

Kermanshah University of  
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## Umbilical endometriosis: A case report

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### Article Info

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### Abstract

**Introduction:** Umbilical endometriosis is a rare disease with a prevalence of 0.5%-1%, which is more common at childbearing age in women. This condition normally presents as an over-6-cm mass, with localized symptoms and periodic pain in 81.5% of the cases. The symptoms include bleeding and inflammation.

**Methods:** The present case report is about a rare disease, i.e. umbilical endometriosis, in a female patient.

**Results:** The patient was a 35-year-old woman treated for five years' history of endometriosis, and presenting to Imam Reza Hospital. She had suffered umbilical pain, enlargement and change of color for three months before presentation. Two weeks before presentation, she had also experienced bleeding from the umbilicus once and ultrasound ruled out umbilical hernia. She had a fairly echogenic 15\*15 mm subcutaneous mass.

**Conclusion:** Given the patient's records and clinical history and the fact that umbilical bleeding is uncommon in adults, she was suspected to have an umbilical endometriosis and underwent surgery. The specimen sent for pathology also confirmed endometriosis.

### Introduction

**E**ndometriosis is defined as the presence of endometrial glands and stroma outside the uterus. Endometriosis normally occurs in women of childbearing age and involves the lower pelvis. Most researchers have therefore proposed the ectopic implantation of endometrial tissue following retrograde menstruation as the cause of this condition (1). Endometriosis is a common disease in women of childbearing age that affects their sexual life (2). The prevalence of endometriosis is estimated to range between 4% in asymptomatic women and 50% in adult women with dysmenorrhea (3). A study reported the prevalence of endometriosis to be 7%-10% in general population and 71%-87% in women with chronic pelvic pain. Seven million women were also reported to have endometriosis in the US and 70 million worldwide (4). A review of literature also suggests that the prevalence of endometriosis increases with age, as this condition was found in 12% of 11-13-year-old girls and 54% of 20-21-year-old girls. Endometriosis is associated with reduced fertility, dysmenorrhea, dyspareunia and chronic pelvic pain (5-6), since the clinical symptoms of this disease include chronic pelvic pain, infertility, dysmenorrhea, dyspareunia and painful defecation (7). Research suggests that two-thirds of women with pelvic endometriosis suffer chronic pelvic pain, 30%-40% of whom are infertile, as well. Moreover, the probability of infertility in women with endometriosis is 20 times as

much as that in healthy women (8). It is worth noting that the symptoms and complications cited are not specific to endometriosis and can be observed in other gynecologic and non-gynecologic diseases such as pelvic inflammatory disease and irritable bowel syndrome (9). In addition, the disease stage is not associated with the symptoms intensity; endometriosis is therefore not diagnosed early and sometimes misdiagnosed. Endometriosis can be definitely diagnosed using laparoscopy or surgery. This condition is difficult to diagnose in time, especially if the lesions are deep (10). No definitive etiology has been yet proved for endometriosis. Estrogen appears to exacerbate the symptoms through stimulating the uterus tissue. Four theories have been proposed to explain the cause of endometriosis, including ectopic implantation of endometrial tissue, Coelomic metaplasia, autoimmune and vascular dissemination; nevertheless, no individual theory can explain the etiology and a combination of all theories may work (11-12). Another way to classify endometriosis is by dividing it to pelvic and extra-pelvic. The most common form of extra-pelvic endometriosis is cutaneous endometriosis, which can spontaneously occur or may develop secondary to abdominal and pelvic surgeries at the site of scar. Abdominal wall endometriosis is the most prevalent type of cutaneous endometriosis and is difficult to diagnose (13). The most common sites for endometriosis are ovaries, posterior cul-de-sac, uterine ligaments, pelvic peritoneum and rectovaginal septum (14).

Extra-pelvic endometriosis occurs when endometrial lesions involve other parts of the body, including the cervix, vulva, vagina, bowel, urinary tract system, abdominal wall, chest, lungs and the central nervous system (15). Endometriosis can rarely involve the skin or the subcutaneous tissue. Cutaneous endometriosis, whose most common site of involvement is abdominal wall, normally occurs secondary to surgical procedures on abdominal and pelvic wall at the site of surgical scars. It also rarely develops spontaneously in the absence of previous surgeries. These cases mostly develop in physiological umbilical scar (16-17). Endometriosis presents as a subcutaneous palpable mass at the site of surgical scars, which is associated with menstrual pain and swelling, sometimes changes size, and accompanies periodic or persistent pain (18). The correct diagnosis of abdominal endometriosis is crucial, as the pelvis is also involved in more than 50% of the cases, which can cause secondary infertility and re-implantation of endometrial tissue in extra-pelvic sites (19). Moreover, the lesions have the potential for malignancy. Despite being rare, these changes should be monitored in rapidly-growing lesions and in recurrent lesions (20). Umbilical endometriosis is a rare disease, with a still unknown etiology, which affects women mostly at childbearing ages. The prevalence of different types of endometriosis ranges from 0.5% to 1%. Among the different theories proposed, the displacement of endometrial cells in the pelvic peritoneum caused by retrograde menstruation is more widely accepted. Radiation is among its risk factors (21-22). Umbilical endometriosis can be classified as primary or secondary and the primary type is rarer. The lymphatic system and blood normally play a role in developing primary endometriosis. Umbilical endometriosis normally presents as a mass of variable size, i.e. more than 6 cm. This disease is characterized by localized symptoms and long latent periods (23) and causes periodic pain in 81.5% of the cases. Bleeding and swelling constitute other symptoms of this disease. The mean age of developing this disease is 37.7 years, although cases as young as 23 are also at risk. The definite treatment for endometriosis is surgery, and local excision depends on its extension. The umbilicus must sometimes be removed and, in that case, a new umbilicus should be made for the patient (23-24).

### The case

The patient was a 35-year-old woman from and living in Kermanshah, Iran, with a weight of 75 kg, with no children, with a five-year history of uterine endometriosis and presenting to Imam Reza Educational and Treatment Center. She was confirmed to have developed endometriosis given her severe pelvic pain during menstruation in the past five years. This patient

had received cyproterone compound, vitamin E and evening primrose. According to the patient, she stopped the medication for a year based on the physician's recommendation. She also suffered asthma, wheezing and headache during menstruation, which were found to be caused by endometriosis based on postoperative findings. This patient had no history of pelvic surgeries. CT scan also suggested bilateral pleural effusion. The patient reported umbilical pain and enlargement over the previous three months, during which the umbilicus had changed color, bleeding had reduced in each menstrual cycle and the interval between menstrual cycles had also increased. One week before the surgery, the patient had moderate bleeding from the umbilicus and the blood did not clot and was dark. The patient therefore presented with umbilical blood discharge, umbilicus appearance changes and a dark black 1.5\*1.5 cm nodule along with a slight tenderness. According to the patient, the bleeding time did not coincide with her menstruation and occurred one week later. The ultrasound of the soft tissue of the umbilical region suggested a relatively echogenic 15\*15 mm subcutaneous mass, which was reported to be mainly inflammation. Sonographic symptoms did not suggest hernia; nevertheless, clinical presentation suggested incarcerated hernia. These findings ruled out umbilical hernia. CT scan also suggested only uterine intramural fibroma and bilateral pleural effusion. Furthermore, the patient's lab tests indicated no abnormal findings. She also had no history of special diseases in her family or relatives.



Figure 1: The patient's umbilicus before surgery

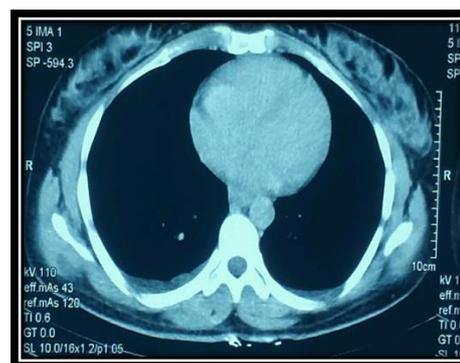


Figure 2: Bilateral pleural effusion

**Discussion:**

The study patient's symptoms, including umbilical blood discharge and change of color, menstrual irregularity and finding a suspected painful hernia in clinical examinations, are consistent with the case of a primary endometriosis reported by BRĂȚILĂ et al. Other symptoms reported by these researchers, such as dyspareunia and a history of surgery, were not observed in the present study (25). The case report by Amanda et al. presented a painful umbilical mass along with excessive discharge. In line with the recently cited study, the patient also suffered periodic pelvic pain and a tender mass. The patient also had a history of C-section using transverse abdominal incision, whereas the present study patient had no history of C-section (22). It is worth mentioning that the prevalence of endometriosis after this incision is 1%. E'gin et al. also confirmed the existence of discharge from an umbilical mass along with dyspareunia and menstruation; however, the study patient, a 27-year-old woman, had regular menstruations and did not suffer pelvic pain (26). Systemic symptoms

such as asthma, wheezing and headache during menstruation were observed in the present study, while they were absent in those found in the studies cited. Surgery was the Treatment of choice in these studies, which was performed as laparoscopy in the study of Amanda et al. and open surgeries in others.

**Conclusion**

Given the patient's records and clinical history and the fact that umbilical bleeding is uncommon in adults, she was suspected to have umbilical endometriosis and underwent surgery. The skin under the umbilicus was incised using a curved incision and the mass was removed along with the subcutaneous tissue and the omentum inside it. A small 1-cm umbilical hernia was observed and restored. The patient's skin was not stitched and the specimen was sent for pathologic investigations to confirm endometriosis. The pathologic result is as follows, which indicates umbilical endometriosis.

**Pathology Report 1**

Path. No: MS-4142-95

**MACROSCOPIC**

Received fixed specimen consists of a piece of skin tissue measuring: 2.5 ×2 ×1.5 cm

Diagnosis Description:

DESIGNATED AS UMBILICAL MASS, BIOPSY

- COMPATIBLE WITH ENDOMETRIOSIS

🚩 **NOTE: IHC for CD10 is recommend****Pathology Report 2**

Pathology No IHC-225-95

**Clinical data:**Umbilical mass, compatible with endometiosis

SPECIMEN IHC source: Kermanshah, Imam Reza Hospital No: MS-4142-95

**IHC Markers**CD10: Positive(weakly)**Interpretation:**🚩 UMBILICAL MASS, BIOPSY- COMPATIBLE WITH ENDOMETRIOSIS

Umbilical masses can therefore denote umbilical endometriosis. Given this diagnosis, this patient underwent treatment using cyproterone compound and is recovering under the supervision of a gynecologist.

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