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Case Report

Umbilical Mass with Cyclical Pain: Surgical Management

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1. Case Description

A 30-year-old female patient presented with a small periumbilical lump of 1.5 years duration. The mass was irreducible, gradually increased in size, and was now pea sized, non-tender, and was associated with recurrent mild pain during her menstrual cycles. She denied gastrointestinal symptoms, had no constitutional symptoms, and review of systems was otherwise unremarkable. There was no history of prior surgery, and the patient was not on any medications. Family history was noncontributory. On physical exam, vital signs were within normal limits. The firm 2 cm supraumbilical mass was non-tender and immobile. Her laboratory values were within normal range. Ultrasound imaging revealed a circumscribed heterogeneously hypoechoic lesion centered in the subcutaneous fat immediately superior to the umbilicus measuring 1.4 × 1.0 × 1.1 cm without associated vascularity. CT abdomen and pelvis with IV contrast revealed an area of focal increased soft tissue attenuation in the subcutaneous fat measuring 1.9 × 1.2 × 1.1 cm with no focal fluid collection and no communication with the abdominal cavity. Based on the above, our top differential would be: congenital mass, incarcerated hernia, and umbilical endometriosis.

2. What Would You Do?

A. Start with a diagnostic laparoscopic approach to rule out intraabdominal pathology

B. Treat with combined oral contraceptive and NSAIDs

C. FNA/Core biopsy to rule out neoplastic process

D. Mass excision with possible umbilical hernia repair

E. Perform an MRI with contrast to further delineate anatomy, rule out malignancy, prior to surgery.

3. What We Did And Why

Correct Answer: D

Abdominal wall mass excision with possible umbilical hernia repair.

Abdominal wall endometriosis, in which endometrium-like tissue is present above the peritoneum (i.e., skin, subcutaneous tissue, abdominal or pelvic wall musculature, or in abdominal incisions), is a rare type of endometriosis. Although endometriosis affects 6-10% of women of reproductive age, primary abdominal wall endometriosis is quite rare, with a reported incidence of 0.03% to 3.5% [1]. Secondary umbilical endometriosis can occur due to iatrogenic dissemination from prior surgery. It is occasionally misdiagnosed as incarcerated hernia, lipoma, suture granuloma, hematoma, abscess, or primary or metastatic cancer, given its clinical presentation as a mass in the abdominal wall [2]. Localized and cyclic abdominal pain without associated dysmenorrhea, as well as a history of laparotomy, are independent risk factors that should raise clinical suspicion for the diagnosis of abdominal wall endometriosis [1].

Despite inconclusive findings on ultrasound and CT imaging, the patient's history of cyclical discomfort that localized to the peri-umbilical mass during menstruation raised the concern for endometriosis. Treatment of umbilical endometriosis consists of excision of the mass. After the induction of general anesthesia, a 2 cm firm mass was palpated in the supraumbilical area, tethered to the underlying fascia. A 2 cm transverse supraumbilical incision was made. We encountered a 1 cm nodule that was excised. On further inspection of the area, we palpated another firm 1.5 cm mass that wasn't readily appreciated on our initial assessment and was in close proximity to the umbilical stalk and nearby fascia. In order to excise the entire mass with a healthy fascial margin, we needed to free the umbilical stalk. We then excised this mass with the involved 1 cm surrounding fascia, and specimens were sent for pathology. The fascial defect was small enough to be primarily repaired using 0- Vicryl interrupted sutures. Hemostasis was achieved. The umbilical stalk was reconstructed and anchored to the fascia using 3-0 Monocryl sutures, and the skin was closed with 4-0 Monocryl simple buried sutures. We bisected the tan-colored mass and found brownish deposits. The patient had an uneventful recovery, and the pathology confirmed the mass to be endometriosis.

Abdominal wall endometriosis more often occurs in the setting of prior pelvic surgery as it seeds in the abdominal incisions, but may also arise spontaneously, as in our case [3, 4]. History is an important aspect of the clinical

assessment; a patient present with a cyclical painful mass during menses suggests the diagnosis of endometriosis, but only 57% of patients presenting with these classically described [3, 5]. Ultrasound imaging may be considered as the initial modality to reduce radiation exposure. CT or MRI can yield improved characterization of the mass and rules out primary intraabdominal pathology in order to better assist in surgical planning. In this case, the patient already had a CT done by the primary care provider and imaging was non-diagnostic.

The preferred treatment for abdominal wall endometriosis is surgical excision, ideally with 1 cm margins to reduce the chance of disease recurrence. However, one case series reported a 4.3% recurrence rate following wide local excision [5]. Medical hormonal therapy has shown some limited benefit in reducing symptoms and often does not result in permanent resolution of the underlying lesion.

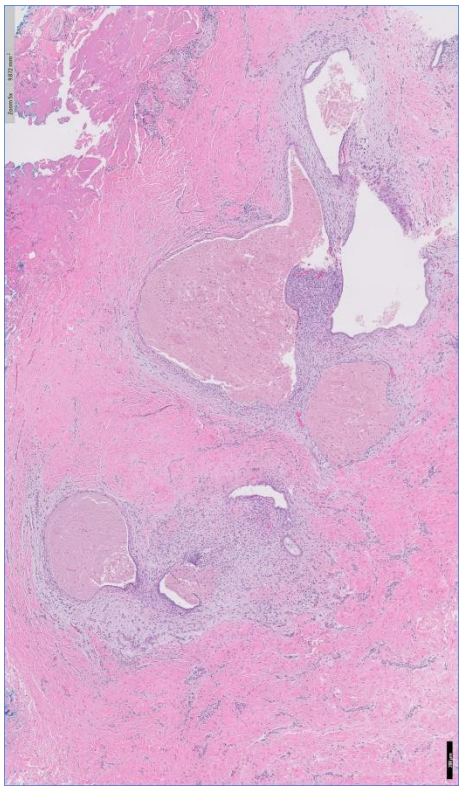

Figure 1A: Histopathology revealing endometriosis in the biopsy specimen. Endometrioid glands are surrounded by endometrial stroma (H&E, Bar = 200 µm).

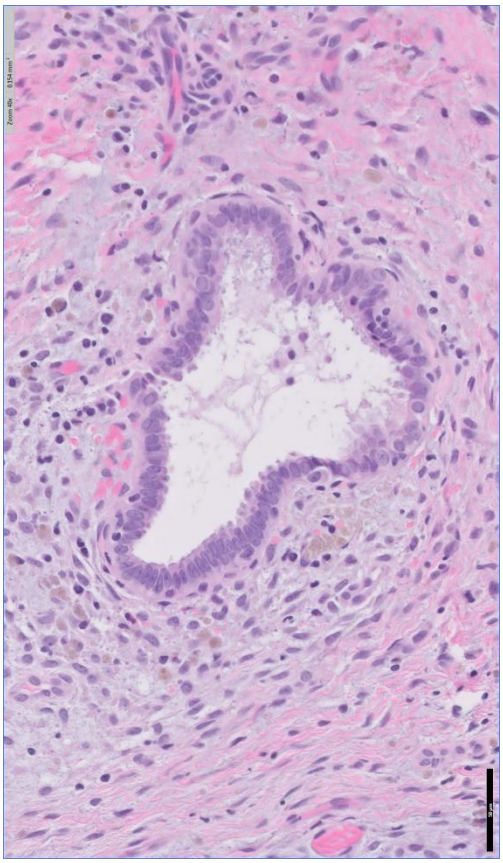

Figure 1B: Higher power view of 1A demonstrating endometriotic glandular tissue surrounded with stromal cells (H&E, Bar = 50 µm).

Conflicts of Interest

There are no conflicts of interest or disclosures to report for any of the authors.

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