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Spontaneous Ruptured Pyomyoma in a Nulligravida Female

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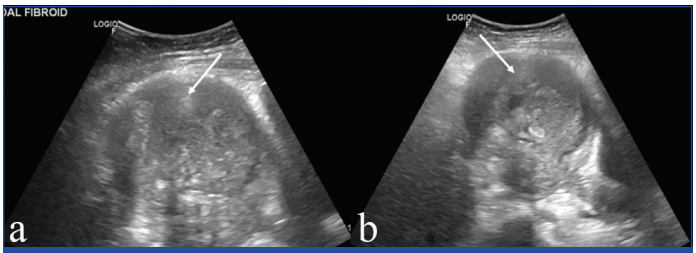
A 41-year-old unmarried nulligravida female presented with complaints of dysuria and intermittent fever for one week. There was no history of menstrual symptoms, uterine instrumentation, or uterine artery embolisation. The patient was a known case of type 2 diabetes and was on insulin treatment. There was no history of hypertension, bronchial asthma, tuberculosis, or thyroid disorder. On examination, the patient had a fever (99.8° F) and stable vital signs. Abdominal examination revealed a uterus size equivalent to 16 weeks of pregnancy. Blood investigations showed leukocytosis with a predominance of neutrophils (Total White Blood cells (WBC) count: 22,370 cells/cu mm with 83% neutrophils) and an elevated Erythrocyte Sedimentation Rate (ESR) of 96 mm/hr. HbA1c was 12.1%, indicating uncontrolled diabetes with an estimated average blood sugar level of 301 mg/dL. A pap smear was negative for intraepithelial lesion or malignant cells. Abdominal ultrasound revealed an enlarged uterus measuring 11.5×9.3×7.9 cm with an anterior wall fibroid measuring approximately 8.3×8.4 cm in the fundal region [Table/Fig-1a,b]. Abdominal and pelvic MRI showed a large heterogeneous lesion with cystic areas measuring 9.0×9.2×8.8 cm in the right antero-lateral myometrial wall [Table/Fig-2a-d].

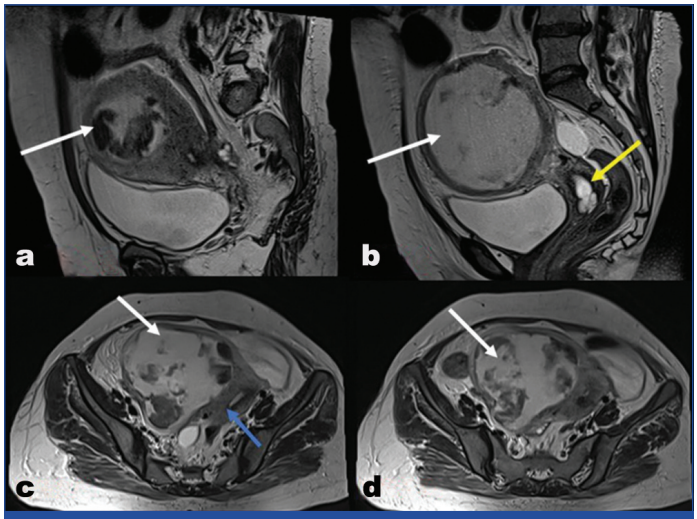
Based on the ultrasound and Magnetic Resonance Imaging (MRI) findings, the possibility of a large anterior wall subserous fibroid with cystic degeneration was considered. The patient underwent surgery, revealing an infected degenerated fibroid in the anterior wall of the uterus with pus drainage, indicating rupture. Foul-smelling pus of approximately 250-300 mL was drained from the peritoneal cavity. The patient underwent total abdominal hysterectomy with bilateral salpingo-oophorectomy. An intraperitoneal drain was placed, and the skin was closed with 2-0 ethilon. No intraoperative or post-operative complications occurred, and the specimen was sent for histopathological analysis [Table/Fig-3a,b]. Histopathology revealed a leiomyomatous uterus with degenerative changes. Culture and sensitivity analysis of the pus showed occasional pus cells, but no organisms were observed.



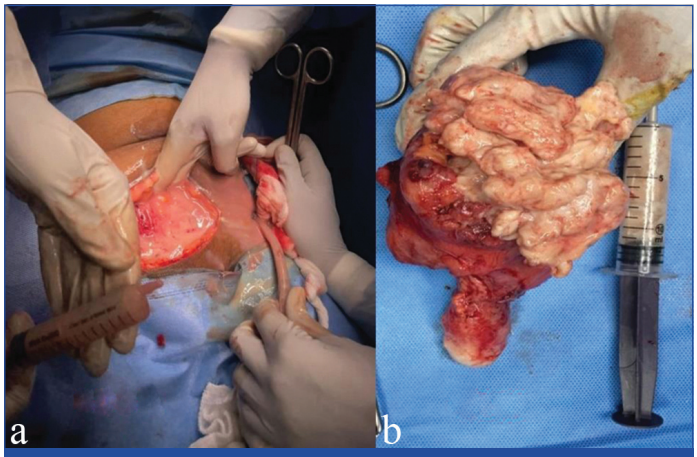
[Table/Fig-1]: (a,b) Transabdominal ultrasound image showing anterior wall fibroid (white arrows).

DISCUSSION

Pyomyoma or suppurative leiomyoma is a rare condition that occurs when an existing leiomyoma becomes infected. The classic triad of symptoms includes abdominal pain, a history of leiomyoma, and sepsis without an obvious origin of bacteremia [1-3]. It usually occurs in pregnancy, post-menopausal women, following uterine instrumentation, or uterine artery embolisation [4,5]. The typical cause is secondary infection in necrotic areas of the fibroid, either due to overgrowth or vascular insufficiency. The present case involved a nulligravida patient with no previous uterine instrumentation or uterine artery embolisation, making it difficult to suspect pyomyoma preoperatively. Consequently, it was initially misdiagnosed as cystic degeneration of the fibroid. Moreover, there were no air foci within the fibroid that could have indicated a secondary infection. In this case, since surgery took place five days after the MRI, the rupture of pyomyoma and the presence of pus in the peritoneal cavity were not detected by the MRI. Imaging alone poses challenges in diagnosing pyomyoma unless air is present within the fibroid. A similar case was reported by Read S and Mullins J, in nulligravida females, although their case involved a broad ligament fibroid, whereas the present



[Table/Fig-2]: (a,b) Magnetic Resonance Imaging (MRI) T2 weighted sagittal image showing anterior wall fibroid with cystic areas within it (white arrows) and nabothian cysts in the cervix (Yellow arrow). (c,d) Axial T2 weighted image showing fibroid in the right lateral wall of uterus (White arrows) pushing the uterus (Blue arrow) to the left-side.



[Table/Fig-3]: a) shows pus in the fibroid cavity; and b) shows postoperative image of the uterus with fibroid.

case involved a subserous fibroid [1]. Another case reported by Bagga R et al., described pyomyoma causing post-abortal fever [2]. De Maoi A and Doyle M, reported a pyomyoma causing postpartum fever [3]. Surgery serves as the definitive method for diagnosis and treatment. Therefore, in patients with fibroids and fever without any apparent source of sepsis, especially in diabetic patients, surgeons should consider the possibility of pyomyoma [2].

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