



# A Case of Abdominal Wall Endometriosis Mimicking Strangulated Incisional Hernia

## Boğulmuş Kesi Fıtığını Taklit Eden Karın Duvarı Endometriozisi Olgusu

Murat Özgür Kılıç, Gürkan Değirmencioğlu, Cenap Dener

Department of General Surgery, Turgut Özal University Faculty of Medicine, Ankara, Turkey

### ABSTRACT

**Introduction:** Endometriosis is a clinical entity characterized by the presence of functional endometrial tissue outside the uterus. This lesion is often seen in the ovaries, rectovaginal region, and peritoneum of the pelvic floor. Endometriosis, located in the abdominal wall, is quite rare and is usually reported as single cases or small series.

**Case Report:** Herein, a case of abdominal wall endometriosis, mimicking strangulated incisional hernia, is reported. Most cases occur following various obstetric and gynecologic procedures, especially cesarean section. Abdominal wall endometriosis can sometimes lead to acute abdominal findings and may be easily misdiagnosed as subcutaneous abscess, hematoma of the rectus sheath, or strangulated incisional hernia, as in our case.

**Conclusion:** The correct diagnosis of abdominal wall endometriosis is often difficult, but it should be considered, especially in a menstruating woman with cyclic pain. Additionally, the history of obstetrical or gynecological operations should be questioned. Total excision is the treatment of choice.

**Keywords:** Abdominal wall, endometrioma, endometriosis, scar endometrioma

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### ÖZET

**Giriş:** Endometriozis, uterus dışında fonksiyonel endometrial doku varlığı ile karakterize bir klinik antitedir. Bu lezyon genellikle overler, rektovaginal bölge ve pelvik taban peritonunda görülür. Karın duvarı endometriozisi, oldukça nadirdir ve genellikle tek olgu sunumları ya da küçük seriler olarak bildirilmektedir.

**Olgu Sunumu:** Bu yazıda, boğulmuş kesi fıtığını taklit eden karın duvarı endometriozisi olgusu bildirildi. Vakaların çoğu, özellikle sezaryen gibi çeşitli obstetrik ve jinekolojik operasyonların ardından oluşur. Karın duvarı endometriozisi bazen akut karın bulgularına neden olabilir ve kolayca deri altı apsesi, rektus kılıfı hematoma ya da bizim olgumuzda olduğu gibi boğulmuş kesi fıtığı ile karışabilir.

**Sonuç:** Karın duvarı endometriozisinin doğru tanısı genellikle zordur ama özellikle siklik ağrısı olan menstrüasyon gören bir kadında düşünülmelidir. Ayrıca, obstetrik ve jinekolojik ameliyat öyküsü de sorgulanmalıdır. Tedavisi total eksizyondur.

**Anahtar Kelimeler:** Karın duvarı, endometrioma, endometriozis, skar endometriozisi

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### Introduction

Endometriosis is characterized by the presence of ectopic and functioning endometrial tissue that is located outside of the endometrium and myometrium. This disease occurs most commonly in the pelvic region, such as the ovaries, rectovaginal septum, and pelvic peritoneum. Extrapelvic sites, such as lung, bowel, and urinary tract, are less affected regions (1). Abdominal wall endometriosis (AWE) is also a rare form of extrapelvic disease. The term 'endometrioma' is defined as a well-circumscribed mass of endometriosis. This interesting condition has usually been reported as single cases or small series (1). Most cases have occurred following obstetric procedures, such as cesarean section, episiotomy, and hysterectomy (2). The incidence of AWE is estimated to be approximately 0.03%-1% after cesarean section (3). Due to its rarity and nonspecific presentations, it is often misdiagnosed in clinical practice. Therefore, it should be determined in the differential diagnosis of other abdominal wall conditions, especially in any menstruating woman complaining of a cyclic, painful abdominal wall mass who has undergone an obstetric or gynecologic procedure previously.

### Address for Correspondence/Yazışma Adresi:

Murat Özgür Kılıç, Department of General Surgery, Turgut Özal University Faculty of Medicine, Ankara, Turkey.  
Phone: +90 312 203 51 47 E-mail: murat05ozgur@hotmail.com

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Figure 1. CT appearance of the mass located in the abdominal wall (white arrow)



Figure 2. Totally excised abdominal mass

### Case Report

A 28-year-old female patient presented with a painful subcutaneous mass on the left side of the *Pfannenstiel incision*. On examination, a tender 3x3-cm subcutaneous mass was found near the cesarean scar. The overlying skin was normal. A strangulated incisional hernia was thought of as the initial diagnosis, but it was learned from the patient's anamnesis that the mass was very painful, especially during last two menstruations. She underwent a cesarean section for her first delivery 10 months earlier. The ultrasound (US) showed a hypoechoic mass with internal echoes, 22x15 mm in size. In the computed tomography (CT) scan, the lesion had irregular borders, and it infiltrated the sheath of the rectus abdominis muscle (Fig. 1). There was no concurrent lesion in the pelvic cavity or any other place. Tru-cut biopsy of the mass showed endometriosis, and total excision with wide margins was performed (Fig. 2). Informed consent was obtained from the patient for this study. The postoperative course was uneventful, and the patient was discharged on the first day.

### Discussion

AWE is an unusual condition and mostly develops after cesarean section or other obstetric procedures. It often occurs in areas adjacent to Pfannenstiel incision scars. The major physical finding of AWE is cyclic and/or continuous pain associated with a palpable mass (1, 4). Similarly, our case presented to our clinic with a firm, palpable subcutaneous mass near the left lateral site of the cesarean section scar. These lesions are also painful, especially during the menstrual periods of patients, as in our case. Cyclic bleeding may also occur in some patients. Similar to other cases reported in the literature, she had undergone a delivery by cesarean section 10 months earlier. However, these lesions can also occur spontaneously without any previous surgery. Moreover, AWE is also related to other surgical operations, such as appendectomy and inguinal hernia repair (5, 6). Coexistence of pelvic endometriosis and scar endometriosis is uncommon. Similarly, the radiological examinations showed no signs of pelvic endometrioma in our patient. The most widely accepted theory in explaining the physiopathology is iatrogenic implantation of endometrial tissue, especially during obstetric and gynecological operations (7). Although a painful mass that is compatible with the menstruation cycle and the presence of previous pelvic surgery are important marks in the diagnosis of AWE, various radiological methods are often needed to rule out other causes in the differential diagnosis. This disease can be easily misdiagnosed with different conditions, such as subcutaneous abscesses, sebaceous cysts, malignant tumors, rectus sheath hematoma, and strangulated incisional hernia. In the US examination, these lesions are generally described as a hypoechoic and solid mass, sometime with cystic areas, with ill-defined outer borders, but these findings are not specific (7). Thus, advanced investigations, such as CT scan and magnetic resonance imaging (MRI), are needed for the correct diagnosis. CT usually shows a solid, heterogeneous, and well-circumscribed mass with no capsule. However, MRI can be more helpful in identifying the structures of the abdominal wall and can give more information about the extent of the disease. Preoperative identification of the characteristics of the lesion is also important for accurate treatment. For example, a fistula between the endometrioma and uterus may be rarely present; thus, the surgical planning can be changed. Malignant transformation of AWE is an exceptionally rare condition, and long-standing recurrent lesions could undergo malignant changes (8). Therefore, Tru-cut biopsy should be performed in the preoperative evaluation of the mass to avoid incorrect treatment. Incomplete excision is the major cause of recurrence (3). Wide excision of the whole lesion is the recommended treatment of AWE. For prevention of the occurrence of AWE, covering the abdominal wall during gynecological surgery is recommended. In addition, vigorous irrigation of the wound with high-jet saline solution before wound closure can prevent the implantation of endometrial tissue into the surgical area. (9).

### Conclusion

The diagnosis of AWE is often difficult, because it is not first considered in the differential diagnosis of masses located in the

abdominal wall. Cyclic symptoms and signs should alert one to the diagnosis of AWE. In addition, the history of obstetric or gynecologic surgery should also be questioned for all patients.

**Informed Consent:** Written informed consent was obtained from patient who participated in this case.

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## References

1. Horton JD, DeZee KJ, Ahnfeldt EP, Wagner M. Abdominal wall endometriosis: a surgeon's perspective and review of 445 cases. *Am J Surg* 2008; 196: 207-12. [\[CrossRef\]](#)
2. Nominato NS, Prates LF, Laury I, Morais J, Maia L, Geber S. Caesarean section greatly increases risk of scar endometriosis. *Eur J Obstet Gynecol Reprod Biol* 2010; 152: 83-5. [\[CrossRef\]](#)
3. Dwivedi AJ, Agrawal SN, Silva YJ. Abdominal wall endometriomas. *Dig Dis Sci* 2002; 47: 456-61. [\[CrossRef\]](#)
4. Blanco RG, Parithivel VS, Shah AK, Gumbs MA, Schein M, Gerst PH. Abdominal wall endometriomas. *Am J Surg* 2003; 185: 596-8. [\[CrossRef\]](#)
5. Akbulut S, Sevinc MM, Bakir S, Cakabay B, Sezgin A. Scar endometriosis in the abdominal wall: a predictable condition for experienced surgeons. *Acta Chir Belg* 2010; 110: 303-7.
6. Ducarme G, Uzan M, Poncelet C. Endometriosis mimicking hernia recurrence. *Hernia* 2007; 11: 175-7. [\[CrossRef\]](#)
7. Savelli L, Manuzzi L, Di Donato N, Salfi N, Trivella G, Ceccaroni M, et al. Endometriosis of the abdominal wall: ultrasonographic and Doppler characteristics. *Ultrasound Obstet Gynecol*. 2012; 39: 336-40. [\[CrossRef\]](#)
8. Stevens EE, Pradhan TS, Chak Y, Lee YC. Malignant transformation of endometriosis in a cesarean section abdominal wall scar: a case report. *J Reprod Med* 2013; 58: 264-6.
9. Toullalan O, Baqué P, Benchimol D, Bernard JL, Rahili A, Gillet JY, et al. Endometriosis of the rectus abdominis muscles. *Ann Chir* 2000; 125: 880-3. [\[CrossRef\]](#)