



ENIGMATOUS ENDOMETRIOSIS – A LIFE IMPACT TRAGEDY

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Abstract: Abdominal wall endometriosis is the development of endometrial tissue in the anterior abdomen usually due to an operation in which the uterus is manipulated. We herein delineate the presentation, clinical investigation, and surgical treatment of three abdominal wall endometriosis cases.

Keywords: Endometriosis, endometrioma, rectus abdominus, abdominal wall mass,

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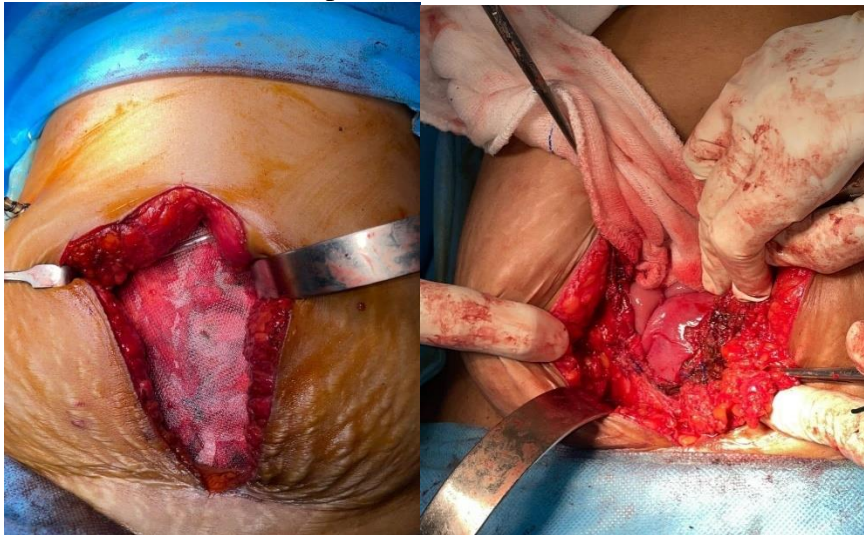
INTRODUCTION:

Endometriosis refers to the existence of endometrial tissue outside the uterus. This is a non-threatening illness that impacts 10-15% of women [1]. It primarily affects women who are in their reproductive years. The lesions primarily manifest in pelvic locations, specifically the ovaries, uterosacral ligaments, ovarian fossa, cul-de-sac, and bladder, in that sequence [2]. Extrapelvic endometriosis is a less frequent occurrence. The extrapelvic locations encompass the diaphragm, pulmonary system, urinary tract, gastrointestinal tract, brain, and cutaneous endometriosis. Umbilical endometriosis is a rare condition, accounting for only 0.5-1% of all cases of extrapelvic illness. Umbilical endometriosis, albeit uncommon, is the most prevalent form of cutaneous endometriosis [3].

Umbilical endometriosis can be classified as primary if it occurs spontaneously, or secondary if it happens after laparoscopic or surgical surgeries. The latter is more frequently observed [4]. Villar's nodule, commonly referred to as primary umbilical endometriosis, was initially documented by Villar in 1886 [5]. The etiology of endometriosis is poorly comprehended. Theories that have been proposed include Sampson's idea of retrograde menstruation, which is the most prevalent, coelomic metaplasia, induction theory, embryonic Mullerian resting, bone marrow stem cell theory, and hematogenous/lymphatic spread. In cases of umbilical endometriosis, the most favored idea is that it spreads through the blood or lymphatic system, particularly when there is also pelvic endometriosis present. It is also possible for isolated umbilical endometriosis to originate from the transformation of urachal remains. The objective of this study was to assess the clinical features, manifestation, diagnosis, and treatment of umbilical endometriosis based on existing literature.

CASE 1:

In this case series, we describe the surgical management of scar endometriosis involving the anterior uterine wall in a 36-year-old multiparous female with a history of multiple cesarean sections (LSCS). The patient underwent meticulous excision of an indurated lesion adherent to the uterus and abdominal wall layers, with subsequent meshplasty and component separation to repair a significant defect (approximately 5x7 cm) in the anterior abdominal wall. Surgical details included salpingectomy for a pathological left fallopian tube and closure of the retrorectal space with polypropylene mesh. Postoperatively, the patient experienced transient febrile episodes attributed to wound infection, requiring a PRBC transfusion and treatment with antibiotics including INJ MAGNEX FORTE, INJ TAXIM, INJ PAN, INJ NEOMOL, T TAXIM O, T DOXY, T LINEZOLID, and T AZEE. Discharge instructions emphasized wound care and pain management, with a follow-up plan for wound swab review and surveillance. This case underscores the complexity of scar endometriosis management, necessitating a comprehensive surgical approach and multidisciplinary care to optimize outcomes and minimize complications.

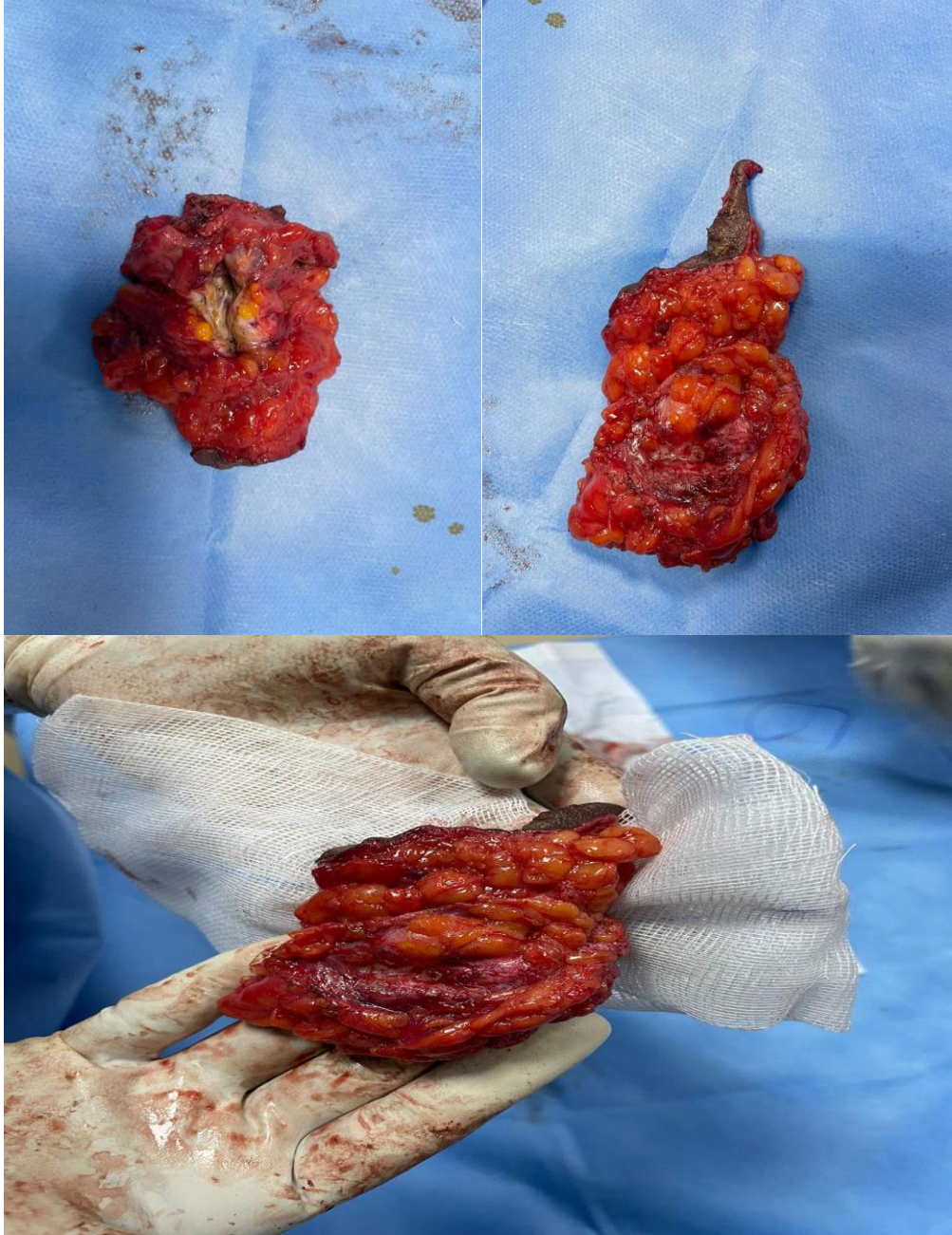
**CASE 2:**

We present the case of a 36-year-old multiparous female with a history of previous normal vaginal delivery and cesarean section, who presented with a chief complaint of an 8-year history of swelling and cyclic pain at the left end of a prior cesarean scar. The patient reported worsening pain during menstruation without associated symptoms such as urinary complaints or fever. Clinical examination revealed a 3 x 3 cm oblong, firm, mildly tender swelling at the scar site, consistent with scar endometriosis. Upon admission, routine investigations including hemoglobin levels (Hb: 12.2 g/dL), renal function tests (serum urea: 19 mg/dL, creatinine: 0.5 mg/dL), liver function tests (total bilirubin: 1.80 mg/dL, direct bilirubin: 0.40 mg/dL), and electrolyte levels (sodium: 136 mEq/L, potassium: 4.3 mEq/L, chloride: 104 mEq/L) were within normal limits. Imaging studies, including CT abdomen plain, revealed mild hepatomegaly and an ill-defined lesion isodense to the uterine fundus extending into the left lower rectus abdominis muscle at the cesarean scar site, suggestive of scar endometriosis.

The patient underwent surgical excision of the scar endometriosis under spinal anesthesia. An elliptical incision was made over the scar site, and dissection was carried out through subcutaneous layers until the scar endometriosis mass was identified. Further dissection revealed extension beyond the rectus sheath, requiring meticulous excision to preserve healthy tissue planes. Hemostasis was achieved, and wound closure was performed in layers. Postoperatively, the patient's recovery was uneventful. Histopathological examination

confirmed scar endometriosis, consistent with the preoperative imaging findings. The patient was managed with a postoperative regimen including analgesics, prophylactic antibiotics (Tab Taxim 200 mg twice daily), and hormonal therapy (Tab Letrozole 2.5 mg daily for 3 months) to suppress endometriosis recurrence.

On discharge, the patient's vital signs were stable, and she was advised on follow-up care. This case highlights the diagnostic challenges of scar endometriosis and the role of surgical excision in the management of symptomatic cases. Long-term follow-up is crucial to monitor for recurrence and optimize patient outcomes.



CASE 3:

In this case series, we report the clinical presentation of a 26-year-old primigravida with a history of previous lower segment cesarean section (LSCS) who presented with chronic

abdominal pain and leukorrhea. The patient underwent laparotomy with omentectomy and left salpingectomy under general anesthesia, revealing left pyosalpinx and grade III endometriosis. Preoperatively, the patient received antibiotics including cefixime (Tab Taxim), pantoprazole (Tab Pan), paracetamol (Tab Para), metronidazole (Tab Metro), iron supplementation (Tab Livogen), calcium supplementation (Tab Calcium), vitamin C (Tab Vitamin C), B complex vitamins (Tab BCT), and non-steroidal anti-inflammatory drugs (Tab Combiflam), along with amikacin intravenously (InjAmikacin) and other supportive medications. Postoperatively, she was discharged on amoxicillin-clavulanate (T. Augmentin), pantoprazole (T. Pan), iron supplementation (T. Livogen), calcium supplementation (T. Calcium), and the progestin hormone dinogest (T. Dinogest) for six months. The patient was instructed to refrain from heavy lifting and advised to follow up in the obstetrics and gynecology outpatient department for further evaluation and management. This case underscores the surgical management of chronic pelvic pain secondary to endometriosis, highlighting the importance of comprehensive preoperative and postoperative care in optimizing patient outcomes.



DISCUSSION;

The mean age of the three patients was 32.67 years, while the literature reports an average age of 37.7 ± 0.98 years [4]. Endometriosis is a disorder that relies on estrogen and affects women of reproductive age who have not yet reached menopause [7]. The average duration of the symptoms was 21.4 years, which aligns with the findings in the literature of 17.8 ± 3.9 months [4]. Umbilical endometriosis can be classified as primary if it occurs without any apparent cause, or secondary if it develops after a previous operation, particularly laparoscopic procedures involving the umbilical port. Out of the three patients, one had undergone laparoscopic surgery before. However, three of the patient had previously undergone cesarean sections. Secondary umbilical endometriosis may develop after cesarean sections in approximately 1% of patients [8]. The diagnosis is frequently established based on the clinical presentation, which was in line with what has been documented in the literature. The majority of patients exhibit edema around the umbilicus along with recurring discomfort and bleeding. Victory et al. [4] reported that about 90% of cases exhibited umbilical edema, with fewer than 50% experiencing blood and approximately 80% experiencing pain. Pain arises from tissue inflammation, distention, and cyclical alterations. The average size of the lesion is around 2.29 cm, exhibiting color variations that range from brown to blue, purple, black, and normal, in descending sequence [4]. Regrettably, the color of the lesions was not documented in our study. Discoloration arises due to the presence of bleeding within the lesion, leading to the deposition of hemosiderin. This can be observed during histological investigation.

While a preliminary diagnosis is typically determined through a patient's medical history and physical examination, the use of imaging techniques can assist in the assessment before surgery. Ultrasound can be utilized to determine the size of the nodule and its impact on nearby tissues, as well as to examine other pelvic abnormalities. This information is helpful in planning surgical treatment [9]. A pelvic ultrasound was performed on one of the patients. The ultrasound characteristics of umbilical endometriosis, such as the presence of an area with similar echogenicity and the presence of bright spots with or without a significant blood supply on Doppler imaging, were not observed in this patient [9]. However, further pelvic abnormalities, such as fibroids within the uterine wall and an ovarian cyst, were detected. Magnetic resonance imaging (MRI) can potentially serve as a modality for preoperative assessment in cases of suspected endometriosis. It assists in assessing pelvic endometriosis and ruling out other serious possibilities, such as cancer, Sister Mary Joseph nodule, and granuloma, among others. The magnetic resonance imaging (MRI) characteristics of umbilical endometriosis consist of a uniformly dark lesion on T1-weighted sequence with reduced signals on T2 weighting [10, 11]. One participant in this study underwent an MRI scan that exhibited characteristics of umbilical endometriosis.

Concurrent pelvic endometriosis is seen in up to 25% of cases of umbilical endometriosis. Two patients had laparoscopy to treat their concurrent pelvic endometriosis. Subfertility is a prevalent issue in people with endometriosis, affecting around 50% of women with this condition [1]. This occurrence was documented in a single patient during the course of this study, who was being monitored for reduced fertility due to occlusion in both fallopian tubes. According to Yu et al., the umbilicus is a natural scar that is commonly chosen as a location for umbilical endometriosis. The user's text is "[11]". Possible explanations for the development of umbilical endometriosis include the spread of endometrial cells through the lymphatic and blood systems, as well as the direct extension of these cells through the round ligaments or remnants of the omphalomesenteric duct [6, 12].

The preferred treatment method is surgical management [5, 12, 13]. Preoperative hormone therapy can provide symptomatic alleviation, but it does not have curative effects. Additionally, it might be employed to diminish the dimensions of substantial lesions before

undergoing surgical intervention. Nevertheless, it is linked to adverse effects such as amenorrhea [13]. The participants in this study underwent surgical excision as their treatment. These lesions have a low likelihood of being cancerous and coming back [4, 14]. The diagnosis is verified through histological examination.

Umbilical endometriosis is an uncommon occurrence, particularly when it happens without any apparent cause. The presence of umbilical swelling, cyclical pain, and occasional bleeding from the lesion strongly indicate this condition. Surgical excision is the preferred treatment, and confirmation of diagnosis is achieved through histological examination.

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