OA Case Reports
Open Access

Case report

Surgery

Pedunculated leiomyoma of the uterus presenting as a large abdominal mass

S Marwah[1]*, H Mangal[1], KD Shivran[1], N Marwah[2]

Abstract

Introduction

This paper reports a case of pedunculated leiomyoma of the uterus presenting as a large abdominal mass.

Case report

A middle-aged pre-menopausal woman presented with pain and a large intra-abdominal lump in the lower abdomen. Ultrasonography showed a large, rounded, hypoechoic mass with septations. Contrast-enhanced CT scan of the abdomen demonstrated a large heterogeneous, predominantly hypodense mass lesion in the abdomen and pelvis with heterogeneous irregular enhancing hypodensity within it. However, the organ of origin could not be identified with investigations and the patient was explored with the possibility of pseudopancreatic cyst or mesenteric cyst. Operative findings revealed a large pedunculated fibroid arising from the uterine fundus and occupying almost whole of the abdomen and pelvis.

Conclusion

Although fibroids usually have a characteristic appearance on sonography, degenerating fibroids can have variable patterns and pose diagnostic challenges.

Introduction

Uterine leiomyomas are the most common gynaecological neoplasms. The typical appearances of leiomyomas are easily recognised on imaging. However, the atypical appearances that follow degenerative changes may cause confusion in diagnosis. Here we report a case of exophytic leiomyoma showing extensive cystic degeneration on imaging, and simulating mesenteric cysts.

Case report

A forty-year-old multiparous woman presented with a complaint of a gradually increasing swelling and dull aching pain in the lower abdomen for the last four months. She had no other symptoms related to either genitourinary or lower gastrointestinal track. There was no significant past, family and personal history. On examination, she had a large non-tender cystic mass of size 30 cm × 15 cm occupying the hypogastrium, umbilical region reaching up to the epigastrium, having ill-defined margins, and smooth surface with side-to-side mobility. Per vaginal and per rectal examination were essentially normal. Routine haematological investigations were normal. CA 125 level was 46 IU (normal range 2.0–35). Trans-abdominal sonography showed a large hypoechoic solid cystic lesion with septations, measuring 18 cm × 18 cm × 9 cm in the abdomen and pelvis touching the anterior abdominal wall and pushing the gut laterally. Bilateral ovaries and uterus were normal. The organ of origin of the mass could not be identified on ultrasonography.

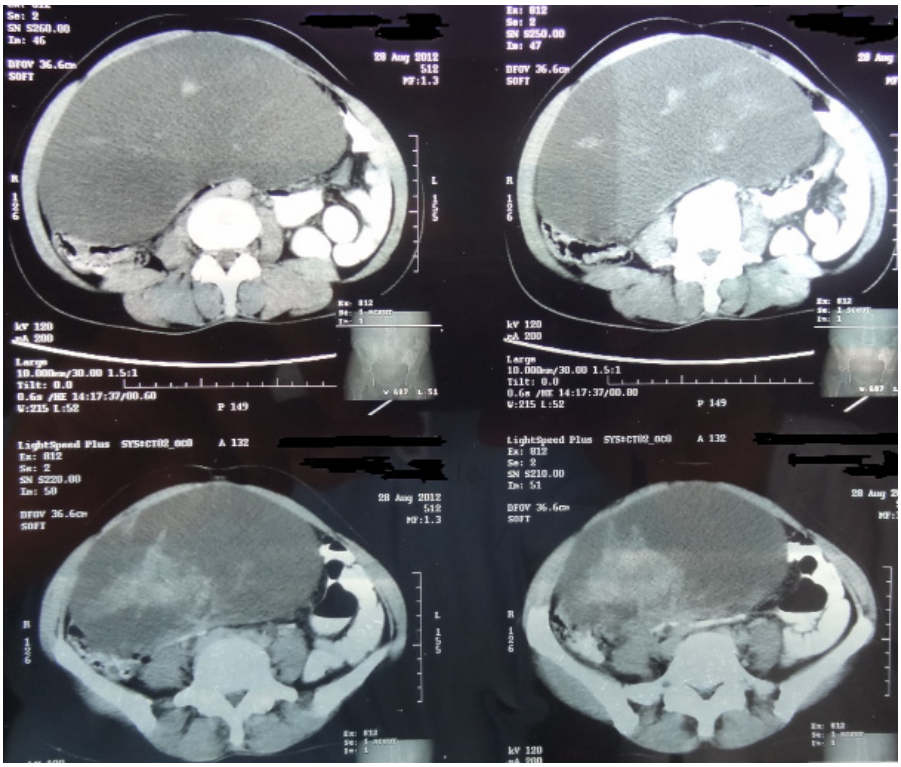

Figure 1: CECT abdomen showing a large heterogenous hypodense mass lesion occupying almost whole of the abdomen and pelvis.

*Corresponding author
Email: drsanjay.marwah@gmail.com

[1] Department of Surgery, Post graduate Institute of Medical Sciences, Rohtak, Haryana, India-124001
[2] Department of Pathology, Post graduate Institute of Medical Sciences, Rohtak, Haryana, India-124001

FOR CITATION PURPOSES: *Marwah S, Mangal H, Shivran KD, Marwah N.* Pedunculated leiomyoma of the uterus presenting as a large abdominal mass. OA Case Reports 2013 Nov 15;2(14):138.

Competing interests: none declared. Conflict of interests: none declared.
All authors contributed to conception and design, manuscript preparation, read and approved the final manuscript.
All authors abide by the Association for Medical Ethics (AME) ethical rules of disclosure.

OA Case Reports
Open Access

Case report

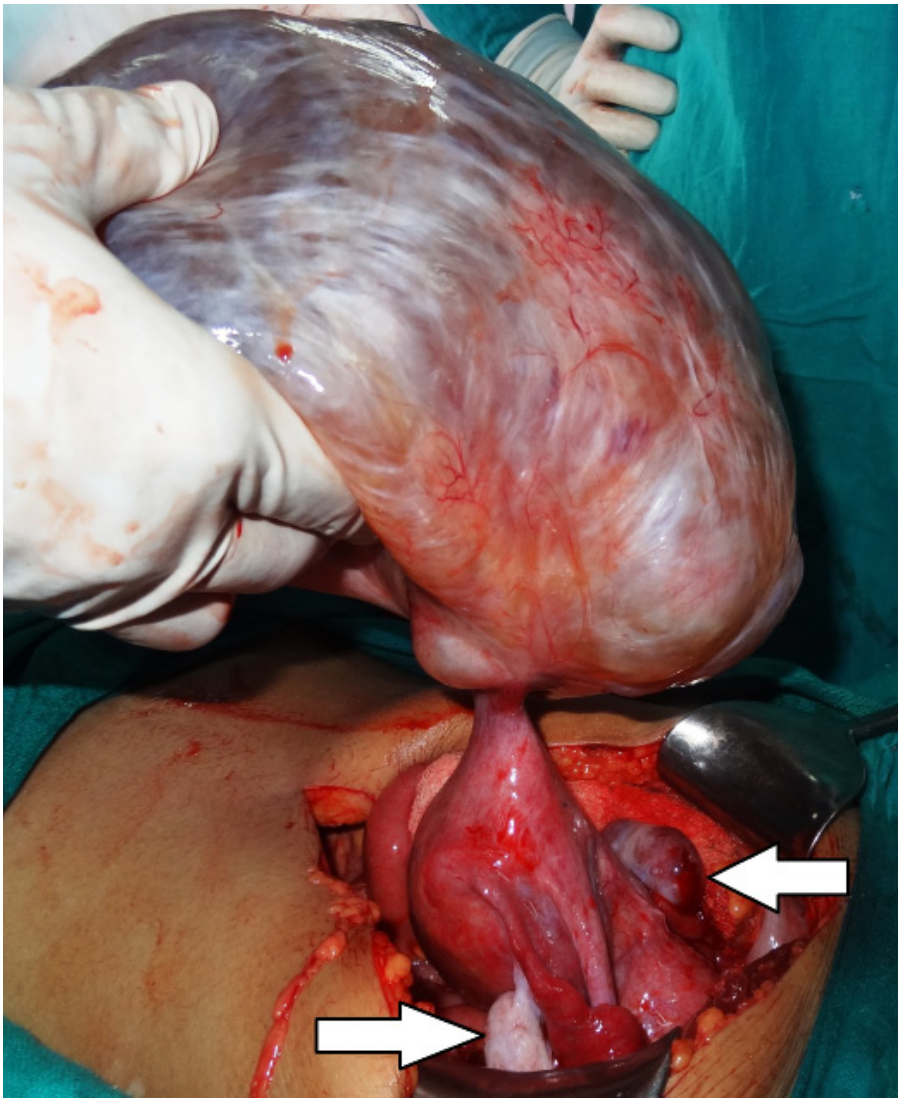

Figure 2: Large cystic mass attached to the uterus with a pedicle. Both ovaries are lying separate from the mass (arrows).

Contrast enhanced computerised tomography revealed a large heterogeneous, predominantly hypodense mass lesion in the abdomen and pelvis, measuring 16.9 cm × 9.6 cm × 13.5 cm and showed heterogeneous irregular enhancing hypodensity within it. Superiorly it reached up to the pancreas and inferiorly up to the uterus. There was mild hydronephrosis in both the kidneys possibly due to pressure effect of the mass. The left ovary was normal and the right ovary had a small cystic lesion in it (Figure 1). There was no free fluid in the abdomen and lymphadenopathy. Based on these findings, the diagnosis of pseudopancreatic cysts or complicated mesenteric cysts was made and the patient was explored.

On exploration, a large cystic mass (of size, 25 cm × 20 cm × 18 cm) was seen in the lower abdomen and pelvis arising from the uterus and connected with its fundus with a small pedicle (Figure 2). Uterus and cervix were essentially normal. There was minimal ascitic fluid in the peritoneal cavity. The ovaries and adnexa of both sides were normal. All other intra-abdominal viscera including the pancreas and mesentery were also normal. The cystic mass was excised after ligating the pedicle. On cut section, the mass had solid and cystic components (Figure 3). Intra-operative frozen section examination was performed and it showed a benign lesion. The abdomen was closed with a pelvic drain. Post-operative period was uneventful. The final biopsy report was a uterine leiomyoma with cystic degeneration.

Discussion

Leiomyoma of the uterus arises from the uterine smooth muscles and is the most common uterine neoplasm in women of reproductive age. It may be single or multiple and its size may vary from microscopic to giant leiomyoma. The size, number and location of leiomyoma determine their clinical behaviour. In 50% of the cases, there are no symptoms[1]. The diagnosis is often made as an incidental finding on ultrasound but the patients may also present with menorrhagia, pelvic discomfort, abdominal bloating, urinary retention /frequency or constipation due to pressure effect, or acute abdomen due to torsion of a pedunculated fibroid. In addition, they may compromise reproductive function, possibly contributing to subfertility, early pregnancy loss and later pregnancy complications such as acute pain due to red degeneration, preterm labour, malpresentations, increased need for caesarean section, and postpartum haemorrhage. Sarcomatous change is rare and is usually associated with rapid growth[1,2]. The rare complications in a uterine leiomyoma include thromboembolism, acute vaginal or intra-peritoneal haemorrhage, mesenteric vein thrombosis, and intestinal gangrene[3].

A large, cystic, pedunculateduterine leiomyoma of the uterus may mimic a primary malignant ovarian tumour on sonography and CT and might undergo extensive surgery like total hysterectomy and bilateral

FOR CITATION PURPOSES: *Marwah S, Mangal H, Shivran KD, Marwah N.* Pedunculated leiomyoma of the uterus presenting as a large abdominal mass. OA Case Reports 2013 Nov 15;2(14):138.

Competing interests: none declared. Conflict of interests: none declared.
All authors contributed to conception and design, manuscript preparation, read and approved the final manuscript.
All authors abide by the Association for Medical Ethics (AME) ethical rules of disclosure.

OA Case Reports
Open Access

salpingo-oopherectomy by mistake[4]. Rarely, gradual enlargement of a pedunculated myoma may occur during pregnancy, worsening after delivery and causing hypovolemic shock, without evidence of external or intra-abdominal haemorrhage. The possible mechanism is that partial occlusion obstructs the venous return, but not arterial blood flow leading to rapid enlargement of the myoma[5]. A large subserosal uterine leiomyoma may very rarely lead to small bowel obstruction due to entrapment of the bowel between pedunculated fibroids, adhesions to infarcted leiomyomas, or from compression of the small bowel by the large mass[6].

In the present case, the patient presented with a progressively increasing abdominal lump that was solid-cystic in nature. It appeared to be a benign mass after investigations, although the organ of origin could not be determined. Other common benign masses in such clinical settings include mesenteric cyst, pseudopancreatic cyst, renal cyst, renal angiomyolipoma, adrenal incidentalomas, retroperitoneal cyst, ovarian cyst, and dermoid. However, the final diagnosis in our case was established on exploration.

Ultrasonography is the primary modality for diagnosing clinically suspected uterine fibroids[7]. It commonly shows a hypoechoic or heterogeneous uterine mass, whose texture depends on the relative ratio of fibrous tissue to smooth muscle and the presence and type of degeneration[8]. CT scan is not the primary modality of diagnosis for leiomyoma. The most common CT findings are uterine enlargement with associated focal masses and uterine contour deformity. Leiomyoma that have undergone degenerations show lower attenuation appearance with diminished contrast material enhancement[8].

For management, myomectomy is the treatment of choice for large symptomatic fibroids in fertile women and may be performed by laparoscopy or laparotomy. For perimenopausal women, vaginal or laparoscopic hysterectomy is the most effective treatment for symptomatic fibroids and is associated with a high rate of patient satisfaction. Uterine artery embolisation is an effective treatment for symptomatic fibroids with low long-term morbidity and can be offered as an alternative to myomectomy and hysterectomy[9]. Safety and effectiveness of uterine artery embolisation in pedunculated fibroids was assessed in 716 women and it was found to be safe and effective[10]. MR-guided focused ultrasound has been recently used to treat a pedunculated fibroid, where only the fibroid is targeted and the stalk is spared. This has been claimed to be a safe and effective treatment for pedunculated subserosal fibroids, but the suitability needs to be confirmed by large prospective studies[11].

Figure 3: Cut section of the mass showing solid and cystic areas.

Conclusion

Although fibroids usually have a characteristic appearance on sonography, degenerating fibroids can have variable patterns and pose diagnostic challenges. A pedunculated, subserosal uterine leiomyoma should be kept as a clinical possibility in such cases.

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.

References

1. Gupta S, Jose J, Manyonda I. Clinical presentation of fibroids. Best Pract Res Clin Obstet Gynaecol. 2008 Aug;22(4):615–26.
2. King R, Overton C. Management of fibroids should be tailored to the patient. Practitioner. 2011 Mar;255(1738):19–23, 2–3.
3. Gupta S, Manyonda IT. Acute complications of fibroids. Best Pract Res Clin Obstet Gynaecol. 2009 Oct;23(5):609–17.
4. Aydin C, Eriş S, Yalçin Y, SenSelim H. A giant cystic leiomyoma mimicking an ovarian malignancy. Int J Surg Case Rep. 2013 Sep;4(11):1010–2.
5. Koide K, Sekizawa A, Nakamura M, Matsuoka R, Okai T. Hypovolemic shock

FOR CITATION PURPOSES: *Marwah S, Mangal H, Shivran KD, Marwah N.* Pedunculated leiomyoma of the uterus presenting as a large abdominal mass. OA Case Reports 2013 Nov 15;2(14):138.

Competing interests: none declared. Conflict of interests: none declared.
All authors contributed to conception and design, manuscript preparation, read and approved the final manuscript.
All authors abide by the Association for Medical Ethics (AME) ethical rules of disclosure.

OA Case Reports
Open Access

due to massive edema of a pedunculated uterine myoma after delivery. J Obstet Gynaecol Res. 2009 Aug;35(4):794–6.
6. Fontana R, Kamel PL. Small bowel obstruction associated with a leiomyomatous uterus. A case report and review of the literature. J Clin Gastroenterol. 1990 Dec;12(6):690–2.
7. Ahamed KS, Raymond GS. Answer to case of the month #103 large subserosal uterine leiomyoma with cystic degeneration presenting as an abdominal mass. Can Assoc Radiol J. 2005;56:245–7.
8. Low SC, Chong CL. A case of cystic leiomyoma mimicking an ovarian malignancy. Ann Acad Med Singapore. 2004 May;33(3):371–4.
9. Marret H, Fritel X, Ouldamer L, Bendifallah S, Brun JL, De Jesus I, et al. Therapeutic management of uterine fibroid tumors: updated French guidelines. Eur J Obstet Gynecol Reprod Biol. 2012 Dec;165(2):156–64.
10. Smeets AJ, Nijenhuis RJ, Boekkooi PF, Vervest HA, van Rooij WJ, de Vries J, et al. Safety and effectiveness of uterine artery embolization in patients with pedunculated fibroids. J Vasc Interv Radiol. 2009 Sep;20(9):1172–5.
11. Park H, Yoon SW, Kim KA, Jung Kim D, Jung SG. Magnetic resonance imaging–guided focused ultrasound treatment of pedunculated subserosal uterine fibroids: a preliminary report. JVIR. 2012 Dec;23(12):1589–93.

FOR CITATION PURPOSES: *Marwah S, Mangal H, Shivran KD, Marwah N.* Pedunculated leiomyoma of the uterus presenting as a large abdominal mass. OA Case Reports 2013 Nov 15;2(14):138.

Competing interests: none declared. Conflict of interests: none declared.
All authors contributed to conception and design, manuscript preparation, read and approved the final manuscript.
All authors abide by the Association for Medical Ethics (AME) ethical rules of disclosure.