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CASE REPORT

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Intraoperative diagnosis of a giant pedunculated uterine myoma mimicking an adnexal mass presenting with acute abdomen in a resource-limited setting

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Abstract

Background Uterine myomas are common benign tumors of the female reproductive tract and are typically diagnosed in women of later reproductive age. Presentation as an acute abdomen due to a giant pedunculated subserosa myoma is uncommon, particularly in very young women. Such cases may closely resemble adnexal pathology and lead to diagnostic uncertainty, especially in resource-limited settings where access to imaging is restricted. Reporting this case highlights an unusual clinical presentation and important diagnostic challenges, particularly in a resource-limited setting.

Case presentation A 21-year-old woman from sub-Saharan Africa with a history of primary infertility and menometrorrhagia presented with sudden-onset severe lower abdominal pain associated with a tender pelvic mass. She was managed as a case of acute abdomen. Due to the unavailability of ultrasonography, an emergency exploratory laparotomy was performed. Intraoperatively, a giant pedunculated subserosa uterine myoma was identified, with both ovaries and fallopian tubes appearing normal. A fertility-preserving myomectomy was successfully performed. Histopathological examination could not be performed, because histopathology services were unavailable. The postoperative course was uneventful, and the patient was discharged in good clinical condition on the fifth postoperative day.

Conclusion Giant pedunculated uterine myomas should be considered in the differential diagnosis of acute abdomen in women of reproductive age, including young patients. In resource-limited settings, prompt diagnosis and management may rely heavily on careful clinical assessment and timely surgical intervention, particularly in emergency situations.

Keywords Giant pedunculated uterine myoma, Acute abdomen, Adnexal mass mimic, Myomectomy, Resource-limited setting, Case report

Background

Pelvic masses may arise from a wide range of gynecological and non-gynecological structures and can be either benign or malignant. They are often detected during routine pelvic examinations or when patients present symptoms, such as pelvic pain, abdominal distension, or abnormal uterine bleeding. Common causes include ovarian cysts, ectopic pregnancy, pelvic

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inflammatory disease (PID), and gynecological tumors such as ovarian cancer and uterine fibroids. Accurate diagnosis is essential, as management strategies and outcomes vary considerably depending on the underlying cause [1]. Statistics show that pelvic masses occur in up to 20% of women throughout their lifetimes [2]. Uterine myomas, also known as fibroids, are the most common benign tumors of the uterus and predominantly affect women aged 30–44 years. Among women older than 35 years, the prevalence ranges from 40 to 60%, and in some populations, it may reach as high as 70% [3]. Although many fibroids remain asymptomatic, others may cause heavy or irregular menstrual bleeding, pelvic pain or pressure, and infertility. Clinical manifestations depend largely on the size, number, and location of the fibroids [3]. Pedunculated subserosa myomas, in particular, may pose a diagnostic challenge, because their extrauterine position and mobility can mimic adnexal masses clinically [4].

Acute abdomen caused by uterine myomas is rare and usually happens because of complications like torsion of pedunculated myoma, ischemia, degeneration, or hemorrhage [5]. In emergencies, the symptoms can look very similar to other gynecological problems, such as ovarian torsion, a ruptured ovarian cyst, or ectopic pregnancy. As a result, urgent surgical intervention is often required before a definitive diagnosis can be established [5].

Imaging modalities, especially ultrasonography, play an important role in the preoperative evaluation of pelvic masses. However, in resource-limited settings, imaging may not be available during emergencies, and clinicians must rely primarily on clinical assessment. In such cases, the final diagnosis is frequently made intraoperatively. This diagnostic uncertainty is particularly important in young women with infertility, in whom fertility preservation is a major concern. Although subserosa fibroids are generally considered to have minimal impact on fertility, large or pedunculated fibroids may contribute to infertility by distorting pelvic anatomy and altering the relationship between the uterus, fallopian tubes, and ovaries [6, 7].

We report a rare case of a giant pedunculated subserosa uterine myoma in a 21-year-old woman from sub-Saharan Africa with primary infertility who presented with acute abdominal pain at a district hospital where ultrasonography was unavailable. The pelvic mass was initially presumed to be adnexal based on clinical findings, and the correct diagnosis was established only during surgery. This case underscores the critical role of thorough clinical evaluation in managing gynecological emergencies in resource-limited settings and emphasizes that uterine myomas should be considered in the differential diagnosis of acute abdomen, even in young women.

Case presentation

A 21-year-old sub-Saharan African woman with a history of primary infertility presented to the emergency unit of our health facility with sudden, severe lower abdominal pain of 8 h' duration. The pain was constant, gradually worsening, and associated with nausea. She had no fever and no urinary symptoms.

She had been married for 2 years without becoming pregnant. According to her medical records, tests for sexually transmitted infections were negative, and her husband's semen analysis done one year earlier was normal. She also reported a history of menometrorrhagia, characterized by prolonged and irregular heavy menstrual bleeding. She has never been operated on and has no known chronic diseases. She had her menses about a week prior to the consultation. Her blood pressure was 118/72 mmHg, pulse rate 92 beats/minute, respiratory rate 20 breaths/minute, and temperature 36.8 °C. Abdominal examination revealed a tender mass in the lower abdomen, mainly above the pubic bone, with guarding. Pelvic examination showed a large, mobile, tender pelvic mass that appeared separate from the uterus and was therefore thought to be of adnexal origin. The urine pregnancy test was negative. Hemoglobin was 10.8 g/dL, white blood cell count was $8.5 \times 10^9/L$, C-reactive protein (CRP) was within the normal range, and urinalysis was unremarkable. Based on the above presentation, the initial working diagnosis was acute abdomen, with possible etiologies including a ruptured ovarian cyst, ovarian torsion, torsion of a pedunculated uterine fibroid, appendicular abscess, and ectopic pregnancy. However, the latter was considered less likely due to the negative pregnancy test. Because this was an emergency and an ultrasound was unavailable at our health facility, no imaging was performed before surgery. The patient was counseled for an emergency laparotomy, and written informed consent was obtained. One pint of cross-matched blood was prepared, and prophylactic intravenous antibiotics were administered. Approximately 6 h after admission, the patient underwent urgent exploratory laparotomy under general anesthesia. During surgery, a very large pedunculated subserous uterine fibroid was found arising from the top of the uterus and attached by a thick, elongated stalk (Fig. 1). The mass was mobile and clearly separated from both ovaries and fallopian tubes, which appeared normal.

A fertility-preserving myomectomy was performed, with careful tying of the stalk and excision of the fibroids. Hemostasis was achieved satisfactorily. The excised mass is shown in Fig. 2. The weight was about 2.5 kg.

The patient recovered without complications and was discharged in stable condition on the fifth postoperative day. She returned 3 days after discharge for wound

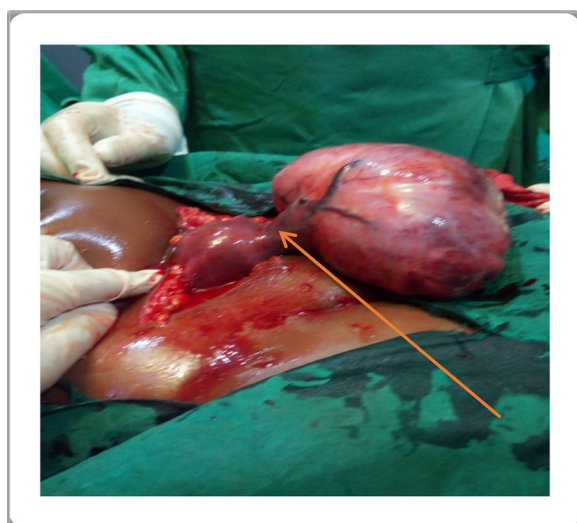


Fig. 1 Intraoperative findings show a large, pedunculated uterine leiomyoma attached to the uterine fundus by a thick stalk, clearly separate from the adnexa



Fig. 2 Gross specimen of the excised giant pedunculated uterine leiomyoma, showing a well-defined, round mass with a smooth outer surface, consistent with leiomyoma

dressing, and at approximately 14 days postoperatively, the surgical wound had healed completely. At the 3-month follow-up, her menometrorrhagia had resolved. At the 6-month telephone follow-up, the patient reported spontaneous conception, which had been confirmed by a positive urine pregnancy test performed at another health facility. The chronological sequence of the patient's presentation, management, and follow-up is summarized in Table 1.

Discussion

Uterine myomas are the most common benign tumors of the female reproductive system. However, giant pedunculated subserous myomas presenting as an acute abdomen are rare, especially in young women [8]. Owing to their unusual extrauterine location, these myomas may be difficult to recognize and can closely mimic adnexal or other intra-abdominal pathology [9]. Acute abdomen caused by uterine myomas is uncommon and is usually related to complications, such as torsion of a pedunculated myoma, ischemia, degeneration, or hemorrhage [5]. Patients typically present with sudden, severe abdominal pain that is indistinguishable from other gynecological or surgical emergencies, including ovarian torsion, ruptured ovarian cyst, ectopic pregnancy, or appendicitis [5]. In this case, the patient was appropriately managed as having an acute abdomen, with several differential diagnoses considered preoperatively. The patient's young age is a notable and uncommon feature of this case. Uterine myomas are more frequently diagnosed in women in their third and fourth decades of life, and their occurrence in women in the early twenties is less common [8]. As a result, fibroids may be under-recognized in younger women presenting with acute abdominal symptoms, particularly in emergency settings. This case highlights the importance of maintaining a broad differential diagnosis that includes uterine myomas, even in young patients [10].

Pedunculated subserosa myomas pose a particular diagnostic challenge because of their mobility and apparent separation from the uterus on clinical examination [9]. This challenge is further exacerbated in emergencies and in resource-limited settings, such as some district hospitals, where access to imaging modalities, including ultrasonography, may be unavailable. In such circumstances, reliance on clinical judgment and prompt surgical exploration is justified to avoid delays that may increase morbidity [11].

Intraoperatively, identification of a giant pedunculated uterine myoma attached by a thick, elongated pedicle allowed definitive diagnosis and appropriate management. Preservation of the uterus and adnexa was essential in this young woman with primary infertility. Although subserosa fibroids are traditionally considered to have minimal impact on fertility, large or giant pedunculated fibroids may contribute to infertility by distorting pelvic anatomy, displacing the fallopian tubes, and altering normal uterine orientation [7]. In our case, the patient had a history of primary infertility, with a normal semen analysis in her partner and negative sexually transmitted infection screening. However, a comprehensive female infertility evaluation, including assessment of tubal patency and hormonal factors, could not be completed

Table 1 Timeline of the patient's clinical course and follow-up

Time	Clinical event
T = -2 years	History of primary infertility and menometrorrhagia
T = 0	Presented with an 8-h history of acute abdominal pain
Within 6 h of admission	Emergency exploratory laparotomy and myomectomy
Postoperative day 5	Discharged in stable condition
Postoperative day 8	Wound dressing
Postoperative day 14	Complete wound healing
3 months	Menometrorrhagia resolved
6 months	Telephone follow-up: spontaneous conception confirmed by a positive urine pregnancy test at another health facility

because of financial constraints and limited diagnostic resources. Therefore, a causal relationship between the uterine myoma and the patient's infertility cannot be definitively established.

The patient's history of heavy and irregular menstrual bleeding suggests that the uterine fibroid had been present for some time before the acute event. In young women who wish to preserve fertility, myomectomy is the preferred treatment, and it can be safely performed even in emergency situations when proper preparation, such as the availability of blood and the use of prophylactic antibiotics, is ensured [10]. In the present case, the patient had an uneventful postoperative recovery, with complete wound healing by approximately postoperative day 14, resolution of menometrorrhagia by the third postoperative month, and spontaneous conception reported at the 6-month telephone follow-up.

Conclusion

Giant pedunculated uterine myomas are an uncommon cause of acute abdomen and may closely mimic adnexal pathology, particularly in young women. This case illustrates the diagnostic challenges encountered in emergency gynecology, especially in resource-limited settings where imaging modalities such as ultrasonography may not be readily available. In such situations, prompt clinical evaluation, early surgical intervention, and careful intraoperative assessment are essential for accurate diagnosis and effective management. Fertility-preserving myomectomy can be safely performed in young women requiring emergency surgical management. Although the patient subsequently conceived following surgery, a causal relationship between the uterine myoma and her prior infertility could not be definitively established, because a comprehensive infertility evaluation was not performed. Clinicians should therefore include uterine myomas in the differential diagnosis of acute abdomen in women of reproductive age, including young women.

Limitations

This report describes a single case, which limits the generalizability of the findings. In addition, preoperative imaging was unavailable, restricting detailed preoperative characterization of the pelvic mass. Histopathological examination of the excised mass could not be performed, because pathology services were unavailable at our facility, and financial constraints prevented referral of the specimen to another hospital for analysis. Although the intraoperative findings and gross appearance of the excised mass were strongly suggestive of uterine leiomyoma and the patient had an uncomplicated postoperative course, the absence of histological confirmation remains a limitation of this report. Nevertheless, this reflects real-world challenges commonly encountered in resource-limited settings.

Abbreviation

PID Pelvic inflammatory diseases

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Author contributions

CA managed the patient and drafted the initial manuscript. NMN, GMA, and FLN critically reviewed and revised the manuscript. All authors read and approved the final manuscript.

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Data availability

No datasets were generated or analyzed during the current study. All relevant clinical information is included within the manuscript. Additional anonymized data may be made available from the corresponding author upon reasonable request and with appropriate ethical approval.

Declarations

Ethics approval and consent to participate

Ethical approval was obtained from the local ethical committee of the Touboro Health District. Written informed consent was obtained from the patient for participation in this study.

Consent for publication

Written informed consent was obtained from the patient for 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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