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Case Report

Uterine leiomyoma-a common pathology with a rare life-threatening complication

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ABSTRACT

Uterine leiomyoma, a common disease of women in reproductive age group may rarely present with a complication as an acute abdomen. We report such a case, a 40-year-old unmarried woman presented to our emergency department with acute abdominal pain, abdominal distension. Ultra sonogram abdomen revealed a large uterine leiomyoma causing small intestinal obstruction. The same was confirmed with abdominal imaging-X-ray erect and CECT. Managed by emergency exploratory laparotomy along with gastro surgical team. Small bowel obstructions are most commonly caused by postoperative adhesions, intestinal volvulus, malignancies or masses and strangulated hernias (together forming 90% of cases). The remaining are due to wide range of intrinsic and extrinsic bowel lesions. Small bowel obstruction is relatively a rare complication of uterine leiomyoma and occurring either as a result of compression of bowel loops by a large leiomyoma in the peritoneal cavity (as in this case), bowel loops incarceration between large pedunculated leiomyoma or bowel adhesions to the infarcted leiomyoma. Possibility of leiomyoma as the culprit causing intestinal obstruction to be considered especially in females with fibroid who present with an acute abdomen.

Keywords: Uterine leiomyoma, Acute abdomen, Small intestinal obstruction

INTRODUCTION

Uterine leiomyoma is a benign monoclonal tumour of smooth muscle cells of uterus.[1] Majority of them are asymptomatic and incidentally detected. The symptomatic presentation depends upon the anatomic subtype and size of the fibroid and manifests as menstrual irregularities (abnormal uterine bleeding), dysmenorrhea, infertility, recurrent pregnancy loss lower abdominal pain or pelvic pain and pressure symptoms.[2]

Causes of acute abdomen in case of uterine fibroids are degeneration of fibroid, torsion, haemorrhage, or thrombosis and very rarely an acute small intestinal obstruction.[2] We report a similar case of uterine leiomyoma which presented as an acute abdomen and meticulously managed in our department.

CASE REPORT

A 40-year-old nun sister presented to our emergency department with complaints of diffuse abdominal pain and abdominal distension for 2 days associated with decreased appetite for past one week, she also had nausea, vomiting, constipation and fatigue. She had regular menstrual cycles with 28–30-day cycle with normal flow, with no significant past or family history. Her vitals were stable with normal systemic examination. Abdominal examination showed distended abdomen with diffuse tenderness all over abdomen. A midline mass corresponding to 24-week size gravid uterus and another mass occupying right lumbar area, approximately 10×10 cm, which is firm in consistency and transversely mobile. No guarding or rigidity. No fluid thrill or shifting dullness. Bowel sounds sluggish. The speculum and vaginal examination were deferred due to her being a nun sister.

Blood investigations showed HB: 10.9G%, PCV: 35%, TC:3400/cumm, platelet: 3.5 lakh/cumm, electrolytes: sodium- 139 mEq/l, potassium-3.9 mEq/l. Ultra sonogram abdomen and pelvis showed enlarged uterus with multiple intramural fibroids, largest fibroid 11×9.5 cm. Another large right sided pedunculated/ broad ligament fibroid of size 15.1×9.7 cm (Figure 1, blue arrow), torsion could not be ruled. No obvious internal vascularity demonstrated (Figure 2). Compression of bowel loops, small bowel loops dilated, mild ascites noted.

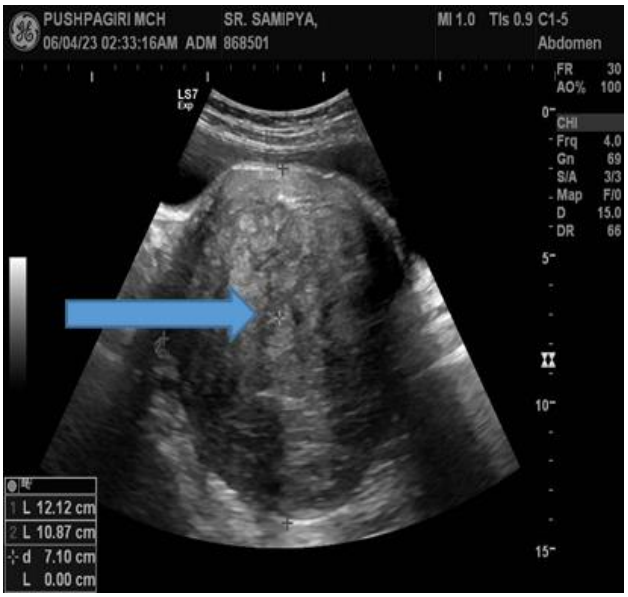

Figure 1: Ultra sonogram image showing large pedunculated fibroid.

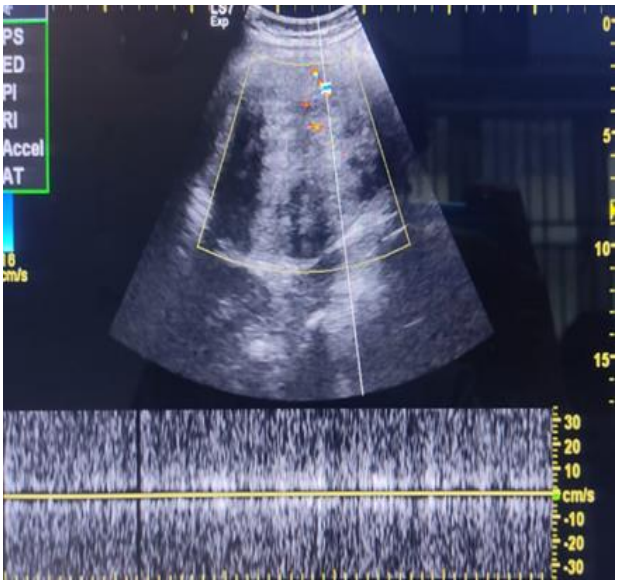

Figure 2: Ultra sonogram image of large fibroid with no internal vascularity.

X-ray erect abdomen taken to rule out intestinal obstruction, revealed dilated bowel loops (Figure 3) with multiple air fluid levels (Figure 4).

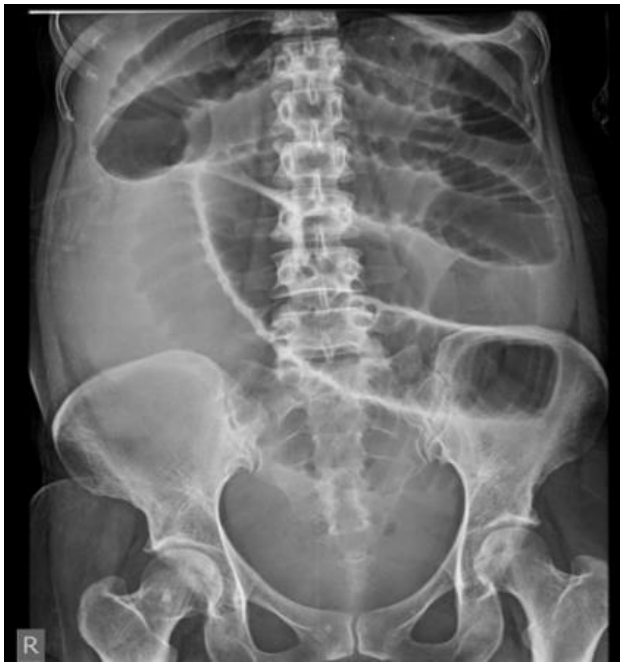

Figure 3: X-ray erect abdomen showing gas filled small bowel loops.

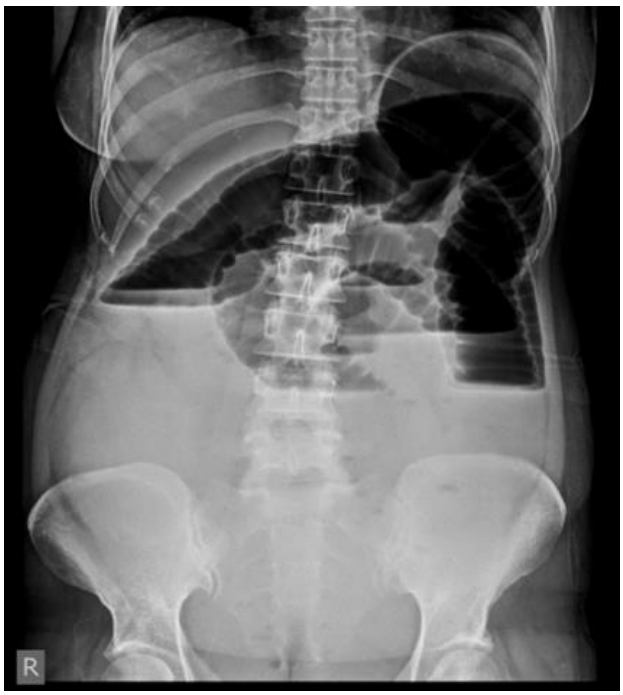

Figure 4: X-ray erect abdomen showing multiple air fluid levels.

CECT abdomen and pelvis confirmed our diagnosis and reported uterus enlarged with multiple fibroid largest 11.9×9.7 cm in left lateral wall. Well defined smoothly marginated non enhancing lesion 12.6×9.6×12.4 cm from right iliac fossa extending to the right lumbar region with tubular structure with hyper dense contents connecting to the right lateral wall of uterus- probably torsed pedunculated uterine leiomyoma (Figure 5, blue arrow).

Dilated small bowel loops (jejunal, proximal and mid ileal) (Figure 6, red arrow) with some of them appearing fluid filled and some with air fluid level. Terminal ileum appears to be collapsed. No evidence of abrupt luminal narrowing-adynamic ileus.

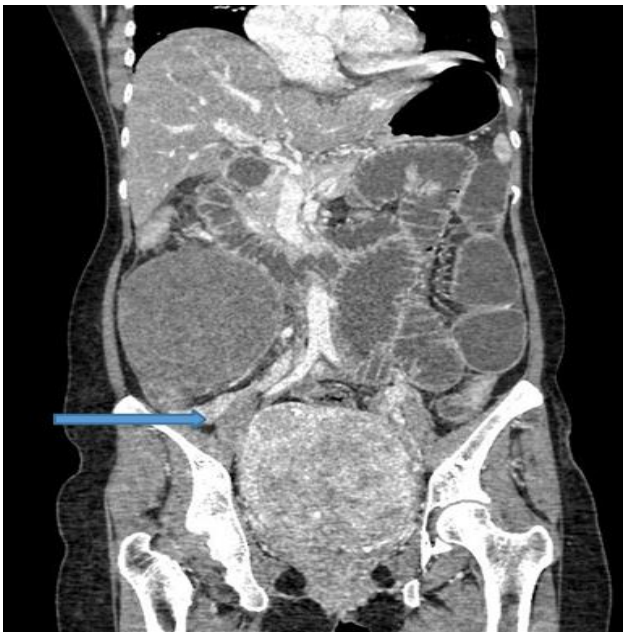

Figure 5: CECT image showing large pedunculated fibroid which has under gone torsion on its pedicle (blue arrow).

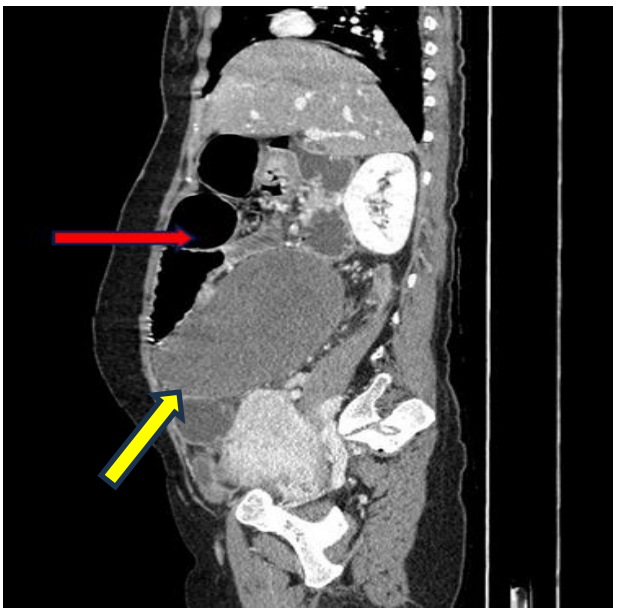

Figure 6: CECT image showing dilated bowel loops (red arrow) filled with air and large uterine leiomyoma (yellow arrow).

She was started on continuous Ryle's tube aspiration which drained 25 ml bile-stained aspirate and started on antibiotics (Cefuroxime 1.5 g and metronidazole 500 mg intravenously). Decision was taken up for emergency exploratory laparotomy along with gastro surgical team with provisional diagnosis of torsion of pedunculated fibroid causing acute intestinal obstruction.

Intraoperatively dilated small bowel loops noted overlying the uterine mass. Uterus enlarged to size of 20 week gravid uterus with a large pedunculated sub serous fibroid approximately 10×10 cm arising from right side of uterine fundus, twisted twice on its pedicle, resting on the small bowel loop (Figure 7 and 8 yellow arrow). Also, a left broad ligament fibroid of similar size present. Small bowel loops were dilated (Figure 8) due to gaseous distension until ileocecal junction severe enough to cause a transverse serosal tear (2 cm) at middle of ileum. Large bowel loops appeared collapsed. There was no evidence of transition point or obstruction or adhesions or necrotic or gangrenous area in bowel loops. We proceeded with hysterectomy. Transverse serosal tear sutured by the gastro surgical team and confirmed the normal peristaltic activity of the bowel.

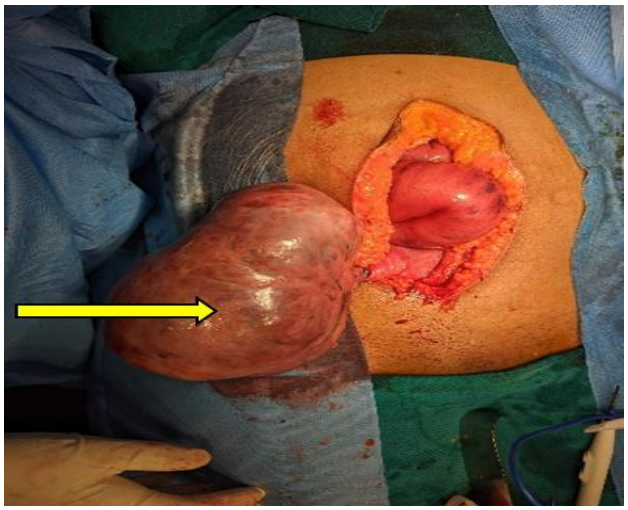

Figure 7: Intraoperative finding of large torsed pedunculated subserous fibroid.

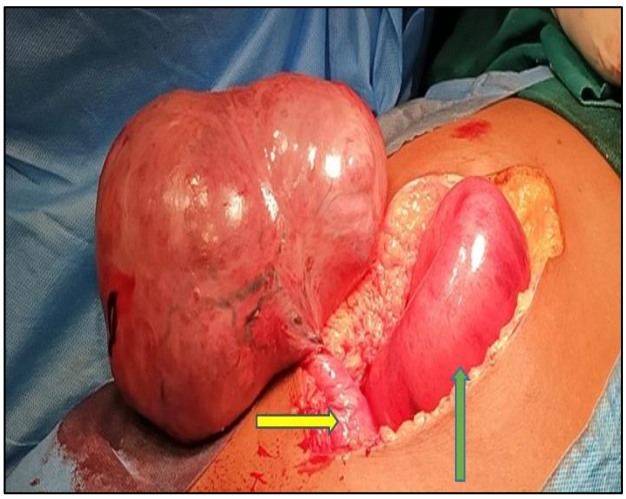

Figure 8: Pedunculated subserous fibroid, twisted twice on its pedicle (yellow arrow) with dilated bowel loops adjacent to it (green arrow).

Postoperatively IV antibiotics and Ryle's tube aspiration continued. Started with clear fluids on immediate postoperative day and tolerated it well. Hypokalaemia (up to 3 mEq/l) noted and corrected. Rest of the postoperative days was uneventful and discharged on POD11 with a healthy, healing wound, normal bowel and bladder habits. On 6-week follow-up abdomen was soft, wound healed, normal bowel habits. The histopathology reported pedunculated sub serous leiomyoma with focus of haemorrhagic necrosis and degenerative changes and uterus with intramural leiomyoma no remarkable changes. With the appropriate diagnosis and timely intervention, we were able to avoid bowel necrosis and gangrene formation, bowel perforation and peritonitis. Both which would have resulted in bowel resection and anastomosis.

DISCUSSION

Leiomyoma are benign, monoclonal tumour of the smooth muscle cells of the myometrium and contain large aggregations of extracellular matrix composed of collagen, elastin, fibronectin, and proteoglycan.[1] They affect 25% of women in reproductive age group while causing symptoms only in 25%. Diagnosis is by history and physical examination. Asymptomatic cases are diagnosed with Ultra sonogram (most sensitive diagnostic modality). Computed Tomography (superior in terms of its advantage of guiding the cause of obstruction). MRI allows evaluation of the number, size, and position of sub mucous, intramural, and sub serous fibroids and can evaluate their proximity to the bladder, rectum, and endometrial cavity.[1] Management should be individualised depending on age of the patient, symptoms, size and type of fibroid, and most importantly desire for fertility.

Reports of rare presentation of leiomyoma causing small bowel obstruction are limited, only handful of cases in medical literatures.[3,4] Bowel loops incarceration between large pedunculated leiomyoma, bowel adhesions to the infarcted leiomyoma and as large leiomyoma causing compression of bowel in the peritoneal cavity.[4-6]

Intestinal obstruction is of two types, dynamic (caused by a mechanical obstruction) and adynamic (absent peristalsis with no mechanical obstruction).[7] Irrespective of aetiology or acuteness of onset, in dynamic (mechanical) obstruction the bowel proximal to the obstruction dilates. Diagnosis of dynamic intestinal obstruction is based on the classic quartet of pain, distension, vomiting and absolute constipation.[7] Erect abdominal films are ordered and further confirmed with contrast enhanced computed tomography. The management of an acute intestinal obstruction is Ryle's tube aspiration, fluid and electrolyte correction and definitive treatment by relief of obstruction surgically.[7]

CONCLUSION

Reproductive women when presenting with an acute abdomen, consider small intestinal obstruction as a differential diagnosis. After excluding frequent causes of intestinal obstruction, uterine leiomyoma should also be considered as a rare potential culprit. With pertinent diagnosis and prompt intervention, we can forestall emergence of further complications.

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