



Case Report

Case of suspected torsion and amputation of myoma during pregnancy

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ABSTRACT

Introduction: Uterine myoma occurs in 1.6–2% of pregnancies. Most myomas during pregnancy are asymptomatic, but 10–20% may develop complications. The most common complication is abdominal pain, usually caused by myoma degeneration or torsion of a pedunculated myoma.

Case presentation: A 40-year-old pregnant woman was transferred with severe left upper abdominal pain with suspicion of left ovarian torsion at 32 weeks of gestation. Magnetic resonance imaging (MRI) demonstrated a 9.8 cm-sized oval mass abutting the uterine fundus, suggesting subserosal myoma with degeneration. She was admitted for pain control, and the pain was relieved in a few days with conservative management. Two years later, she revisited our hospital for the treatment. Total laparoscopic hysterectomy with bilateral salpingectomy was performed. A 6-cm isolated solid mass adhering to the omentum in the pelvic cavity was observed intraoperatively. The trace on the anterior wall of the uterus was considered to be a broken pedicle that had initially connected the mass.

Clinical discussion: In our case, the patient had severe abdominal pain, and ultrasound and MRI findings suggested subserosal myoma degeneration. A retrospective diagnosis of torsion was made following the surgery, which was assumed to cause the pain during pregnancy, and that an amputation occurred during or after the pregnancy.

Conclusion: Diagnosis is based on clinical manifestations and radiologic examination, however, it is usually difficult to diagnose preoperatively, especially among pregnant women who have diagnostic test limitations. Therefore, if a pregnant woman with a myoma complains of abdominal pain, various possibilities should be considered

1. Introduction

Uterine myomas are one of the most common affecting the female reproductive system. It occurs in 20–40% of women, and the prevalence during pregnancy is estimated to be 0.3–2.6% [1,2]. Most myomas during pregnancy are asymptomatic, but 10–20% may develop complications [3]. The complications include first trimester pregnancy loss, pressure symptoms on the mother and the fetus, pain, premature labor, premature rupture of membranes, malpresentation, retained placenta, postpartum hemorrhage, and uterine torsion. One of the most common complications is abdominal pain caused by torsion of a pedunculated myoma or myoma degeneration. The management of painful myomas during pregnancy is usually medical, but some myomectomies and pain control with epidural patient-controlled analgesia block have been reported [4,5].

Surgery is generally avoided during pregnancy because of the increased risk of severe bleeding, pregnancy injury, and pregnancy loss

[4]. However, surgical treatment may be performed in situations, such as torsion of a pedunculated myoma or rare cases of necrosis, resultant inflammatory peritoneal reaction, and persistent pain [1]. A careful approach is required when diagnosing abdominal pain in women with fibroids and determining treatment methods.

Here, we report a case of subserosal leiomyoma that caused acute abdominal pain during pregnancy. The pain was initially to be due to the degeneration of the myoma, but after delivery, it was discovered through surgery that the cause of the pain was torsion and that an amputation of the myoma occurred during or after the pregnancy [6]. This case report has been reported in line with the SCARE Criteria (include citation) [7].

2. Case report

A 40-year-old pregnant woman was referred from another hospital with severe left upper abdominal pain and suspicion of left ovary torsion

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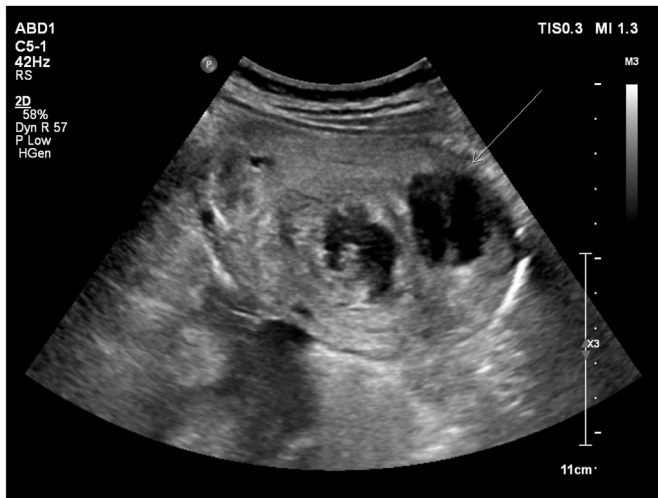


Fig. 1. Ultrasonography showed a solid mass containing an echogenic portion, measuring 9.39 cm × 8.21 cm on the left side of the uterus.

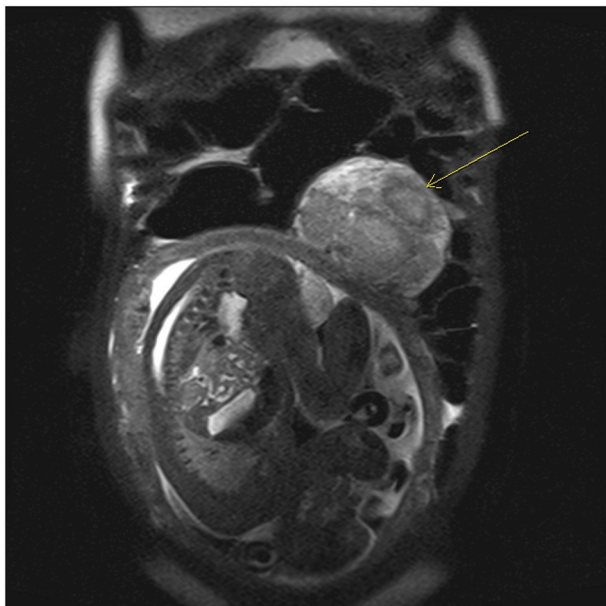


Fig. 2. Magnetic resonance imaging (MRI) demonstrated a 9.8 cm-sized oval mass abutting the uterine fundus in the left upper abdomen with poor enhancement and heterogeneous on T1/T2WI, suggesting subserosal myoma with degeneration.

at 32 weeks of gestation. She had no significant medical history, and before the pain occurred, her pregnancy had been uneventful. There was no vaginal bleeding, and her vital signs were normal. On physical examination, tenderness was noted on the left upper quadrant of the abdomen, but without peritonitis. Her uterus remained soft with no contractile activity, and the fetal heart rate was normal. Blood tests were unremarkable except for an increased concentration of C-reactive protein (CRP) 3.67 mg/dL and white blood cell count of 11,000/μL with 85.0% segmented neutrophils. Ultrasonography showed a viable intrauterine fetus at 32-week 5-day-gestational age with a solid mass containing an echogenic portion, measuring 9.39 cm × 8.21 cm on the left side of the uterus (Fig. 1). The structure appeared like a cystic degenerating myoma. Magnetic resonance imaging (MRI) demonstrated a 9.8 cm-sized oval mass abutting the uterine fundus in the left upper abdomen with poor enhancement and heterogeneous on T1/T2WI, suggesting subserosal myoma with degeneration. Neither ovary was clearly

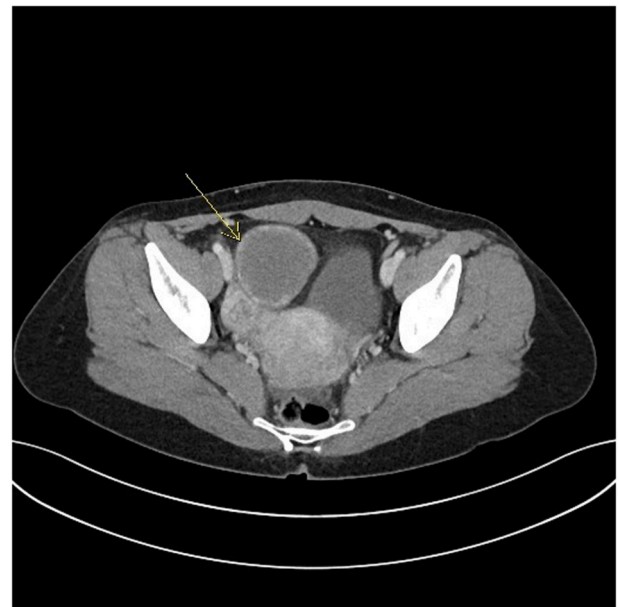


Fig. 3. Abdominal computed tomography (CT) showed a 5.6 cm-sized exophytic soft tissue mass on the right side of the uterine fundus with peripheral rim calcification, suggesting degeneration of an old subserosal myoma.

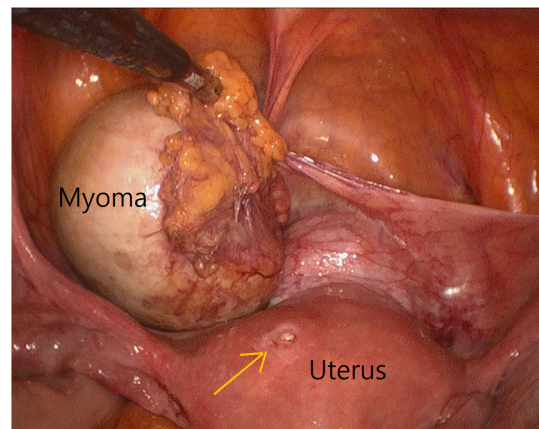


Fig. 4. A 6-cm isolated solid mass adhering to the omentum in the pelvic cavity was observed intraoperatively. The trace on the anterior wall of the uterus (arrow) was considered to be a broken pedicle that had initially connected the mass.

visualized (Fig. 2). The presumptive diagnosis was myoma degeneration instead of ovarian torsion. She was admitted for pain management. Betamethasone was administered to the patient in preparation for cesarean section, which was planned to be performed if the pain persists. Antibiotics were administered because of elevated CRP levels, and daily fetal monitoring was performed. Intravenous fentanyl citrate and pethidine meperidine were administered for pain control along with conservative management, which allowed dramatic improvement within a few days. Furthermore, CRP level decreased to 1.32 mg/dL, and there were no abnormal findings on the follow-up laboratory exam. She was discharged without any complications and delivered vaginally at term in another hospital. Two years later, she revisited our hospital for the treatment of a myoma. Abdominal computed tomography (CT) showed a 5.6 cm-sized exophytic soft tissue mass on the right side of the uterine fundus with peripheral rim calcification, suggesting degeneration of an old subserosal myoma (Fig. 3). Total laparoscopic hysterectomy with bilateral salpingectomy was performed. A 6-cm isolated solid

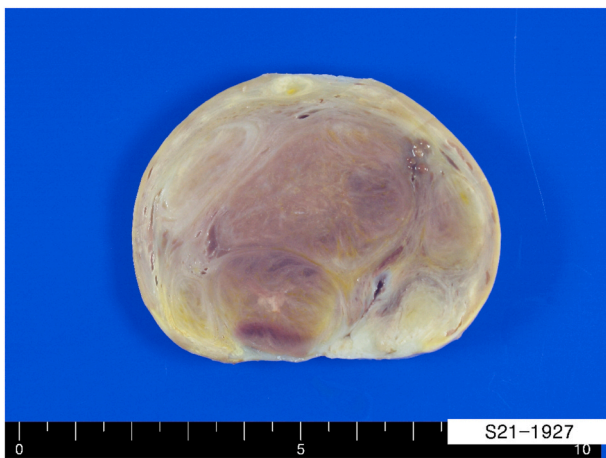


Fig. 5. An oval-shaped grayish mass (6x4.5 × 4.5cm in size) with calcification consistent with a uterine myoma.

mass adhering to the omentum in the pelvic cavity was observed intraoperatively. The trace on the anterior wall of the uterus was considered to be a broken pedicle that had initially connected the mass (Fig. 4). A retrospective diagnosis of torsion was made following the surgery, which was assumed to cause the pain during pregnancy, and that an amputation occurred during or after the pregnancy. Pathological examination revealed a leiomyoma with degeneration and calcification (Fig. 5).

3. Discussion

Acute abdominal pain in a patient with a leiomyoma may arise from other locations uterine myoma. It is necessary to rule out appendicitis, gastroenteritis, pelvic inflammatory disease, and torsion of ovarian cysts. In pregnant women, additional gestational causes including pre-term labor and placental abruption should be considered [3,6]. Even when acute pain is caused by uterine myoma, it is mostly brought about by secondary degeneration. Only a handful of cases have been reported on the torsion of subserosal myoma. Although irrelevant to pregnancy, cases of autoamputation of a pedunculated subserosal uterine myoma have been reported [8].

Diagnosis is based on clinical manifestations and radiologic examination, however, it is usually difficult to diagnose preoperatively, especially among pregnant women who have diagnostic test limitations [6]. In our case, the patient had severe abdominal pain, and ultrasound and MRI findings suggested subserosal myoma degeneration. Given this finding and the improvement of symptoms, the possibility of torsion was not considered. The patient had dramatic abdominal pain relief and was discharged without any complications. Surgery performed after delivery revealed an isolated pelvic mass, hence, it can be inferred that the pain during pregnancy might have been caused by torsion of the myoma. Fortunately, the pain subsided, and the patient did not need further treatment. Amputation of the subserosal myoma might have occurred. However, pain relief may likewise be due to the amputation of the myoma. Therefore, if a pregnant woman with a myoma complains of abdominal pain, various possibilities should be considered.

Declaration of competing interest

The authors have no conflicts of interest to declare.

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None.

Appendix A. Supplementary data

Supplementary data to this article can be found online at <https://doi.org/10.1016/j.amsu.2021.103007>.

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Ethical approval

This is a case report, therefore Ethics committee/IRB approval is not required.

Author contribution

Eun Seo Shin: physician of patient, written the paper, correction of the paper, Hye Sim Kang: corresponding author. written the paper, correction of the paper.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Registration of research studies

Not applicable.

Guarantor

Hye Sim Kang.

Hyesim Kang will be the guarantor and accepts full responsibility for the work and/or the conduct of the study, had access to the data, and controlled the decision to publish at this given time of submission.

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