

## Case Reports

## Abdominal scar endometriosis: case report

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## Summary

Abdominal scar endometriosis, corresponding to the presence of an endometrial tissue near or inside an abdominal surgical incision, is a rare clinical event that can occur in women after gynecological or obstetric surgery. Generally, a triad consisting of underlying mass at the incision, cyclic menstrual scar pain, and history of previous gynecological or obstetric surgery leads to the preoperative diagnosis. In rare cases, the clinical presentation is atypical and the differential diagnosis with incarcerated incisional hernia, granuloma, abscess or other soft tissue tumors can be difficult. The authors describe the case of 39-year-old woman who underwent three previous cesarean sections, with a 20-week history of underlying palpable mass at the Pfannenstiel incision, associated to continuous pain. In this case, a surgical excision followed by the histology definitely clarified the diagnosis.

**Key words:** Abdominal wall endometriosis; Cesarean incision; Endometrial implants; Scar endometriosis; Obstetric surgery.

## Introduction

Endometriosis is defined as the presence of normal functioning endometrium abnormally implanted in extrauterine sites [1]. Because of a normal expression of the hormonal receptors, this condition can only affect women during reproductive age. Its overall incidence, normally corresponding to 1-2% of female population, can reach 25% among infertile women [2,3].

Abdominal scar endometriosis is defined by the presence of an endometrioma near or inside an abdominal surgical incision. This condition is a rare clinical event which can occur after gynecologic and obstetric surgery, with an incidence of 0.03–3.5% [4,5]. Surgery represents the treatment of choice, also considering the potential risk of malignant transformation [6].

The authors report a clinical case of scar abdominal endometriosis observed in a female who had previously undergone cesarean incision.

## Case Report

A 39-year-old female came to the authors' attention with a 20-week history of palpable painful mass at the left corner of a Pfannenstiel incision. Clinical history revealed early menarche (at ten years), irregular menses, dysmenorrhea, and three previous cesarean sections. Clinical examination evidenced a painful, immobile, and solid mass, underlying the left extremity of the incisional scar with apparent integrity of fascial plain. Ultrasonography showed a subcutaneous hypoechoic solid mass (2.05×1.9 cm) with fluid component, adjacent to the rectum muscular fascia without its involvement (Figure 1). A preoper-

ative diagnosis of incisional abscessualized granuloma was made and an ambulatory wide excision was planned.

Under local anesthesia with ten ml of mepivacaine chlorohydrate (10 mg/ml), a re-incision along the left edge of previous surgical scar was performed. In the subcutaneous layer, a nodular solid mass adhering to the fascia was identified and excised. One layer closure using a non-absorbable monofilament suture was performed. Patient was discharged after two-hour clinical observation in good condition. Postoperative course was regular with normal healing of the surgical incision. Histology revealed the presence of endometrial tissue immersed in fascial and muscular tissue of the abdominal wall (Figure 2). A postoperative abdominal magnetic resonance was performed to exclude other endometrial implants. Ultrasonographic controls at six and 12 months resulted negative for local recurrence.

## Discussion

The cause of endometriosis is unknown. The leading theories include retrograde menstruation, metaplasia of coelomic epithelium, and hematogenous or lymphatic spread of endometrial cells [7]. A combination of these theories is likely to be responsible. Theory of retrograde menstruation postulates that viable fragments of endometrium shed at the time of menstruation and pass through the uterine tubes to implant in the pelvic cavity [8]. The risk of endometriosis is higher in women with prolonged menstrual flow, short menstrual cycle lengths, and outflow tube obstructions (cervical stenosis, transverse vaginal septa). This "implanting" property of endometrial cells easily explains why endometriosis is most commonly found on the peritoneal surfaces of the ovaries, tube or bladder, and along the

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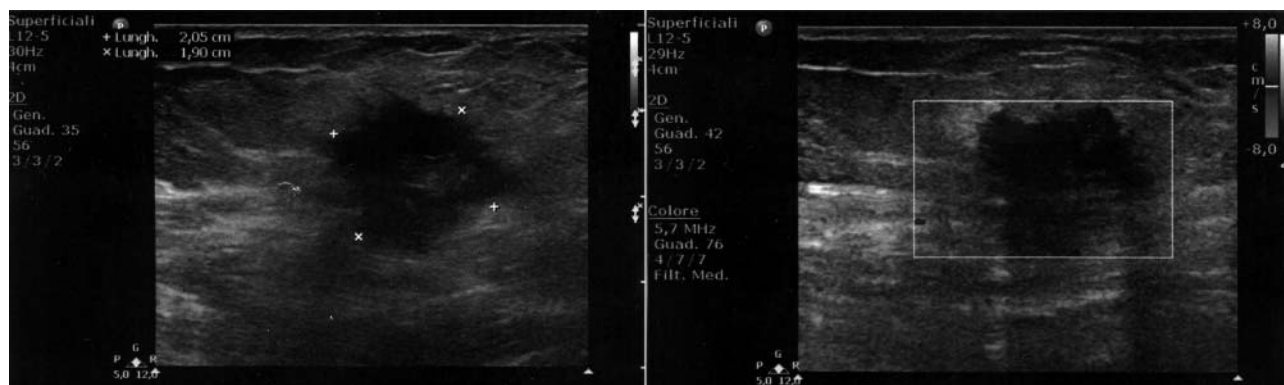


Figure 1. — Subcutaneous irregular mass (3×2.5 cm) with mixed component, adjacent to the rectum muscular fascia.

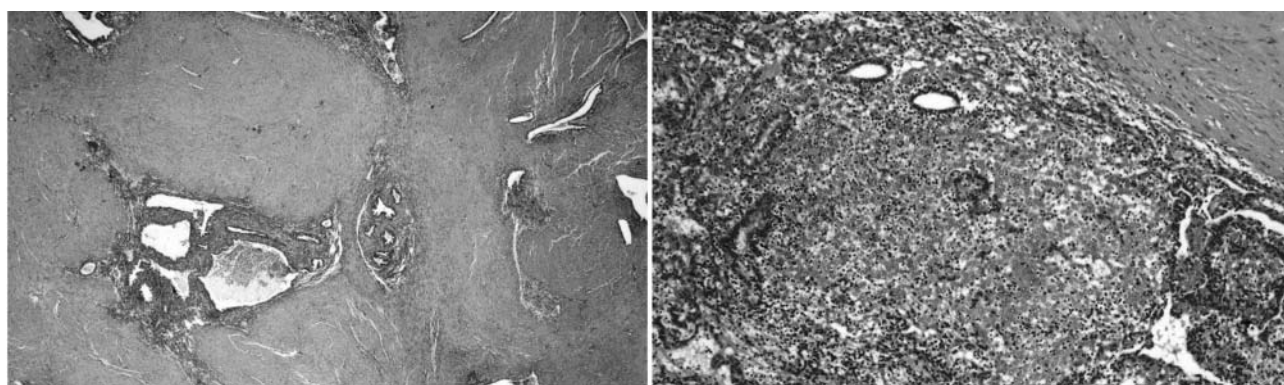


Figure 2. — Island of endometrium tissue immersed in fascial e muscular tissue of the abdominal wall (H&E; A: ×50; B: ×100).

surgical incision after obstetric or gynecological procedures [9]. Generally, a triad consisting of underlying mass at the incisional area, cyclic menstrual scar pain, and previous gynecological or obstetric surgery leads to the diagnosis. In rare cases, as in the present patient, the clinical presentation was atypical with continuous pain not exacerbated by menstruations [10]. In these patients, the differential diagnosis with incarcerated incisional hernia, granuloma, abscess or other soft tissue tumors, can be difficult.

Radiology can be useful to achieve a correct diagnosis, but, in some patients, the preoperative imaging results inconclusive to define the real nature of the lesion [11]. Thus, the histology represents the only way to obtain a correct diagnosis.

In the present patient, the hypothesis of incarcerated incisional hernia was discarded because of intestinal symptoms absence as well as signs of fascial interruptions. Ultrasonographic findings suggested an incisional granuloma because the citing and mixed component of the lesion. This theory was also supported by the macroscopic features during the dissection with hard consistence and fibrotic aspect. Also in this case, the correct diagnosis of en-

dometrioma was achieved by histology. The absence of other endometriotic implants confirmed by MRI demonstrates the iatrogenic nature of this lesion.

## Conclusion

Abdominal scar endometriosis is a very rare event which occurs in women who have had gynecological or obstetric surgery. Differential diagnosis with suture granuloma and irreducible incisional hernia can be difficult because of same surgical etiology and similar clinical features (subcutaneous, solid, painful mass). When present, the cyclical trend of pain can lead to a correct preoperative diagnosis. Surgical excision with histology represents the only procedure to make a correct diagnosis and definitive treatment.

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