Acute pelvic pain due to cystic degeneration of large leiomyoma of uterus - A diagnostic challenge.
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Background
Acute pelvic pain is common in young women due to reasons such as ovarian torsion, appendicitis but unlikely due to fibroid. Cystic degeneration is uncommon complication of leiomyomas. Leiomyomas can undergo variable changes making diagnosis difficult. This is a case of cyst within large leiomyoma presenting with acute pain.

Case report
• A 33 year old nulliparous patient presented with acute abdominal pain and lump. Her vital signs were normal. On examination a tender mass was palpable extending from pelvis towards right lower quadrant of the abdomen.
• The Ultrasound scan showed 9 x 8 x 6 cms leiomyoma and on top, there was a cyst of size 8 x 6 x 6 cms. The cyst had some solid areas but no papillary projections. The top of the cyst was difficult to define. Right ovary could not be identified separately. Left ovary was normal. Uterus was normal sized. There were minimal free fluid.
• CT scan showed very large partly solid/cystic mass arising from left side of the pelvis. No enlarged lymph nodes identified. Tumour markers were normal.
• As patient was symptomatic decision for laparoscopy was made after detailed discussion about fertility preservation. Laparoscopy was performed. It showed 6 cm x 6 cm cyst on top of the leiomyoma at uterine fundus. The cyst was drained. It was difficult to reach to the base of the cyst hence laparotomy was performed. Cyst and leiomyoma were removed together. Both tubes and ovaries were normal. Endometrial cavity was not breached.
• Post-operative recovery was uneventful and patient was discharged after 48 hours. Histology suggested benign leiomyoma with cystic degeneration.

Discussion
• As leiomyomas enlarge, they can outgrow their blood supply, resulting in various types of degeneration, such as hyaline, cystic, myxoid or red degeneration and dystrophic calcification. Hyalinization is the most common type of degeneration, occurring in up to 60% of cases. Cystic degeneration, observed in about 4% of leiomyomas, may be considered extreme sequelae of oedema.
• In the literature, there have been reports of cystic uterine fibroids mimicking ovarian cyst, a postoperative abscess and endometrial hyperplasia. Therefore, these cystic degenerating fibroids can present a diagnostic challenge in non-pregnant women. Degenerative fibroid should also be considered as one of the differential diagnoses for all women presenting with acute abdominal pain and a large fibroid mass regardless of their hormonal status or age.
• The preferred imaging modality for the initial evaluation is ultrasound scan because it is least invasive and dynamic images can be obtained by clinicians.
• A CT scan was subsequently performed to exclude other non-gynaecological issues. Although MRI is preferred for demonstrating the character of a fibroid mass, it is not usually used as first-line imaging due to high cost and availability.
• The current established management of cystic degeneration is conservative but it is not acceptable for most of the patient in acute pelvic pain.
• A surgical approach is safe but need to be individualised as per patient symptom. Fertility perseveration surgery is ideal for our patient.

Conclusion
Cystic degeneration of fibroids should be considered as one of the differential diagnosis for all women presenting with acute abdominal pain.
A surgical approach is safe even though not well documented on acute presentations.

References