MONTHLY BLEEDING UMBILICAL ENDOMETRIOSIS: CASE REPORT

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ABSTRACT

BACKGROUND: Umbilical endometriosis is a rare condition characterized by the presence of endometrial-like tissue in or around the umbilicus. This case report aims to highlight the unusual presentation of endometriosis in the umbilical region and review its surgical management.

CASE PRESENTATION: A 20-year-old patient presented with monthly bleeding and painful umbilical swelling for the past four months. She had never been pregnant and had no history of pelvic surgery.

INTERVENTION AND OUTCOME: The umbilical lesion was excised, and the umbilicus was reconstructed. Histological examination confirmed the diagnosis. The patient was followed for three months post-surgery and reported no further complaints about her umbilical area.

CONCLUSION: Umbilical endometriosis is a rare disease but should be considered in the differential diagnosis of umbilical lesions with bleeding in women of reproductive age. Excision with umbilical reconstruction has a favorable outcome.

KEYWORDS: Endometriosis, Umbilicus, Case Report

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INTRODUCTION

Endometriosis is defined as the presence of endometrial tissue (glands and stroma) outside the uterine cavity, affecting 5 to 10% of fertile women.[1] It is a chronic disease associated with severe, disturbing pain during menstrual bleeding, sexual intercourse, chronic pelvic pain, and infertility.[2-5] Abdominal wall endometriosis is among the most common extrapelvic endometriosis, occurring at distant sites from the reproductive organs.[6] Umbilical endometriosis, first described in 1886 by Villar, is defined as endometrial-like tissue within the umbilicus. It is rare, with a reported incidence of 0.5%-1% of all endometriosis, 0.4%-4% of extragenital cases, and 21% of abdominal wall endometriosis. [7-9]

Endometriosis in atypical locations is explained by the theory of retrograde menstruation, where migrating cells implant in pelvic organs, most commonly the ovary and uterosacral ligament area. Umbilical endometriosis can be classified as primary and secondary, with the inciting event in secondary type and primary umbilical endometriosis not well elucidated. According to a systematic review, most umbilical endometriosis cases are primary, accounting for 70% of cases. Since the nodule is estrogen-dependent, women of reproductive age are affected.[10-15]

The common clinical presentation of umbilical endometriosis includes red, purple, or black umbilical nodules causing pain, swelling, and bleeding in the umbilical area in every menstrual cycle. [5, 8, 12, 16]

The diagnosis of umbilical endometriosis is suspected clinically and confirmed with histology after surgical excision. The management principle in umbilical endometriosis is radical surgery with wide excision.[12-14, 17]

This case study presents the clinical course of a patient with monthly bleeding umbilical endometriosis, detailing the diagnostic journey, therapeutic interventions, and outcomes. By discussing this rare manifestation, we aim to enhance awareness among clinicians and contribute to the understanding and management of extrapelvic endometriosis. Understanding such cases is crucial for early recognition, appropriate management, and improved outcomes for patients presenting with unusual symptoms of endometriosis beyond conventional sites.

CASE PRESENTATION

A 20-year-old nulligravida patient presented with swelling over the umbilicus for the past four months. Associated with the swelling, she had dark red, non-clotting bleeding from the mass, starting on the first day of her menstrual cycle each month. She experienced severe pain in the swelling for two days before the bleeding started, which then decreased. She had no lower abdominal or pelvic pain except for mild abdominal discomfort during the first two days of her menses. She had no vulvar swelling and no pain during sexual intercourse. Her menstrual cycles were regular, occurring every 28 days and lasting for five days. She had no history of surgery and no bleeding from other body sites. She had no plans for conception and had an Implanon implant in her left arm for the past three years. There was no family history of the same problem.

On physical examination, there was a 2 by 3 cm soft, dark-colored umbilical mass, which was non-tender (Fig. 1). There were no abnormal results on pelvic examination.

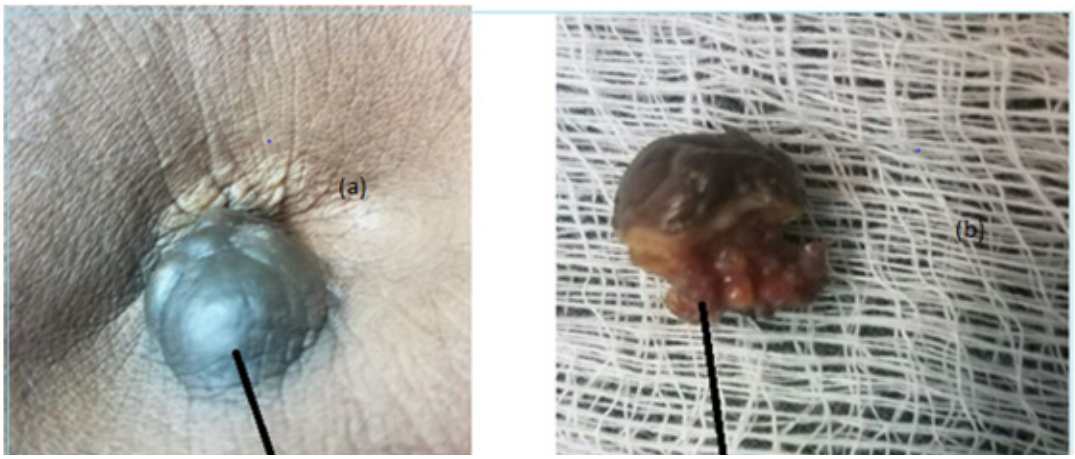

Figure 1. Umblical mass before surgery (a) and removed tissue after surgery (b)

The abdominal-pelvic ultrasound reveals normal findings in the uterus, adnexa and pelvic peritoneum and there was a 1.5 cm by 1 cm well-defined hypo-echoic solid lesion in the anterior abdominal wall above the linea Alba with no communication to the peritoneal cav

MANAGEMENT AND OUTCOME

The patient was evaluated by an anesthetist, and mass excision with umbilical reconstruction was performed under spinal anesthesia (Fig. 1.b). Histopathology results revealed surface squamous epithelium with endometrial-type glands and stroma beneath.

She was seen a week after surgery and had a normally healing wound. Over the next three months of follow-up, there were no complaints and no recurrence at the scar site.

DISCUSSION

Extrapelvic endometriosis can involve almost every organ in the human body, with a mean age of presentation of 34 years. It was first described by Villar in 1886 and is known as Villar's nodule.[1, 18]

The pathogenesis of endometriosis is not entirely clear. The most widely accepted assumption is retrograde menstruation into the abdominal cavity, described by Sampson in 1927, and supported by several clinical observations.[3,19] Another theory is the transformation of mesothelium to endometrium-like tissue under the influence of regurgitated endometrium (the induction theory). This "coelomic metaplasia" theory is based on the observation that coelomic epithelium can differentiate into both endometrial and peritoneal cells.[20] Additionally, the differentiation of Müllerian remnants into endometrial tissue has been suggested. Lastly, an impaired immune response, such as decreased natural killer cell activity, may diminish the clearance of endometrial cells from the peritoneal cavity, leading to endometriotic lesion development.[21, 22]

For umbilical endometriosis, the implantation of intra-abdominal endometrial cells likely occurs through lymphatic or vascular spread or by dislocating endometrial tissue during surgeries, such as laparoscopic procedures. These routes explain the occurrence of endometriosis at distant locations.[23, 24]

In the development of spontaneous umbilical endometriosis, as in the presented case, it is possible that the umbilicus acts as a physiological scar with a predilection for endometrial tissue.[25]

The clinical diagnosis of umbilical endometriosis can be challenging. The mass in our case was nearly black, resembling a pigmented tumor. Umbilical endometriosis has been described as flesh-colored, brownish, dark-bluish, or simply a subcutaneous

mass.[18, 26-28] Because of its variable macroscopic appearance, these lesions can initially be confused with malignant tumors such as melanoma. However, conditions presenting with a subcutaneous mass or discoloration of the umbilical skin, such as a benign nevus, lipoma, abscess, cyst, hernia, or metastatic deposit from a malignancy, should also be considered.[29, 30]

Various systematic reviews, case series, and reports describe umbilical endometriosis as a problem of reproductive age, commonly presenting as an umbilical mass that increases in size periodically and bleeds with menstruation. Our case aligns with these reports.[6, 7, 15, 17]

To aid the diagnosis of cutaneous endometriosis, the use of dermoscopy 31, MRI25, and high-frequency power Doppler 32 is recommended. It is generally advised that umbilical endometriosis be removed surgically.[2, 4, 27] Histology will confirm the diagnosis. In our case, the diagnosis was made clinically, aided by ultrasound findings, and confirmed by histological examination revealing typical ectopic endometrial tissue similar to other cases in the literature. Given the possibility of recurrence, the patient was counseled for follow-up. No mass was found in the umbilical area three months post-surgery.[33, 34]

As this is a case report, the variety of clinical presentations may not be revealed. The short follow-up period also limits the ability to detect possible recurrence or evidence of endometriosis at other sites.

CONCLUSION

Umbilical endometriosis is a very rare disease but should be considered in the differential diagnosis of umbilical lesions. Clinical diagnosis is challenging due to the presence of other benign and malignant umbilical skin lesions. Diagnosis should be supported by imaging, such as ultrasound, to examine the extent of lesion involvement and identify other endometriotic lesions in the abdomen and pelvis. Surgical excision is the treatment of choice. Follow-up is recommended to monitor for possible recurrence.

DECLARATIONS

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Authors' contributions

AWM, DMA, and GDA took the history, performed physical examinations, and conducted the operation. AWM wrote the manuscript. All authors read, reviewed, and approved the manuscript before submission.

Ethics approval and consent to participate

The case study was conducted following the Helsinki Declaration and Ethiopian National Research Ethics Guideline. Informed consent was obtained from the patient. Additionally, the Bahir Dar University College of Medicine and Public Health Sciences Institutional Review Board granted ethical clearance to publish this case report (protocol number 536/2022).

Consent for publication

Written informed consent was obtained from the patient for the publication of this case report and any accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

Competing interests

The authors declare that they have no competing interests.

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