Letter to the Editor

A rare case of pyomyoma following hysterotomy in a premenopausal woman with leiomyoma

Dear Editor,

Leiomyomas are benign uterine tumors that occur in up to 75% of women and complicate about 2-10% of pregnancies (1). In rare cases, a leiomyoma may undergo necrosis and become infected, and this condition is referred to as pyomyoma. This condition is associated with high rates of morbidity and may lead to death (2). Herein, we present a case of pyomyoma in a 29-year-old woman with a history of hysterotomy, which was managed by uterus-preserving surgery, as preserving her fertility was important.

A 29-year-old female P0L0A1 presented to the emergency department of obstetrics and gynecology with complaints of severe abdominal pain and high-grade fever for two months. She had a history of hysterotomy performed two months previously in an outside facility**,** for failed medical termination of pregnancy at mid-trimester gestation. On general examination, she was conscious and oriented, with a blood pressure of 80/40 mmHg, heart rate of 134/minute, RR-24/minute, temperature 103.3 °F and saturation 99% on room air with qSOFA of 2/3. On systemic examination, her respiratory and cardiovascular systems were found to be normal. On per abdominal examination, there was no organomegaly, but her uterus was approximately 20 weeks in size and tender. Per speculum examination revealed no foul-smelling discharge, and her cervix and vagina appeared to be grossly normal. Per vaginal examination also indicated that the uterus was approximately 20 weeks in size and exhibited cervical motion tenderness. Her hemoglobin level was 9.2 g/dL, with a total leukocyte count of 31,000/μL and a C-reactive protein (CRP) level of 21.3 mg/dL. Sonography suggested the presence of a heterogeneous mass with echogenic foci of size 10x9.6x9.8 cm with pelvic collection (Figure 1). Management was started for septic shock, including administering a fluid bolus of 1.5 litres. Blood, urine and high vaginal swab culture were taken and empirical antibiotic (piperacillin-tazobactam and teicoplanin) was started. For source control, an emergency exploratory laparotomy was performed. Intraoperatively, an approximately 9x8 cm large low corporeal subserosal fibroid was noted over the posterior wall of the uterus. Approximately 200-300 cc of foul-smelling, purulent fluid was drained from the mass, followed by myomectomy (Figures 2-4). Pus culture was sent, which revealed Gram-negative bacilli. Postoperatively, the patient recovered well with symptomatic improvement. Her white blood cell count and CRP also normalized and she was discharged. Histopathological examination confirmed the diagnosis of suppurative leiomyoma (Figure 5).

Pyomyoma is caused by compromised vascularity, which causes necrosis in leiomyoma and increases its susceptibility to infection (2). Risk factors are submucosal fibroids,

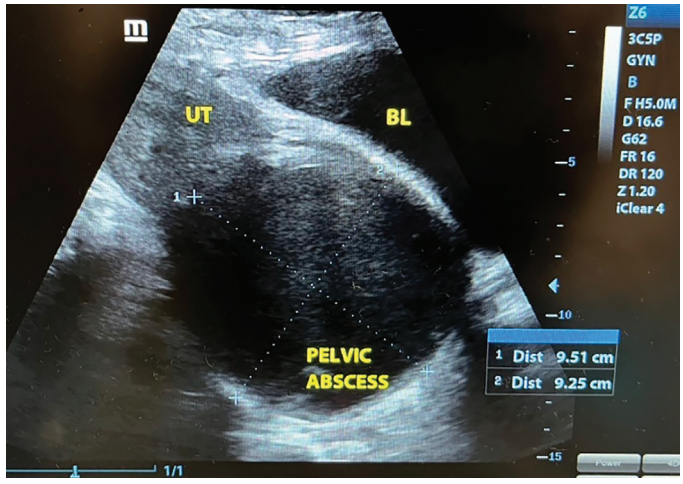

Figure 1. Ultrasonography image showing collection in leiomyoma

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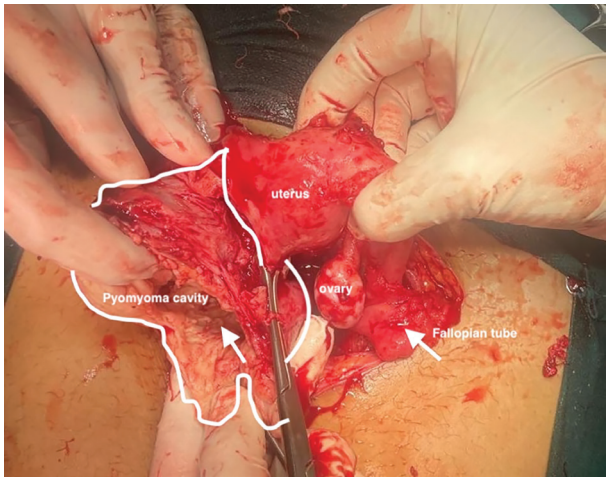

Figure 2. The pyomyoma dimensions are shown with a white outline over the posterior surface of the uterus, and its cavity is marked with a white arrow. The fallopian tube was edematous

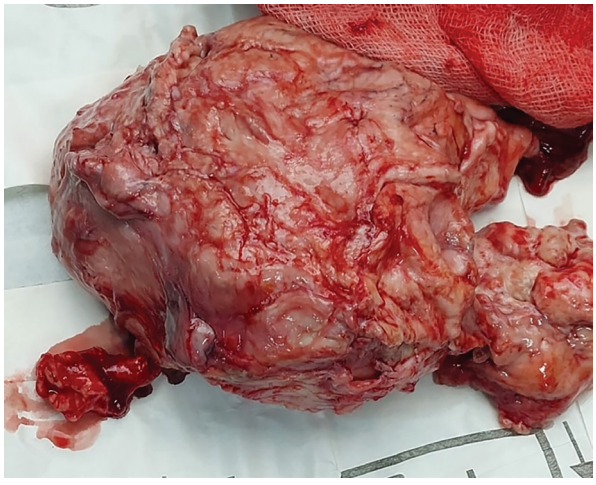

Figure 3. The necrosed fibroid with the pus inside was dissected from the uterus

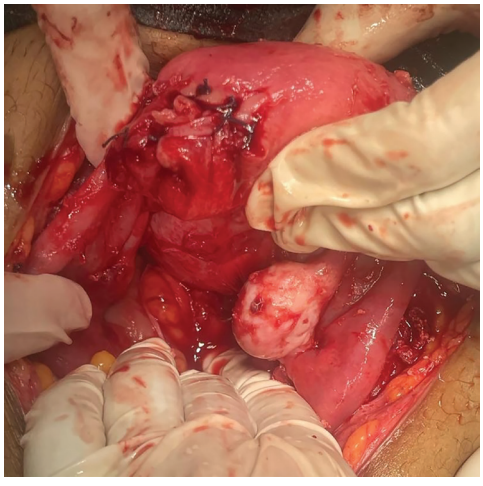

Figure 4. The repaired uterus after dissection of pyomyoma

preexisting infection, advanced maternal age, intravenous drug use, presence of intrauterine devices, co-morbid medical conditions, such as diabetes, hypertension and immunocompromise (3). Pre-labor rupture of membranes (1), ascending genital tract infection during the postpartum phase, and use of mechanical methods for the prevention of postpartum hemorrhage are also described as risk factors for leiomyomas. In the post-abortal phase, pyomyoma has been reported following spontaneous abortion (4) and uterine instrumentation.

To the best of our knowledge, this is the first case in which a patient developed pyomyoma following hysterotomy. This case emphasizes the importance of keeping pyomyoma as a differential diagnosis along with well-known causes, like tubo-ovarian abscess, pyometra, red degeneration of fibroid, endometritis, and septic abortion in a case of acute abdomen during pregnancy and/or the post-abortal and postpartum period.

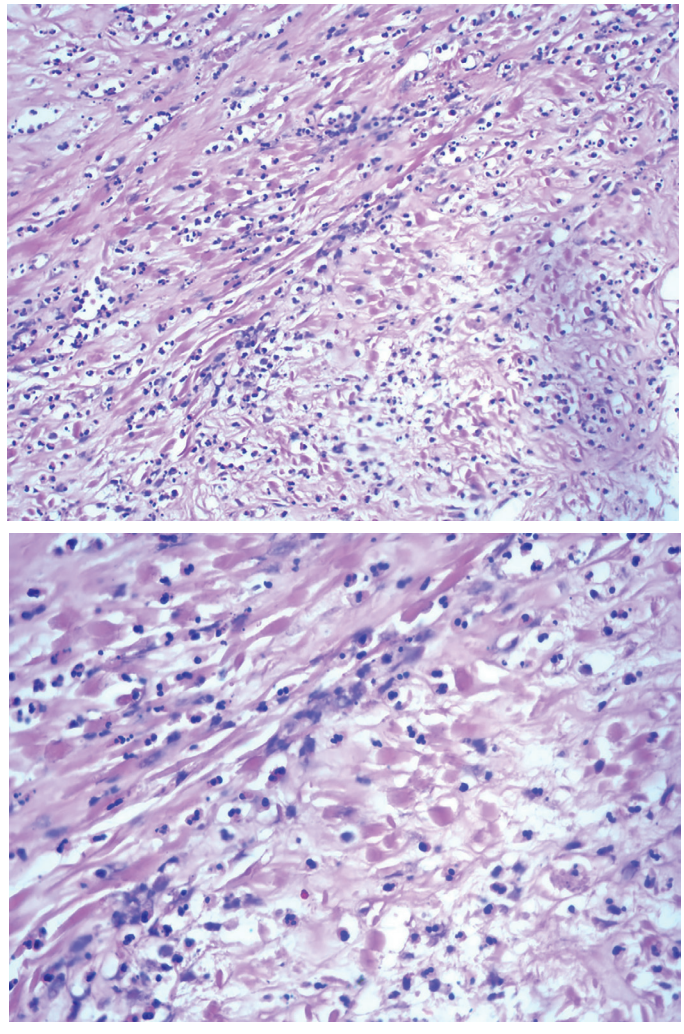

Figure 5. Histopathological images showing degenerated smooth muscle bundles with infiltration by neutrophils and areas of necrosis consistent with suppurative leiomyoma

Ethics

Informed Consent: *Written informed consent was obtained from the patient.*

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