



Case Reports

Malrotation of Gut with Internal Mesocolic Hernia Mimicking Mesenteric Cyst

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Abstract

Various clinical presentations from chronic abdominal pain to acute midgut volvulus with ischaemic bowel injury may result from failure of normal intestinal rotation and fixation. A patient having malrotation and internal herniation of gut clinically presented to us with intermittent abdominal pain, bilious vomiting and abdominal mass mimicking mesenteric cyst. This is a very rare and exceptional form of presentation of malrotation of gut. Rarity of the clinical presentation leads us to report this case.

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Case Note

Master U, a boy of three years hailing from Atrai thana of Naogaon district came with the complaints of abdominal swelling, intermittent colicky abdominal pain and bilious vomiting for eight days and with past history of several episodes of similar attack.

On clinical examination, the patient was mildly dehydrated and pale; his abdomen was not distended but a tender soft mobile lump of 10x15 cm in diameter was palpable in the central abdomen. Per rectal digital examination revealed no abnormality. Our clinical diagnosis was enterogenous mesenteric cyst with intermittent twisting of its pedicle and differential diagnosis was matted inflammatory bowel loops (intestinal tuberculosis). Sonogram of the abdomen revealed mesenteric adenitis. Findings of the plain X-ray

abdomen, chest skiagram, blood count and ESR were within normal limits. So diagnostic dilemma was still persisting.

Finally after adequate preparation, laparotomy was on 22nd May 2001, which revealed internal herniation of whole small gut within the transverse mesocolic sac, caecum was floating and duodenum was on the right side of the midline. Peroperatively we diagnosed the case as malrotation of gut with mesocolic internal hernia. After reduction of all herniated loops of small gut mesocolic defect was repaired. The mesentery was widened by blunt dissection and intestinal coils were replaced in the peritoneal cavity. Postoperatively he recovered uneventfully.

Discussion

The term malrotation refers to a condition in which the midgut, part of the intestine supplied by the superior mesenteric vessels extending from the

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duodo-jejunal flexure to the midtransverse colon, remains unfixed and suspended on a narrow based mesentery.¹

The narrow pedicle formed by the base of the mesentery in malrotation predisposes the midgut to clockwise twisting from the duodenum to the transverse colon.² Excessive length of the mesentery or a point of adhesion at the convexity of the loop may act as an axis for a twist.³

Malrotation may go undetected throughout the life. Approximately 60% of cases are encountered in the 1st month of life and over 40% of these within the 1st week.⁴

The primary presenting sign of malrotation is the sudden onset of bilious vomiting in previously healthy, growing infant.⁵ Abdominal cramps are common. As vascular compromise progresses, intraluminal bleeding may occur and blood is often passed per rectum. Abdominal tenderness varies but sign of peritonitis are invariably present.

Intermittent or partial midgut volvulus is less frequent than acute volvulus and results in lymphatic and venous obstruction with enlargement of the mesenteric lymph nodes. This situation is more commonly encountered in children older than 2 years of age.⁶

Recurrent abdominal pain and malabsorption are the two primary presentation of chronic midgut volvulus. Bilious vomiting in conjunction with abdominal pain should be considered as surgical problem until proven otherwise.⁷

Lack of fixation of the mesentery of the right and left colon or of the duodenum may result in the formation of potential spaces for hernias. Internal hernias permit recurrent entrapment of bowel with partial obstruction. Right and left mesocolic hernias are the most commonly seen forms of internal hernias.⁸

Contrast radiography is essential for clinical evaluation and diagnosis of disorder of rotation and fixation of gut. Plain abdominal radiography is

often not helpful. Ultrasonogram is more important for diagnosis of internal herniation.

Infant with protracted vomiting may be dehydrated and shows signs of hypovolaemia and hypochloroemia that needs rapid resuscitation.

Prolongation of resuscitation effort, however, is unwarranted because expeditious laparotomy is essential for survival. Additional measures, including placement of nasogastric tube, satisfactory intravenous access and administration of parenteral antibiotics should be undertaken as quickly as possible. The Ladd procedure corrects the fundamental abnormalities associated with malrotation with or without midgut volvulus.

Conclusion

Malrotation with internal herniation of gut may present, as a clinical confusion of mesenteric cyst causing intermittent intestinal obstruction should keep in mind about this rare possibility.

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