

PARADUODENAL HERNIA ; CASE REPORT

Siriporn POOLSIRI MD. ¹, Watcharin CHUNSAM MD.²

Internal hernia is a clinical problem of abnormal internal rotation and fixation of the intestine. Paraduodenal hernias are the commonest of internal hernia. The symptom and sign are recurrent, intermittent intestinal obstruction and non specific chronic abdominal pain. Because the clinical diagnosis of internal hernia is often difficult, imaging studies such as upper gastrointestinal study and small bowel follow through play an important role in establishing the diagnosis. In this case, we reported a case of left paraduodenal hernia which the patient suffered from recurrent non specific chronic abdominal pain.

CASE REPORT

A 6 year - old Thai girl, presented several times with the chief complaint of chronic intermittent colicky abdominal epigastric pain, on and off over the past few years and having noticed that the symptom was aggravated at night. Sometime, she presented with nausea and vomiting. Everytime, she was admitted and treated with bed rest, antispasmodic drug or treated as peptic ulcer or gastritis, which she was reported to have clinical improvement.

Plain abdomen, abdominal sonogram and the first upper GI study were read as normal study. Several months later, she presented again with the

same complaint. Upper GI with small bowel follow through study was done and showed the loops of small bowel crowded together in the hernial sac and widely separated from other segment of terminal small bowel that remained in the peritonium cavity. Paraduodenal hernia was concluded (figure 1-5). Exploratory laparotomy was performed and found nearly total herniation of small bowel in a retroperitoneal space through a defect on the left mesocolon, and a left paraduodenal (mesocolic) hernia was diagnosed. The patient made an uneventful recovery after the hernia was surgically repaired.



Fig. 1 A. Plain abdomen, supine

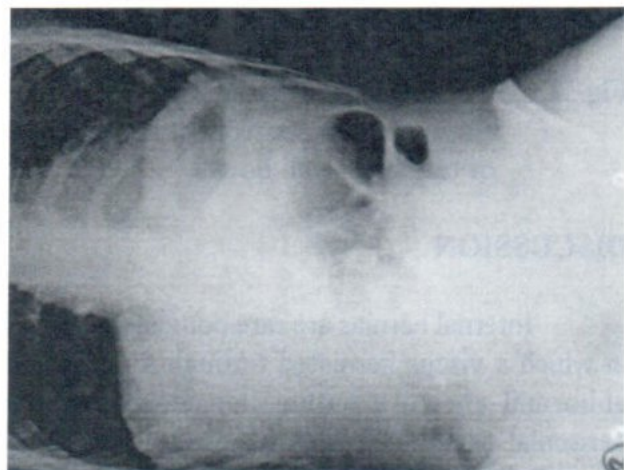


Fig.2 B. Plain abdomen, upright non specific small bowel dilatation.

¹ Devision of Radiology, Pranangkloa hospital, Nonthaburi, Thailand.

² Devision of Surgery, Pranangkloa hospital, Nonthaburi, Thailand.

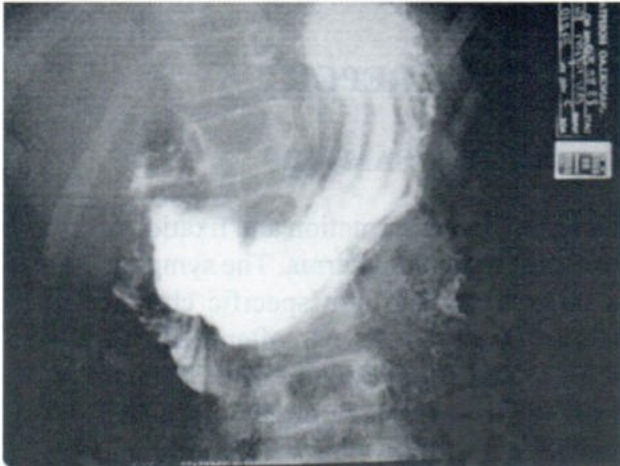


Fig 2 small bowel follow through study.
2.A normal stomach and duodenum.



Fig. 2.B 15 min after intake minimal dilated bowel loops in the left upper quadrant of abdomen.



Fig. 2.C 30 min widely separated of small bowel loops in hernia sac from other segments of terminal small bowel.



Fig. 2.D lateral abdomen, showing sac of paraduodenal hernia

DISCUSSION

Internal hernias are rare congenital lesions in which a viscus herniated through a normal or abnormal aperture within the confine of the peritoneal cavity. The true incidence of rotation abnormalities of the mid gut is difficult to be determined. The autopsy prevalence is high as 0.5 to 1% of the total population but the incidence of

clinical symptoms is substantially less. The incidence of symptoms leading to clinical diagnosis is estimated at 1 in 6,000 live births. 50- 75% of patients with malrotation who become symptomatic do so within the first month of life, and approximately 90% occur in children younger than 1 year of age. The remainder are seen later in life.

ETIOLOGY

1. Congenital. Some result from an abnormal internal rotation causing various defects in the developing peritoneum and mesenteries with lack of fixation of the mesentery of right and left colon and of the duodenum, results in the formation of the potential hernial pouches that containing the herniated viscera become enlarged, and a portion of the developing bowel elongates within them.
2. Following trauma.
3. Post surgical procedure.

Internal hernias can contain a few loops of bowel or almost the entire small bowel. More than half of all internal hernias are paraduodenal, resulting from failure of the mesentery to fuse with the parietal peritoneum at the ligament of Treitz (mesentericoparietal hernia). Depending on the position of the duodenum and the orientation of the opening of the paraduodenal fossa, either left or right paraduodenal hernias can result. The left paraduodenal hernia is about 3 to 4 times more frequent than the right.

CLINICAL FINDINGS

The presentation of patients with paraduodenal hernias, varies from mild intermittent gastrointestinal complaints to acute intestinal obstruction with volvulus and infarction from entrapment bowel, recurrent and intermittent bowel obstruction, which may lead to constant abdominal pain, vomiting and sometimes constipation. The symptoms are often considered to be psychological.

INVESTIGATION

A paraduodenal hernia is best demonstrated by an upper gastrointestinal series during the period of acute symptoms. Examination during an asymptomatic interval can fail to show the hernia or merely demonstrate a non specific

dilatation with stasis and edematous mucosal folds.

Even at surgery a paraduodenal hernia may not be evident, either because of the spontaneous resolution of the hernia or because of an inadvertent operative reduction due to traction on small bowel loops. In addition, the extent of potential space in a peritoneal fossa seen at exploratory laparotomy is generally not appreciated from the relatively small size of the orifice of the fossa.

The small intestine generally fills the lower half of the abdomen, extending laterally into each flank, where it is bounded by the colon, and downward into the true pelvis. The jejunum chiefly occupies the left side of the abdomen, and the ileum the right. Dilated loops of the jejunum or ileum extending beyond the midline are strong presumptive sign of the presence of an internal hernia, torsion or adhesions. In both types of paraduodenal hernia, the principal radiographic finding is that of displaced, bunched loops of small bowel that appear to be confined in a sac. In partial obstruction, dilatation of bowel loops and delay in transit time can be noted. In the more common left paraduodenal hernia, small bowel loops pass into the paraduodenal fossa posteriorly and into the left mesocolon, producing dilated loops of bowel clustered in the left upper quadrant of the abdomen lateral to the fourth portion of the duodenum. Paraduodenal hernias occurring on the right side are associated with incomplete intestinal rotation. The junction of the duodenum and the jejunum has a low, right paramedian position. The duodenum is dilated with the jejunal loops situated on the right side of the abdomen, extending into the right transverse mesocolon. In both types of paraduodenal hernias, transverse colon tend to be depressed inferiorly by the mass.

Repeated episodes of paraduodenal herniation can increase the size of the defect and lead to adhesions between the trapped bowel and hernia sac. This process can result in obstruction or circulatory compromise. Therefore, even a small paraduodenal hernia is potentially dangerous and is usually considered to be an operable condition.

TREATMENT

Neonates and infants with rotational abnormalities require operative management, laparotomy. The management of the older asymptomatic patient with malrotation is controversial.

In this case, the patient presents with suggestive symptom even though the initial investigation including ultrasonogram of the whole abdomen, and the first upper GI study are negative, resulting in the delay of the surgical treatment. The second gastrointestinal follow through study was done during acute symptom which resulted in the demonstration of the paraduodenal hernia. The finding led to curative treatment with exploratory laparotomy.

CONCLUSION

Paraduodenal hernias are rare. Most of them are congenital, but the rest are incidences of after trauma or post surgical procedure. They usually present during early childhood and often were delayed due to non specific abdominal

symptoms. During asymptomatic period, definitive diagnosis may be possible. With recurrent and intermittent intestinal obstruction, upper gastrointestinal series study is recommended during acute symptom.

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