



Acute Abdomen with Ascites Due To Fibroid Torsion

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ABSTRACT

Uterine fibroids are the most common solid pelvic tumours in women of child bearing age. When located on the serosal surface of the uterus, they are usually attached by a broad stalk. It is unusual for this condition to cause acute complication such as torsion. The suspicion of myoma torsion as a differential in case of acute abdomen is uncommon. The precise pre-operation diagnosis is usually difficult till during surgical exploration. Here, we describe a case of acute abdomen with massive ascites due to torsion of a pedunculated serosal fibroid.

INTRODUCTION

Uterine leiomyoma, commonly termed fibroid is the most common pelvic tumour encountered in reproductive-aged women.^{1,2} Most are asymptomatic; symptomatic cases present with abnormal uterine bleeding, pressure symptoms and rarely severe abdominal pain.³ Pain maybe related to cervical dilatation by a submucous

myoma protruding through the cervix, red degeneration during pregnancy or torsion of a pedunculated fibroid nodule.⁴ The later is a rare occurrence. Reports of torsion of a pedunculated subserous uterine fibroid, with or without pregnancy, are infrequent in the literature. The majority of such infrequent reports record that most cases occur during pregnancy or the puerperium.³

In patients with subserous uterine fibroid, the incidence of torsion is less than 0.25%⁵. Torsion uterine fibroid in association with peritoneal collection can pose diagnostic dilemma, as the clinical presentation can be non-specific, ranging from mild abdominal discomfort to acute abdomen with shock.^{6,7} Differential diagnoses include accidented ovarian cyst, ectopic pregnancy, ovarian tumour, leiomyosarcoma etc.^{3,6,8}. The diagnosis of torsion of a pedunculated subserous fibroid can be aided by imaging techniques such as ultrasound scan with high Doppler flow, MRI or CT but the definitive diagnosis is usually at laparotomy.^{8,9} This is a case report of torsion of a subserous uterine fibroid with massive ascites requiring emergency laparotomy and myomectomy.

CASE REPORT

Miss N.P, a 28-year old P₀⁺¹, was admitted in the accident and emergency department of the Rivers State University Teaching Hospital on 07/04/2023 with complaint of abdominal pain of one week duration. Her LMP was on 01/04/2023.

The pain was initially located around her lower abdomen, and became generalized on the day of presentation. There was associated abdominal swelling which had progressively increased in size. There were several episodes of vomiting, and the vomitus contained recently ingested meals. There were no changes in her bowel habit, and there was no history of trauma or abdominal massage. There was a history of dizziness and weakness but no fainting spells.

Physical examination revealed a young lady that was in painful distress, mildly pale, anicteric and mildly dehydrated. Her chest was clinically clear with a respiratory rate of 20 cycles per minute. Her pulse was 120 beats per minute and blood pressure 118/70mmHg. Her abdomen was distended, with generalized tenderness and guarding (which precluded assessment of her liver, spleen and kidney as well as any abdominal or pelvic masses). Vaginal examination revealed a normal vulva and vagina; her cervix was posterior. The adnexae and pouch of Douglas were full and tender. The gloved finger used for examination was smeared with altered blood. An assessment of acute abdomen 2⁰ ? accidented ovarian cyst was made.

Pregnancy test done was negative. An urgent ultrasound scan done showed right complex ovarian cyst with massive hemoperitoneum. Packed cell volume estimation was 36%. She was counselled on the diagnosis and management modality. A signed informed consent was obtained and she was prepared for emergency laparotomy. Her intra-operative findings were four liters (4L) of straw coloured ascitic fluid, hemorrhagic torsioned huge pedunculated fibroid (which weighed 2.7kg), and posterior wall subserous fibroid ~12 X 10cm. The adnexae were normal.

Myomectomy was done, and the anterior abdominal wall was closed with absorbable sutures. Samples were sent for histological analysis. Her post-operative period was uneventful. She was discharged home on oral medications and followed up on outpatient basis.

DISCUSSION

Uterine fibroid is most common benign gynaecologic tumour affecting women of reproductive age.^{1,2} The usual presentation are abdominal swelling, pressure symptoms, abnormal uterine bleeding, infertility etc⁷. It is not common that uterine fibroid cause acute complication such as torsion associated with ascites or hemoperitoneum.^{4,10} In the literature few cases have been reported. Tondera *et al* reported the first case of acute abdomen due to torsion of a calcified pedunculated myoma in 1952.⁹

Risk for torsion increases when the pedicle is thin and the length is long enough to cause excess motility of the myoma. Other risk factors for torsion of an uterine fibroid include increased weight of the fibroid mass, and softening of the fibroid during pregnancy.^{4,11,12} Miss NP had a huge fundal pedunculated fibroid similar to the case reported by Ward *et al* and Charles K *et al*.^{9,11}

Torsion of any pelvic organ usually presents with sudden, severe abdomino-pelvic pain that is usually unresponsive to analgesics. The pain is due to ischemia of the vascular pedicle and compressive nature of the torsion process.^{9,13} Miss NP had acute onset abdominal pain that was initially localized but later became generalized and not amenable to analgesics. Peritoneal collection in association with this condition had been reported in literature, and is either due to ascites or haemoperitoneum. Miss NP had a peritoneal collection initially thought to be haemoperitoneum 2⁰ accidented ovarian cyst but at laparotomy it was found to be ascites.

Ascitic fluid in association with a benign condition had been attributed to various causes which include anoxia and release of toxins due to torsion which then causes damage and increase tissue permeability, exudation from extensive neovascularization of the tumour, peritoneal mechanical irritation by the tumour, loss of balance between secretion and absorption in the presentation of a pathology.¹⁴ In a case reported by Okaro *et al*, ascites was attributed to mechanical irritation of the tumour.¹³ There could likely be an interplay of the above theories in the case of Miss NP.

Misleading clinical symptoms coupled with the rarity of the condition may result in missed pre-operative diagnosis.^{7,15} Clinical symptoms varies from mild abdominal discomfort to acute cardiovascular shock. It could be suspected from the medical history of a fibroid pre-existing in the patient. For Luk *et al* and Foissac *et al*,^{6,8} there was prior knowledge of existing uterine fibroids in their patients. Thus it prevented misdiagnosis

but in the case of miss NP, she denied prior knowledge of any abdominal mass.

Imaging techniques can aid pre-operative diagnosis. Ultrasound scan is the widely available modality and can exclude the presence of an adnexal mass, but if a normal ovary is not observed, definitive diagnosis becomes inconclusive.¹⁵ The sensitivity of ultrasonography is however operator-dependent, and subject to interpretative bias.¹⁶ In a case report by Gaym *et al*, Gaye *et al* and Thanasas *et al*, they missed the diagnosis as was in the case of miss NP.^{3,17,18} An ultrasound scan exam with Doppler interrogation is more effective for the detection, mapping and characterization of myomas and making an assessment of organ vascularity. It is more sensitive than a CT scan, but MRI is more effective in comparison to ultrasound scan.^{8,19,20,21} Pre-operative diagnosis was possible with CT scan for the cases reported by David Le *et al*, Tavernaraki *et al*, and Chang *et al*.^{19,22,23} While for Durai *et al*, MRI was the imaging tool that clench the pre-operative diagnosis of torsion fibroid.^{22,24} However, access to these imaging modalities is limited in poor resource setting like ours due to cost and or limited availability. Miss NP presented with abdominal pain, abdominal distension and tachycardia coupled with ultrasound findings of complex ovarian mass. Her pre-operative diagnosis was accidented (ruptured) ovarian cyst with hemoperitoneum.

If torsion is left untreated, hemorrhagic infarction of the myoma can lead to systemic infection and death.^{18,24} Once diagnosis is made, pre-operatively or intraoperatively, treatment include derotation and myomectomy, which can be undertaken either by laparotomy or laparoscopy (in cases of fibroids < 10cm); hysterectomy may be offered to post-menopausal women with no desire for children.²⁴ Miss NP had abdominal myomectomy with uneventful post operative period.

CONCLUSION

The diagnosis of torsion fibroid is challenging pre-operatively due to the rarity of the condition and occasional sonographic misdiagnosis. Therefore, a high index of suspicion is needed in women of reproductive age who present with acute abdomen and a history or findings of an abdomino-pelvic mass.

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have a good day



Figure 1: Torsioned pendunculated huge fibroid nodule



Figure 2: Haemorrhagic fibroid nodule



Figure 3: Note normal ovaries

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