



FIBROID TORSION: AN UNCOMMON CAUSE OF ABDOMINAL PAIN


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ABSTRACT

Uterine fibroids are the most common gynecologic tumors, clinically apparent in 25% percent of reproductive aged women, and found in 80% of surgically excised uteri. Although usually asymptomatic, acute torsion of a fibroid can be a surgical emergency. Patients often present with severe abdominal pain caused by ischemia after torsion of the vascular pedicle. Only a handful of cases are reported, but the prevalence would suggest it is more common. A 43 year-old female, with no significant history, presented to the Emergency Department with 24 hours of acute onset, severe, left lower abdominal pain. Ovarian torsion was ruled out with a transvaginal ultrasound. CT showed a fibroid uterus, and a hypoattenuating, heterogeneous soft tissue density within the left adnexa. Gynecology took the patient for laparoscopy and discovered a pedunculated fibroid torsed on its pedicle. The patient underwent myomectomy and has been asymptomatic since. Initial imaging workup for suspected fibroid torsion should begin with ultrasound, although the pedicle may be too thin for identification. Case reports have advocated for both CT and MRI in the evaluation of fibroid torsion. Often definitive diagnosis will not be made until surgery. Utilizing imaging early in the workup can help exclude other differential pathologies.

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INTRODUCTION

Uterine leiomyomas (fibroids) are the most common gynecologic tumors, estimated to be in 20-40% of women of reproductive age [1-4]. One study, using ultrasound, reported a prevalence of fibroids to be 14.9% in African American and Caucasian women under 30 years of age. Fibroids are noted on pathologic exam in approximately 80% of surgically excised uteri. Fibroids are benign tumors that arise from the smooth muscle cells of

the myometrium. Although usually asymptomatic, acute torsion of a pedunculated fibroid can be a surgical emergency. Patients often present with severe abdominal pain caused by ischemia after torsion of the vascular pedicle [5].

We present a 43-year-old female with no significant past medical or surgical history who presented to the Emergency Department with acute onset, severe left lower abdominal pain. She reported that the pain began the night before, after she ate some questionable fish for dinner. She subsequently had a moderately loose non-bloody bowel movement with no relief. She also reported intermittent light vaginal bleeding over the preceding 5-7 days, of which she ascribed to her regular menstrual cycle. Thinking that her symptoms were related to her

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menstruation, she took one ibuprofen pill with no relief. Given the severity and worsening of her pain, she called emergency medical services, and was then taken by ambulance to the hospital. On arrival to the emergency department, the patient appeared in moderate distress but was otherwise afebrile with stable vital signs. She reported 7/10 left lower quadrant pain and nausea as her only symptoms. Physical exam was notable for a palpable and tender left lower quadrant/adnexal mass. There was no cervical motion tenderness or vaginal discharge. On further questioning, the patient reported that she felt a mass in her left lower quadrant for several months, but did not have any pain until presentation. She denied family or personal history of breast, gynecologic, or colon cancer. She was not sexually active. Her labs were normal and noncontributory.

Primary concern was for left adnexal mass with or without ovarian torsion. A limited transvaginal ultrasound was performed but had to be terminated early secondary to patient discomfort. The partial exam demonstrated a normal sized left ovary, with demonstrable Doppler and Spectral blood flow, essentially ruling out ovarian torsion. Additionally a soft tissue mass was partially visualized, but not fully evaluated, likely a fibroid (Figure 1).

A contrast enhanced CT was subsequently performed to evaluate for mass, (figure 2 & 3) which showed a large fibroid uterus, in addition to a hypoattenuating and somewhat heterogeneous soft tissue density within the left adnexa measuring 5.6x4.8x6.0 cm. Given the acute onset and severity of the pain, Gynecology took the patient to the operating room for diagnostic laparoscopy.

Intraoperatively, it was discovered that that left adnexal mass was a large pedunculated fibroid, torsed on its pedicle. The fibroid was detorsed and subsequently underwent myomectomy, given the concern for repeat torsion. Scattered smaller fibroids were seen throughout the remaining uterus, and the ovaries were normal in appearance. Tissue pathology later confirmed the diagnosis of leiomyoma. The patient was discharge the following day with minimal medication for pain and nausea control.

Initial imaging workup should begin with a transabdominal and transvaginal ultrasound which can help identify a lesion lateral to the uterus; however, a definitive diagnosis cannot always be made as the torsed pedicle may be too thin for identification with this imaging technique [6]. MRI is considered the best imaging modality for uterine leiomyoma when ultrasound is inconclusive. Access to MR is not always widely available, therefore CT is frequently used. Case reports have advocated for the use of both as part of the imaging workup[7]. There have been no studies comparing the sensitivity and specificity of MRI to CT for evaluation of torsion of a leiomyoma. Often definitive diagnosis will not be made until time of laparoscopy/laparotomy[8] as in our case. Utilizing imaging early in the workup can certainly help exclude other differential pathologies. The differential diagnosis for this pain includes ovarian or adnexal torsion, ovarian tumor, necrotic infarction of a fibroid, and fibroid torsion. To date, there are only a handful of cases of fibroid torsion reported in the literature, although the prevalence of the disease would suggest it is much more common place.

Fig 1. Primary concern was for ovarian torsion. TVUS showed a normal sized left ovary, with Doppler and Spectral blood flow, essentially ruling out ovarian torsion. A mass was partially visualized likely a fibroid (arrow).

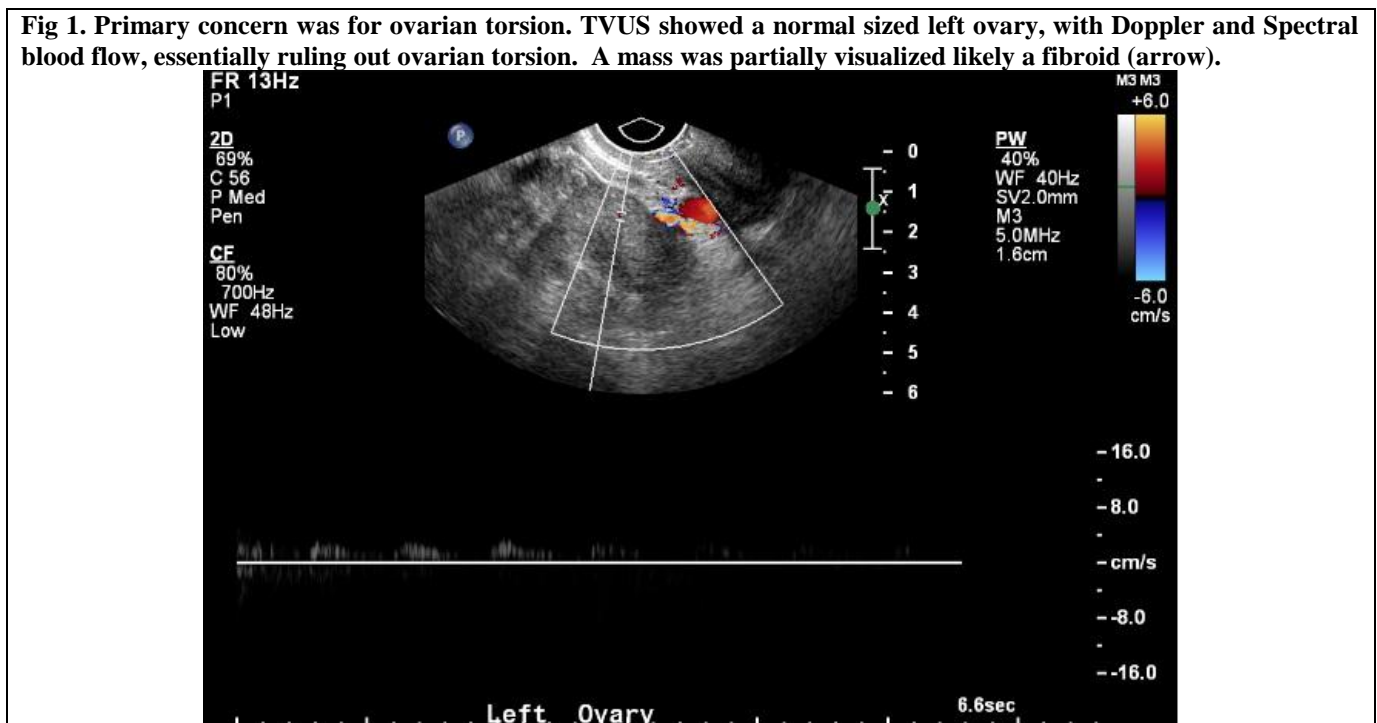


Fig 2. A contrast enhanced CT was subsequently performed which showed a large fibroid uterus, in addition to a hypoattenuating and somewhat heterogeneous soft tissue density within the left adnexa measuring 5.6x4.8x6.0 cm.

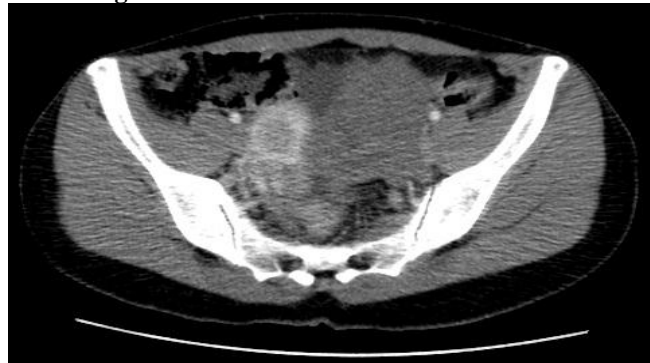
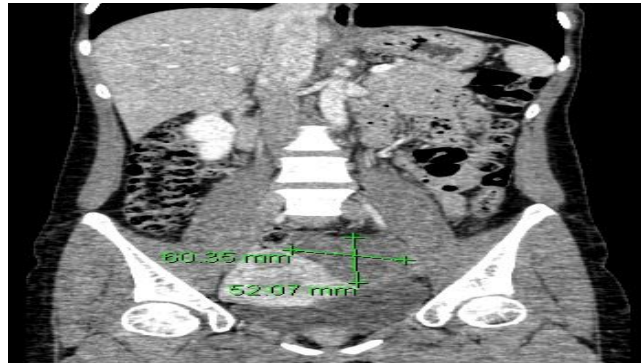


Fig 3. Intraoperatively, the left adnexal mass was found to be a large pedunculated fibroid, torsed on its pedicle. Given the concern for necrosis & repeat torsion, patient underwent myomectomy



Major Teaching Points

1. Fibroid torsion is a rarely thought of, and rarely reported, cause of acute abdominal/ pelvic pain in a female.
2. Given the high prevalence of fibroids (20-40% of reproductive age females) it is likely more common than is actually reported in the literature.
3. TVUS should be the initial imaging consideration for gynecologic pelvic pain and additional imaging with CT or MRI may be appropriate when sonography is inconclusive. With fibroid torsion, however, imaging findings are often non-specific and definitive diagnosis is made surgically.

REFERENCES

1. Gupta S and Manyonda IT. (2009). Acute complications of fibroids. *Best Pract Res Clin Obstet Gynaecol*, 23, 609-17.
2. Marcotte BC, Novellas S, Buratti MS, Caramella T, Chevallier P, Bruneton JN. (2007). Torsion of a uterine leiomyoma: MRI features. *Clin Imaging*, 31, 360-2.
3. Murase E, Siegelman ES, Outwater EK, Perez-Jaffe LA, Tureck RW. (1999). Uterine leiomyomas: histopathologic features, MR imaging findings, differential diagnosis, and treatment. *Radiographics*, 19, 1179-97.
4. Roche O, Chavan N, Aquilina J, Rockall A. (2012). Radiological appearances of gynaecological emergencies. *Insights Imaging*, 3, 265-75.
5. Owen C and Armstrong AY. (2015). Clinical management of leiomyoma. *Obstet Gynecol Clin North Am*, 42, 67-85.
6. Beddy P, Keogan MT, Sala E, Griffin N. (2010). Magnetic resonance imaging for the evaluation of acute abdominal pain in pregnancy. *Semin Ultrasound CT MR*, 31, 433-41.
7. Chang HC, Bhatt S, Dogra VS. (2008). Pearls and pitfalls in diagnosis of ovarian torsion. *Radiographics*, 28, 1355-68.
8. Chan SC, Yuen PM. (2004). Torsion of a paraovarian myoma in a teenage woman. *J Am Assoc Gynecol Laparosc*, 11, 96-8.

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All procedures performed in human participants were in accordance with the ethical standards of the institutional research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. This article does not contain any studies with animals performed by any of the authors.

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Nil

CONFLICT OF INTEREST

No interest



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