

# Abdominal Wall Endometrioma: A Rare Case Report

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## ABSTRACT

Abdominal wall endometrioma (AWE) being an unusual phenomenon is a benign tumor defined as ectopic functional, endometrial tissue located in the abdominal wall. Abdominal wall endometrioma is a rare sequela to gynecologic surgeries such as cesarean section, tubal ligation, and hysterectomies. The incidence varies from 1 to 2%. It presents as intense pain and discomfort to the patient with a seemingly non discernible cause. Awareness of this entity can help the surgeon to make an early diagnosis and deliver prompt treatment, usually surgical. We present a case of AWE, along with a brief review of literature.

**Keywords:** Clinical profile, Complications, Endometriosis, Surgical site.

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## INTRODUCTION

Abdominal wall endometrioma, an unusual phenomenon, is a benign tumor defined as functional endometrial ectopic tissue located in the abdominal wall.

Abdominal wall endometrioma is a seldom seen sequel to pelvic surgeries such as cesarean section, tubal ligation, and hysterectomies. The incidence varies from 0.1 to 0.4%.<sup>1</sup> It presents as an extreme pain and distress to the patient with a seemingly nondiscernible cause. Quicker diagnostic rates and thereby timely treatment (usually surgical) can be provided to patients if surgeons remain more cognizant of this entity.

We present a case of AWE, along with a brief review of the literature.

## CASE REPORT

A 44-year-old P3L3 with all vaginal deliveries and one MTP followed by puerperal tubal ligation 18 years ago with posthysterectomy status presented with intense cyclical pain in the abdomen for 1 year. The patient had no history of fever, abdominal bloating or mass, urinary or bowel complaints. She underwent a total abdominal hysterectomy 15 years ago after which she started experiencing cyclical pain localized to the left edge of the Pfannenstiel scar. The pain was cyclical which later progressed to continuous type, radiating to the left thigh. The pain had increased in intensity over the past year.

Her previous menses were regular lasting for 3–4 days with normal flow, soaking 2–3 pads per day associated with severe dysmenorrhea and passage of clots. All routine investigations were within normal limits. Local examination done revealed the presence of a firm, mobile, extremely tender nodule, approximately 1 × 1 cm on the left edge of the Pfannenstiel scar with normal overlying skin. No other palpable abdominal mass was felt. Ultrasonography of the abdomen and pelvis was done which revealed a well-defined hyperechoic structure in the left iliac fossa region in the intramuscular plane measuring 13 × 11 × 7 mm showing minimal peripheral vascularity—highly suggestive of an AWE. Bilateral ovaries were normal (Fig. 1).

A 3-cm long transverse incision was taken at the left edge of the Pfannenstiel scar and layers of the abdominal wall were opened till the rectus muscle. Intraoperatively, a 1 × 1 × 1 cm firm irregular

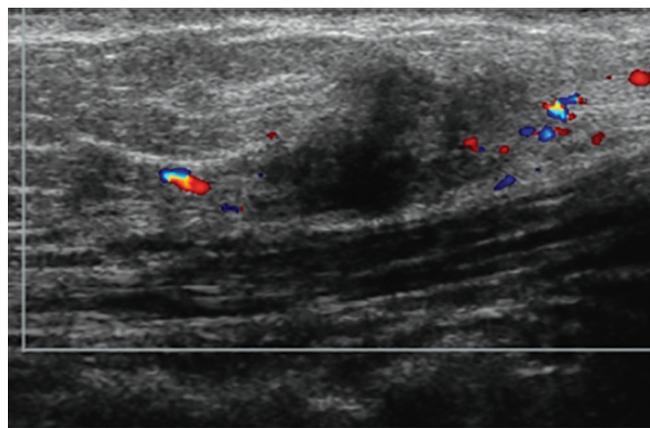
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**Fig. 1:** Ultrasonography findings of 13 × 7 mm endometrioma in abdominal wall above rectus muscle at left border of rectus abdominis

mass was seen between the rectus sheath and muscle adherent to the rectus muscle below. No extension was seen into the rectus muscle (Fig. 2).

Wide local excision of the mass was done with 1-cm tumor-free margin (Fig. 3).

The sample was sent for histopathological examination. Postoperatively, the patient experienced complete resolution of symptoms, and the course in the ward was uneventful.

Histopathological examination revealed fibroelastic tissue with endometrial glands and stroma.

Glandular endometrial tissue and stromal tissue if and when present outside the uterus are known as endometriosis. When the lesion occurs as a well-circumscribed mass it is referred to as an endometrioma.<sup>2</sup> It is commonly observed in women of active

reproductive age as the growth of endometriomas depends on estrogen. The predominant location of endometriosis was the ovaries (96.4%), followed by the soft tissue (2.8%), gastrointestinal tract (0.3%), and urinary tract (0.2%).<sup>3</sup>

Fragments of endometrial tissue are inserted into the surgical site during surgery leading to endometriotic implantation (Fig. 4). The typical surgical procedures that give rise to AWE are abdominal hysterectomies and cesarean sections. Several hypotheses have been developed to analyze the causes and development of AWE. The transport hypothesis states that categorical injection or transfer of endometrial tissue into surgical incisions or nearby tissues in the course of surgery is responsible for endometriosis of the abdominal wall. The metaplastic hypothesis states that primitive pluripotent mesenchymal cells have been isolated and metaplasia can give rise to endometrioma of the abdominal wall. Prior obstetric surgery or hysterectomy, grand multiparity, and menorrhagia are definitive risk factors for AWEs. The Esquivel triad, which includes a palpable tumor, cyclical pain, and a record of prior pelvic surgery all but confirms a diagnosis of AWE.<sup>2</sup> Minor differences in clinical features may be noticeable and therefore a detailed history regarding the timing of surgical events and the onset of symptoms is very important. Typically, the gap between primary surgery and the occurrence of endometriotic lesion-associated symptoms averages around 3–6 years. Our case was presented for almost 6 years. Other criteria of the Esquivel triad were fulfilled in our case as



Fig. 2: Wide local excision of AWE



Fig. 3: AWE seen just below the rectus sheath

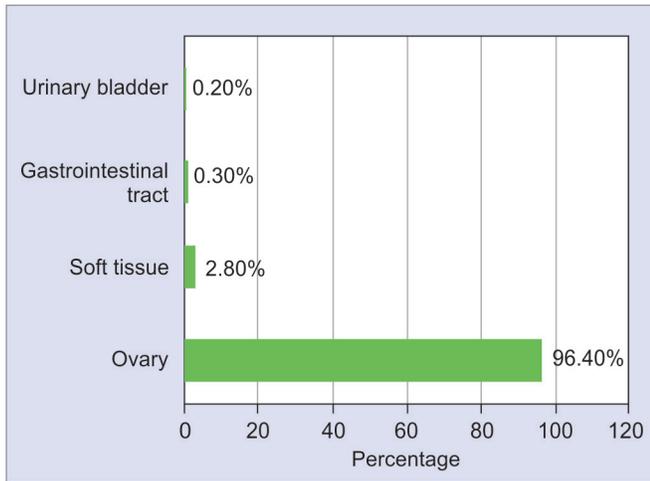


Fig. 4: Common sites of pelvic endometrioma

well, which along with imaging reports ultimately lead us to arrive at the correct diagnosis. Clinical suspicion is a prerequisite, however, for further plan of management to move in the correct direction. A variety of thought patterns are available to validate AWE diagnoses. As for imaging studies to confirm the diagnosis, several tools are available. USG of the abdomen plus pelvis and a contrast-enhanced computed tomography (CECT) performed during menstruation can be diagnostic as demonstrated in our case. Ultrasound and CECT, however, rank poorly when compared to MRI. Essentially, MRI is preferred as the final confirmatory study before undertaking surgical resection as it provides a highly detailed analysis of the resectable mass regarding the depth of invasion into surrounding and underlying tissues. It also helps localize and delineate smaller endometriomas than which could be spotted on a USG and will indicate any bleeders that may be present around said endometrioma. Another, more invasive method of confirming the diagnosis would be fine needle aspiration cytology (FNAC) to demonstrate epithelial cells such as endometrial, stromal cells, and macrophages filled with hemosiderin that would establish that it is indeed an endometrioma and not one of the differential diagnosis commonly presenting with a similar pattern of symptoms such as a small abdominal wall abscess, lipoma, hematoma, sebaceous cyst, suture granuloma, hernia, lymphoma, and carcinoma.<sup>4</sup> However, there is the possibility that it could lead to the injection of the endometriotic material along the tract created by the aspiration cytology needle and thereby defeat the purpose of the study and in fact exacerbate symptoms. Fine needle aspiration cytology will show. Histopathological examination of resuscitated mass helps to confirm a temporary diagnosis. Therefore, a detailed history with a positive clinical association of USG or MRI findings can help to make an accurate preoperative diagnosis. The therapeutic regimens used by AWE include progesterone containing oral contraceptives, danazol, and gonadotropin agonists such as leuprolide acetate. However, it has been seen that medical therapy cannot ensure a complete resolution and nonrecurrence

of symptoms and so surgery remains a pillar of management in most cases. The clinical features of AWE are usually severe pain, pain, bleeding, dysmenorrhea, and dyspareunia. Most patients can develop asymptomatic with an unpleasant and painless tumor (96%). The appearance of lesion externally is based on which layer in the abdominal wall the endometrioma is deposited: it could be an invisible, painful mass if the lesion is deep-seated in the rectus sheath, as was seen in our case, or, if the deposit is more superficial, in the subcutaneous tissue or fat, it will be seen as a dark or black nodule on the skin at the scar site. Pain, cyclical, or noncyclical are present in most of the patients with the condition. Indications for incomplete resuscitation are the seroma formation at the surgical location and the onset of pain localized to the prior surgical site, not responding to medical management. Clinical suspicion of AWE is essential to develop prevention protocol during index surgery and arrive at an accurate and early diagnosis when the condition occurs.

## CONCLUSION

Abdominal wall endometrioma is an entity usually occurring after a cesarean section or any surgery involving the opening of the endometrial cavity. It is extremely rare after a hysterectomy. It is, however, essential that surgeons are more aware of the possibility of the development of endometriomas in the late postoperative period of obstetrical and gynecological surgeries and take the required measures to prevent it (high-pressure saline irrigation of the wound edges).<sup>2</sup> In case prevention fails and an AWE is suspected, further management would involve getting a USG or CECT to confirm the need for surgery, and MRI to assist in precise surgical excision. Surgical excision is the gold standard of treatment as it is the only management that ensures a zero recurrence of symptoms can prevent the development of AWE at the time of the index surgery. Sclerotherapy uses ultrasound-guided intralesional ethanol injection for AWE. Compared with the complications of surgical excision, the complications of sclerotherapy by ethanol are at a more acceptable level. More recently, sclerotherapy by ethanol injection has been developed as an alternative treatment to surgery for AWE.<sup>3</sup> More studies on preventive strategies would further help in reducing the occurrence of AWE.

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