

## Case Report

# Uterine Leiomyoma presenting as acute emergency

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### Abstract

Spontaneous haemorrhage from uterine myometrial fibroid with patient presenting in shock is very rare with only 100 cases been reported in the past. Our patient was a known case of fibroid who presented to the emergency as acute abdomen and was referred to radiology department for ultrasound. Ultrasound revealed a large fibroid with free fluid in abdomen. MRI indicated the fluid to be blood. Diagnosis was made on ultrasound guided ascitic tap which revealed hemoperitoneum. Per operative findings were engorged and tortuous surface veins over the myometrial fibroid. Total abdominal hysterectomy was done along with peritoneal lavage. Patient was normal on discharge post-surgery (6 months follow up is available)

**Key words:** Leiomyoma, Haemoperitoneum, Ultrasound, MRI

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### Introduction

Uterine leiomyomas (fibroids) are the most common pelvic tumors affecting females in the fertile age group<sup>[1,2,3]</sup> Acute complications of fibroids are rarely seen but may be serious.<sup>[3]</sup> Spontaneous hemoperitoneum due to fibroid rupture is a rare entity with less than 100 cases reported in the literature.<sup>[1,2]</sup> Intratumor massive bleeding leading to hypovolemia is extremely rare. In this case report, we report the case of spontaneous uterine intraleiomyoma hemorrhage and hemoperitoneum diagnosed by ultrasound and MRI (Magnetic Resonance Imaging) confirmed by laparotomy and pathological diagnosis.

### Case report

A 33 year old lady presented to the gynaecological emergency with complaints of severe abdominal pain and vomiting for past one day. She denied trauma or vaginal bleeding and had no other associated

symptoms. Patient was a known case of uterine fibroid with off and on pain abdomen for past 3 years. Her menstrual history was normal. She was para 3 (1 LSCS and 2 FTND). Last child birth was 3 years back.

On examination she had normal blood pressure, mild tachycardia (HR was 108 per minute), pallor was present. Abdomen showed guarding and rigidity with 18 weeks pelvic mass lesion, lower limit of which could not be defined, likely uterine in origin.

Patient was sent for an urgent ultrasound examination with clinical suspicion of appendicitis with uterine fibroid. Ultrasound abdomen revealed a large, heterogeneously hypoechoic mass lesion measuring 12x9 cm arising from the fundus of uterine myometrium. No significant vascularity was noted within on Color doppler mode. Bilateral adnexa were clear. Appendix was normal. Patient had moderate to gross free fluid with low level internal echoes. A

pelvic MRI was done for the pelvis which showed a heterogeneously hypointense uterine mass lesion on T2W and STIR measuring 12.5x8.7 cm likely uterine fibroid (Fig 1). There was evidence of free fluid in pelvis which was T1W hyperintense (Fig 2); T2W isointense indicating haemoperitoneum. Ultrasound guided ascitic tap confirmed haemoperitoneum.

Patient was taken up for exploratory laprotomy which showed 2 liters of hemoperitoneum with large uterine fundal fibroid cauliflower like appearance with vascularity and degenerative changes. Mass measured 20x15 cm. Total hysterectomy and peritoneal washing was done.

Gross pathological examination showed enlarged uterus with a mass measuring 12x8.8 cm arising from the posterior myometrium with evidence of vascular degeneration (Fig 3). On microscopic examination, a cellular leiomyoma with evidence of hemorrhagic infarction is found. No malignant cells were identified. (Fig 4) The uterine cervix, fallopian tubes, and ovaries were normal.

### Discussion

The common causes of acute abdomen in cases of fibroid uterus include torsion of subserous fibroid, torsion of uterus along with the fibroid, red degeneration and sarcomatous degeneration.<sup>[4]</sup> Larger fibroids usually degenerate as they outgrow their blood supply. The degeneration types include hyaline, myxoid, cystic, and red degeneration.<sup>[5]</sup> Red or carneous degeneration is occasionally seen in a fibroid, which develops most frequently during pregnancy.<sup>[6]</sup> Sudden intraperitoneal hemorrhage can also present as acute abdomen.<sup>[4]</sup> The bleeding is likely due to torn enlarged veins coursing over the surface of leiomyomas, resulting in hemoperitoneum and resultant hypovolemic shock.<sup>[4]</sup> One review

reports only 50 cases before 1961 and 6 additional cases by 1997.<sup>[8]</sup> A second review cites 7 cases between 1994 and 2004.<sup>[8]</sup>

Ultrasound is the initial diagnostic imaging modality for suspected complications of fibroids. Ultrasound, although insensitive for small hemoperitoneum and nonspecific in diagnosing the source, is a useful modality and can be performed at the bedside of an unstable patient. A fibroid is usually seen as a well-defined, heterogeneously hypoechoic lesion arising within the surrounding myometrium (in case of myometrial fibroid). Location can also be submucosal or subserosal. Fibroids can demonstrate posterior acoustic enhancement or attenuation without any calcification. Mild internal vascularity may be demonstrable. Degeneration of fibroids gives a more complex ultrasound appearance with areas of cystic change and Doppler can show circumferential vascularity. Fibroids that are torsed or are necrotic will show absence of flow on Doppler ultrasound.<sup>[3]</sup>

CT (Computed Tomography) is not the investigation of choice; however, fibroids are often found incidentally at CT.<sup>[9]</sup> The typical finding on CT is a bulky, irregular uterus, or a mass in continuity with the uterus. Mild heterogeneous enhancement is seen post contrast administration. Degenerate fibroids may appear complex and contain areas of fluid attenuation.<sup>[1]</sup> Magnetic resonance imaging is superior due to its excellent contrast resolution and is helpful in evaluating leiomyoma size, number, location, and presence or extent of degeneration, but it requires a stable patient and may be difficult to perform in the emergency setting.<sup>[1]</sup>

Management is both surgical and supportive. Stabilising the vitals by infusion of intravenous fluids and blood should be done immediately to compensate for significant blood loss. The definitive treatment is

surgical, requiring vessel repair and/or myomectomy.<sup>[1]</sup> or hysterectomy. Alternative to surgery, percutaneous embolization of uterine artery is increasingly being used for non-acute uterine hemorrhage. It is minimally invasive and also maintains patient's fertility. Percutaneous embolization of internal iliac arteries branches has proven effective in the emergency treatment of pelvic hemorrhage, resulting from any cause including trauma, uterine fibroids or other causes.<sup>[10]</sup> Our patient underwent total hysterectomy with bilateral salpingo-oophorectomy because of the increased risk of sarcomatous degeneration of the uterine fibroids at her age.

### Conclusion

Our case report highlights the rare but possible fatal presentation of uterine fibroids as hemoperitoneum and shock secondary to rupture of engorged surface veins. Although uncommon, this is an important diagnosis, highlighting the importance of serial abdominal examinations and the potential use of bedside ultrasound, and emergency physicians should be aware of this condition.

Fig 1 :-T2 weighted Sagittal image of pelvis showing large heterogeneously hypo intense mass lesion arising from the fundus of the uterus. Hyper intense foci within are suggestive of cystic and necrotic changes. Free fluid noted. Fat planes with surrounding are maintained. Rest of the myometrium, endometrium and cervical regions are normal.

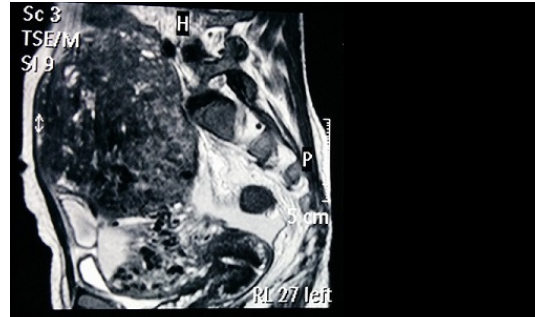


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Fig 2:-T1W Gradient axial images of pelvis shows heterogeneous mass lesion with increased surface vascularity seen as multiple signal voids. Hyperintense free fluid seen suggestive of hemoperitoneum

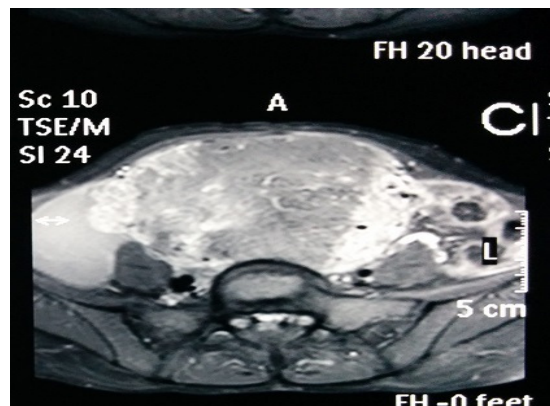


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Fig 3: Gross Specimen of the operated uterus



Fig 3.-: Gross specimen of the operated uterus.

Fig 4: Photomicrograph showing smooth muscle bundles cross cut as well as longitudinally cut present in crisscross fashion. A few capillaries are also seen. (Haematoxylin and Eosin 10X)

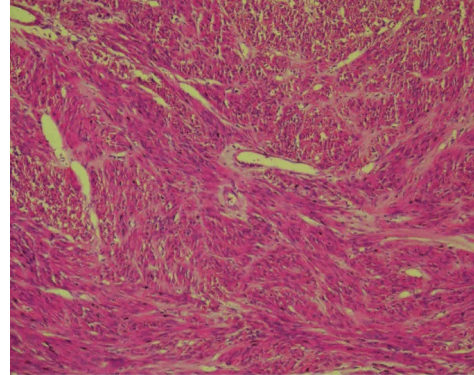


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