Case Report

A rare case of secondary small bowel volvulus due to twisted ovarian cyst

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Small gut volvulus is a life threatening surgical emergency. Small gut volvulus is an uncommon entity, uncommoner still is a small gut volvulus with a secondary cause. We present the rare case of a secondary small gut volvulus due to a twisted ovarian cyst in a 50 year old woman.

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Key words **: Intestinal obstruction, small bowel volvulus, twisted ovarian cyst.**

Volvulus describes the condition in which the bowel becomes twisted on its mesenteric axis a situation that results in partial or complete obstruction of the bowel lumen and a variable degree of impairment of its blood supply[1]. The clinical presentation is that of an acute abdomen[2]. The aetiology may be primary or secondary, where other predisposing factors initiate the volvulus[3].

In Western countries above 86% of small bowel volvulus are of secondary type[2], but in Africa, Asia, including Indian subcontinent, majority of small bowel volvulus are of primary type[3]. Though various causes for secondary small bowel volvulus have been reported, no case has been reported till date in adults where small bowel volvulus is secondary to twisted ovarian cyst.

Case Report

A 50 year old post menopausal 3rd gravida female presented at the emergency of the hospital with history of pain abdomen for last 36 hours. The pain was sudden in onset, initially colicy, localized at the lower abdomen, which later became continuous and generalized. The patient had history of obstipation for last 24 hours. The patient had a few episodes of bilious vomiting. There was no other significant complaint. The patient had no past history of medical illnesss or surgical intervention.

Examination — There was mild pallor, temperature was not raised, pulse rate was 98/min and BP 110/72 mmHg. Abdominal examination revealed distended tympanic abdomen. Generalized abdominal tenderness was present but rebound tenderness was absent. No obvious lump was palpable on abdominal palpation. Per-rectal examination revealed an empty rectum with ballooning.

Investigations — A straight X-Ray abdomen was done is erect posture which revealed gas filled bowel loops with multiple air fluid levels (Fig 1). A provisional diagnosis of acute intestinal obstruction was made and emergency laparotomy was performed.

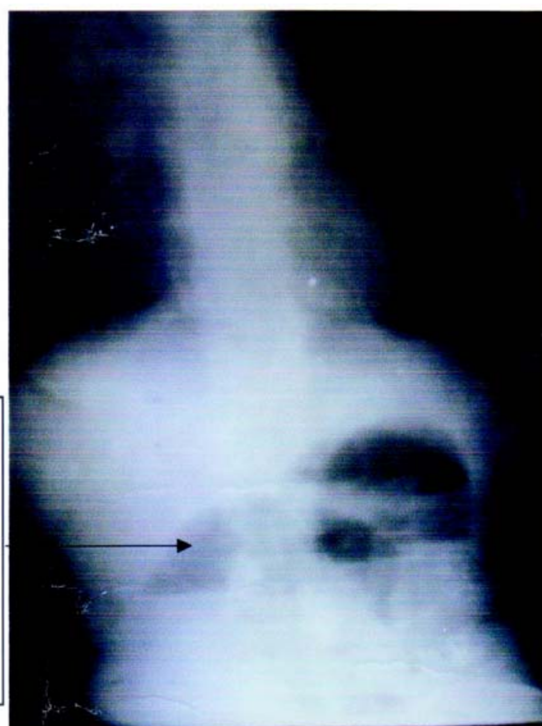

Fig 1 — Straight X-ray abdomen

Intervention — Abdomen was opened through mid line vertical incision under general anaesthesia. The small bowel loops were grossly dilated. A plum colored right side twisted ovarian cyst was seen around whose pedicle a portion of terminal ileum had twisted clockwise one and half turns resulting is secondary small bowel volvulus. The attempt to derotate the gut was unsuccessful initially.

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A right salpingo-oophorectomy was done after which derotation of gut was possible. The rotated ileum was viable, though inflamed, and hence no further surgery was done. The salpingo-oophorectomy specimen was sent for HPE. The abdomen was closed as per routine (Fig 2).

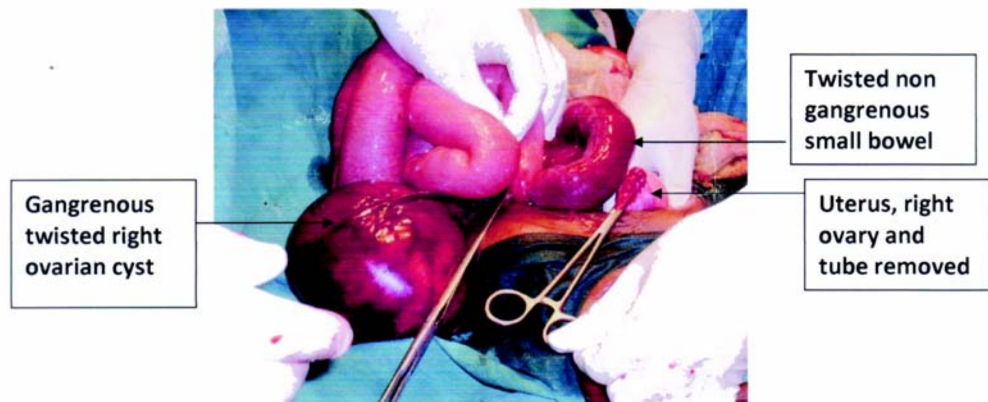

Fig 2 — Intraoperative finding

Follow up — Postoperative period was uneventful. The HPE revealed cystadenoma of right ovary.

Discussion

Small bowel volvulus is a rare entity. Mortality in various studies is 10-35%[3]. Incidence of small bowel volvulus varies from 1.7-5.7 / 1,00,000 population is Western countries compared to 24-60/ 1,00,000 population is Africa and Asia, primary volvulus being more common there[3].

Secondary small bowel volvulus may develop as a result of various congenital and acquired pre disposing factors[2]. The most frequently related conditions are bands, adhesion, Meckel's diverticulum, internal hernia and pregnancy. Other associations that have been reported include illeal atresia, Meconium ileus, leiomyoma of the mesentry, eneteroenterostomy and following operation, particularly gastrostomy, gastrectomy and total hip replacement[3].

Secondary small bowel volvulus is uncommon in those < 40 years of age with a peak incidence in the 6th and 8th decade. The reported patient was in her 5th decade. Though the reported case was of a female, yet males predominate in both primary and secondary volvulus[3].

Twisting of pedicle is commoner in right sided ovarian cyst[4]. No case of secondary small bowel volvulus due to twisted ovarian cyst has been reported in adults till date. However, there are 19 reported cases of neonatal ovarian cysts resulting in bowel obstruction. Two mechanisms exist for bowel obstruction, adhesions caused by torsed necrotic ovary and mass effect of a large ovarian cyst[5]. Ovarian cancer can cause small bowel obstruction but the pathogenesis of obstruction is totally different from that of small bowel volvulus[6].

A case of colonic stricture secondary to torsion of an ovarian cyst has been reported in a newborn born at 41 weeks of gestation after a normal pregnancy and delivery. The left fimbria and ovary twisted around the sigmoid colon causing colonic obstruction[7]. Another case of acute interstinal obstruction caused by twisted ovarian cyst has been reported in a 7th para African adult woman; the obstruction was caused by reflex nervous paralysis of the lower part of the gut due to twisting of ovarian pedicle[8].

Conclusion

Secondary small bowel volvulus is itself a rare cause of acute intestinal obstruction. Though reported in neonates, no case of secondary small bowel volvulus due to twisted ovarian cyst in adults has been reported till date. The mechanism in this case is very similar to that of a band, where the twisted pedicle acted as the precipitating cause. This case had a favorable outcome due to early intervention.

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