcoma and desmoid tumor [1]. Once the parietal endometriosis is suspected, Sonography and Doppler could contribute to preoperative diagnosis, they can show an image with fluid or mixed content, hypoechoic or hyperechoic depending on the phase of the menstrual cycle [4]. Anecdotal studies have mentioned the use of computed
Prevention in case of laparotomy is based on abundant washing of the pelvic cavity should be systematic. Thus, these measures are part of good surgical practice although their benefit has never been demonstrated [5].

**CONCLUSION**

The anterior abdominal wall endometriosis is a rare entity. The diagnosis should be suspected in localized, painful tumor that increased at menstrual period happening after a gynecological surgery. To confirm this hypothesis, MRI is the most adapted. The medical treatment can be used to reduce the size of big endometrioma, however surgery is the definitive treatment and should be carcinological.

**CONFLICTS OF INTEREST**

None.

**FUNDING**

None.

**AUTHOR CONTRIBUTIONS**

All the authors testified to the care of the patient and the writing of the manuscript. The authors have read and approved the final version of the manuscript.

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