

Rare Case Of Abdominal Wall Endometriosis After Cesarean Section

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1. Abstract

Abdominal wall endometriosis (AWE) is a rare condition characterized by the presence of ectopic endometrial tissue within the abdominal musculature, often associated with prior surgical interventions such as cesarean sections. We report the case of a 47-year-old woman who presented with a four-year history of a painful, progressively enlarging mass on her lower abdomen, with pain exacerbated by her menstrual cycle. A CT scan identified a hyperdense lesion measuring 4.2 x 2.6 x 6 cm in the lower abdominal wall, raising suspicion for either an old hematoma or an endometrioma. Intraoperative findings confirmed the presence of endometriosis, with histopathology revealing endometrial tissue within the lesion. Complete excision was performed, providing symptomatic relief.

2. Keywords:

Abdominal wall endometriosis (AWE), computer tomography (CT), cesarean scar endometriosis (CSE), high-intensity focused ultrasound ablation (HIFUA), gonadotropin-releasing hormone (GnRH)

3. Patient Presentation

A 47-year-old woman presented with a mass on her lower abdomen that had been gradually enlarging over four years. The mass was accompanied by localized, cyclical pain that intensified with her menstrual cycle. Six years earlier, she had undergone a cesarean section. Over time, the mass grew

more noticeable and tender, especially around menstruation, prompting further investigation to determine its cause. A CT scan of the abdomen revealed a 4.2 x 2.6 x 6 cm hyperdense lesion in the lower abdominal area (Figure 1). Given the patient's history of cyclical symptoms related to her menstrual cycle. The patient underwent surgical excision to confirm the diagnosis and relieve symptoms. During the operation, a subcutaneous lesion located beneath the previous cesarean section scar (Figure 2) was identified and removed en bloc (Figure 3). An intraoperative frozen section analysis confirmed the diagnosis of an endometrioma. All affected tissue was removed to reduce the likelihood of recurrence.

Figure 1: A computed tomography (CT) scan revealed AWE confined to the right rectus muscle, with minimal involvement of the left rectus muscle.

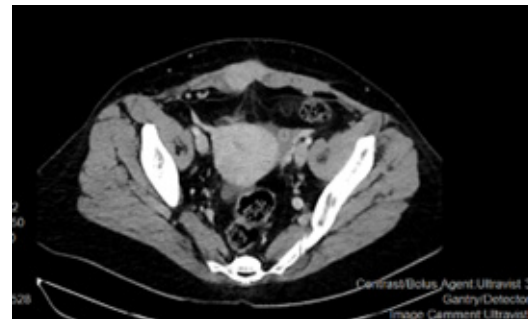
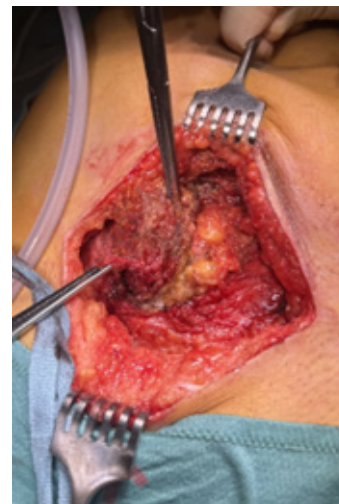


Figure 2: Intraoperative image presenting an AWE.



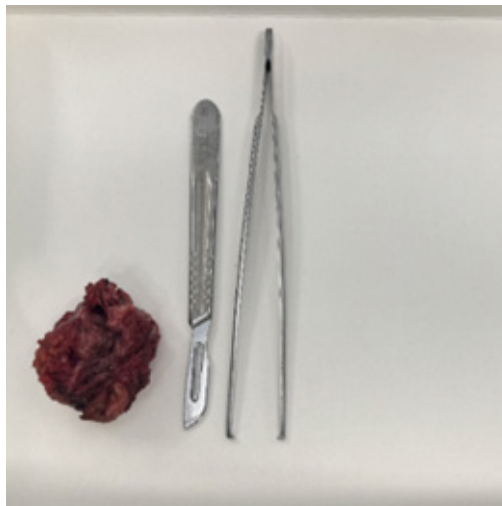


Figure 3: Image showing the endometrioma after resection.

4. Discussion

Endometriosis, a condition commonly linked to chronic pain and infertility. It affects approximately 10% of women of reproductive age. Its prevalence varies depending on the location of the endometriotic lesions [1]. Abdominal wall endometriosis (AWE), also known as parietal endometriosis, is among the rarer forms of the condition [2]. This includes cesarean scar endometriosis (CSE), with an estimated incidence of 0.03% to 0.4%. The prevalence is slightly higher in cases of AWE occurring after hysterotomy, ranging from 1.08% to 2% [3]. Endometriotic implants are commonly located in the subcutaneous tissue of surgical scars, particularly following procedures performed during pregnancy [4]. The Pathophysiology of this type of endometriosis may be explained by the metaplasia [5] and migration theory [6]. It is thought that endometrial cells can inadvertently implant in the abdominal wall during surgical procedures, resulting in ectopic tissue growth outside the uterus. These cells respond to hormonal fluctuations, leading to cyclical pain and mass growth [2]. The clinical presentation of abdominal wall endometriosis is highly variable. The most common complaint is abdominal pain related to menstruation cycles. Rarely the first symptom may be presented as an acute abdomen [7]. Another possible presentation is a palpable lump in the abdominal wall, typically located on a post-operative scar, which size often fluctuates in relation to the menstrual cycle [8]. The characteristic triad of symptoms includes a lump located at or near an abdominal wall scar, cyclical pain, and a history of prior gynecological surgery. By suspected AWE ultrasound, computer tomography, and magnetic resonance can be used [9].

Ultrasound is the primary imaging technique of choice for screening AWE [10]. While imaging methods like ultrasound and CT can detect the lesion, histopathological examination is typically required for a definitive diagnosis. Surgical excision is the treatment of choice and is considered curative. To minimize the risk of recurrence, the procedure should ensure negative resection margins. Typically, the removal of the affected

tissue leads to the resolution of pain [11-12]. Alternative noninvasive treatment options mentioned in the literature include high-intensity focused ultrasound ablation (HIFUA) [13] and hormonal therapies such as combined oral contraceptives or gonadotropin-releasing hormone (GnRH) analogs, especially for patients who decline surgery. In addition, hormonal therapy can be used preoperatively to reduce the size of the lesion, facilitating surgical removal.

5. Conclusion

AWE is a rare disease that can appear specifically AWE in reproductive-age women with cyclical abdominal pain and a palpable mass following pelvic or abdominal surgery. The incidence may be larger with the years because of the increase in gynecological and obstetrical surgeries, especially C-sections. Although various diagnostic imaging modalities are available, a definitive diagnosis is confirmed through histological analysis following surgical excision. This approach remains the most effective for alleviating symptoms and minimizing the likelihood of recurrence.

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