A case study regarding torsion of a subserous uterine leiomyoma: an unusual pathology

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Abstract
Uterine leiomyoma with torsion is an uncommon pathology. There are fewer than 10 cases reported in the literature of torsion of uterine leiomyoma in non-pregnant women. A 48 year-old woman presented with abdominal pain and abnormal uterine bleeding. Transvaginal ultrasonography demonstrated an enlarged fibroid uterus. She underwent total abdominal hysterectomy and bilateral salpingo-oophorectomy and was found to have torsion of a large pedunculated leiomyoma.

Key words: leiomyoma, hysterectomy, torsion, subserous fibroid

Introduction
Uterine leiomyomata are benign tumours that arise from the smooth muscle cells of the myometrium. Uterine leiomyomata are the most common gynaecologic tumors, clinically apparent in approximately 25% of reproductive aged women and noted on pathologic exam in approximately 80% of surgically excised uteri [1]. Although usually asymptomatic, acute torsion of a pedunculated leiomyoma causing severe abdominal pain is a rare complication and can be a surgical emergency when associated with infarction, necrosis, ischemic gangrene or peritonitis [2, 3].

To date, there are fewer than 10 cases reported in the literature of torsion of a uterine leiomyoma in non-pregnant women.

Case report
A 48-years old female presented with the complaints of acute onset of pain in the abdomen associated with menometrorraghia. On examination, the patient was anemic since 6 months and appeared pale, had tachycardia and a BP of 90/60 mm Hg. On abdominal examination, there was no tenderness, guarding or rigidity. A firm distinct mass of size 10 × 10 cm was felt in the supra-pubic region. Vaginal examination revealed enlarged uterus with multiple fibroids and one submucus prolapsed through the vagina to the vulva outside. The submucus one was necrotic and haemorrhagic with bad odour suggesting infection.

Her haemoglobin was 9g%. The other lab investigations were normal even the WBC count. Ultrasound examination revealed two heterogeneous well defined, predominantly solid masses in the right pelvic region, one measuring 10 × 12 × 13 cm communicating with uterus not showing vascularity and another mass seen separately of 10 × 6 × 5 cm, showing vascularity highly suggestive of fibroid. Also a submucus uterine fibroid prolapsed through the cervix measuring 5 cm diameter.

After adequate blood and fluid resuscitation, a laparotomy was performed through a Pfannenstiel incision revealing a large necrotic-appearing pedunculated leiomyoma, emerging from the back of the uterus. When attempting to mobilize the leiomyoma, it was found to be twisted approximately four times around its vascular pedicle. The patient was found to have additional pedunculated leiomyomata. She underwent an uncomplicated TAH/BSO (Fig. 1 and 2). Also, there was a pedunculated fibroid of 6 cm beside the first one. A small amount of sero-sanguineous fluid was noted in the peritoneal cavity.

According to the pathology report, the leiomyoma was with discoloration, haemorrhage and necrosis diagnostic of torted fibroid. Her post-operative course was uncomplicated and the patient was discharged on day three.

Discussion
Torsion of subserous leiomyoma is very rare. Review of literature could not reveal the true incidence of this condition. Torsion of the pedicle of a sub serous leiomyoma interrupts first the venous and then the arterial supply, leading first to extravasation of blood and then to gangrene [3]. Hence, it becomes a surgical emergency. Rarely, the torsion is overlooked and the myoma degenerates and forms adhesions to the omentum and other structures.
Tordera et al. provide the first case report of an acute abdomen caused by torsion of a calcified pedunculated myoma in 1952. Since that time, there have been fewer than 10 reported cases of torsion of a uterine leiomyoma in non-pregnant women [4].

According to the available case reports, torsion of a uterine leiomyoma usually presents as sudden onset severe abdominal pain caused by ischemia of the vascular pedicle. The differential diagnosis for this pain includes ovarian or adnexal torsion, ovarian tumour, necrotic infarction of a leiomyoma and, less commonly, leiomyoma torsion. Transvaginal ultrasound can identify a lesion lateral to the uterus however a definitive diagnosis cannot be made and the pedicle is often too thin for identification with this imaging technique. MRI is considered the best imaging modality for uterine leiomyoma when ultrasound is inconclusive [5]. To date, there are no studies comparing the sensitivity and specificity of MRI to CT for evaluation of torsion of a leiomyoma. MRI may be a better diagnostic technique, however, access to MRI is not widely available, and therefore CT is frequently used. Marcotte-Bloch et al. reported a case of torsion of a uterine leiomyoma where the pedicle was noted and diagnosis made based on MRI [5]. Roy et al. report
a case where diagnosis was made based on CT scan demonstration of normal ovaries and contrast enhancement of the uterine portion connected to the mass [6].

Ultrasound cannot delineate torsion of leiomyoma if the pedicle is too thin. MRI is considered the best diagnostic modality when ultrasound is inconclusive [4]. Immediate surgical management is crucial to avoid potential life threatening complications. Uterine artery embolization is considered as an alternative to surgery, for the management of fibroids. But, pedunculated fibroids have long been considered as a relative contraindication to UAE (uterine artery embolisation), mainly because of the risk of separation from the uterus after embolization, which can lead to complications and also because of adhesions to the bowel leading to necrosis of the bowel wall, peritonitis and sepsis [7, 8]. There was no no serious complications after uterine artery embolization for pedunculated subserosal fibroids with a stalk diameter of 2 cm or larger [9]. Though UAE is an alternative for the management of subserous fibroids, surgery is the only option, once torsion has been diagnosed.

This patient had two large pedunculated fibroids with torsion of one of them. Ultrasound helped to diagnose torsion in this patient. More often than not, torsion is missed by ultrasound and MRI may be needed if there is a high degree of clinical suspicion.

References


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