Incarcerated transmesenteric hernia following appendectomy in Pediatric patient: case report

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Abstract

Transmesenteric hernia is a rare cause of bowel obstruction. It can be strangulation and sepsis following obstruction and delay diagnosis. There are so many causes of transmesenteric hernia, more commonly described in postoperative patients, blunt abdominal trauma, inflammatory disease and less likely congenital.

We present a case of transmesenteric hernia with incarcerated and strangulation of small bowel in 11-year old girl. She had previous surgery from appendicitis 1 month ago. This admission she had treat as severe gastritis and supportive treatment for 1 night and her symptom get worse and become early sign of sepsis. Investigation show she had transmesenteric hernia with bowel strangulation. Emergency laparotomy was performed. We found small bowel ischemia from herniation through ileum mesentery from adhesion of ileum to abdominal wall. We resection ischemia segment of ileum and anastomosis and lysis adhesion to prevent another attack of gut obstruction.

Key word: internal hernia, transmesenteric hernia,small bowel ischemia,closed loop obstruction, small bowel obstruction.

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Introduction

Incidence of The internal hernias are a rare pathology with an incidence of about 0.2–0.9%[1] Transmesenteric hernia only constitute an estimated 5–10% of cases.[2] despite being congenital, they may occur at any age.[3] They are defects of about 2–5 cm diameter and are typically located in proximity to the angle of Treitz or th ileocecal valve.[4] They involve, more frequently, the small bowel and, very rarely, the colon.

Case report

A 11-year-old girl patient, with no relevant medical history, presented at the emergency department with a clinical picture characterized by abdominal pain in the upper quadrants, associated with nausea and vomiting more than 10 times. Abdominal examination, there was intense diffuse abdominal pain without clear signs of peritoneal irritation. The analytical study showed leukocytosis, and dehydration she had no fever. She had history of appendectomy 1 month ago, and had abdominal pain 10 day before this admission.

She got provisional diagnosis severe gastritis from primary doctor at emergency department and hospitalization. After admission she complain abdominal pain and look weak , pediatric department sent her to investigation with film x-ray Acute abdomen series.

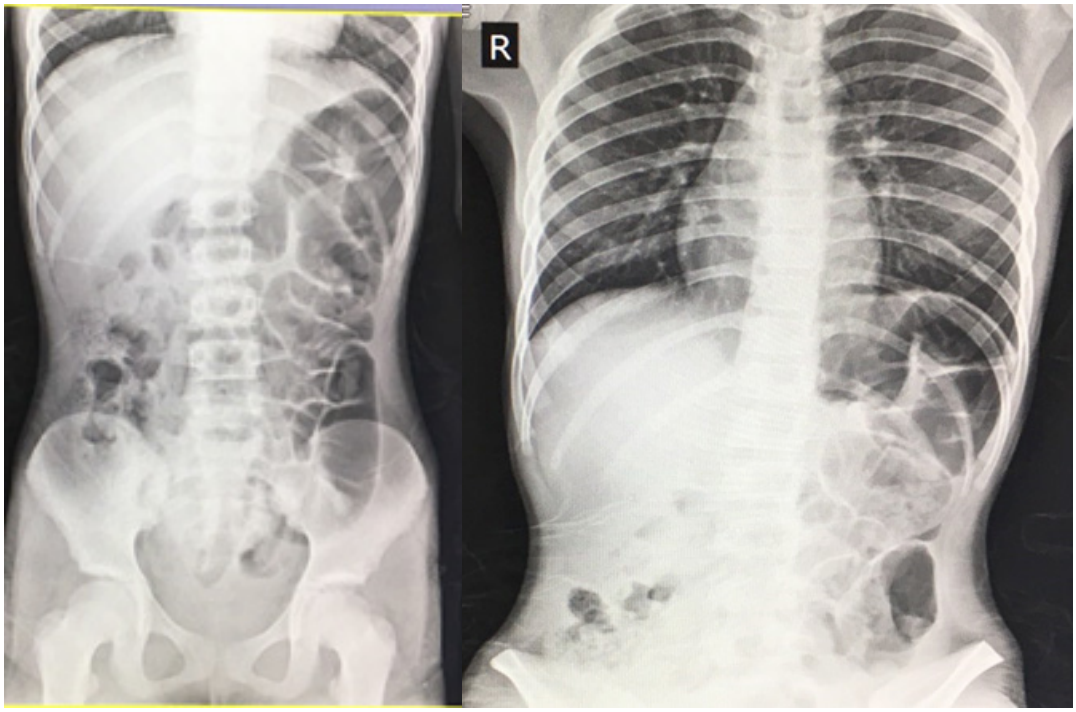

Figure 1. Film abdomen supine and upright show small bowel and large bowel dilatation.

She got diagnosis as small bowel obstruction and retain NG tube and give resuscitation fluid. Her symptom 8 hours later not improve her laboratory show more leukocytosis and acidosis. She complaint abdominal pain at pelvic area. Abdominal examination she had tender at lower abdomen and peritonitis. Pediatrician sent her to CT scan and consult Surgery. Result of CT scan show as figure

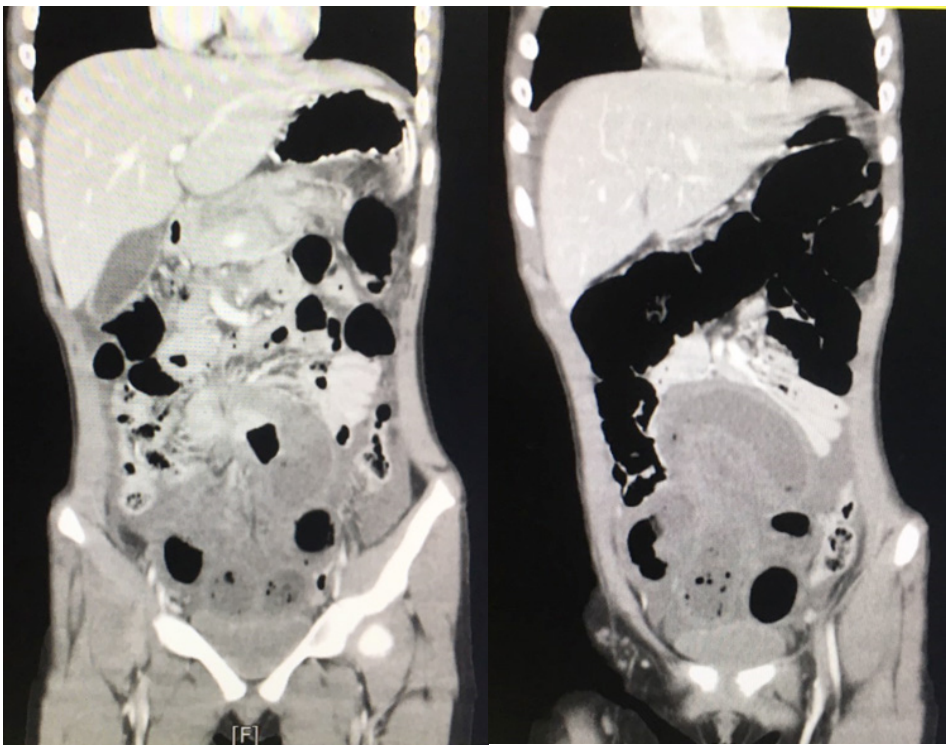

Figure 2. Coronal view of CT whole abdomen show incarcerated hernia with twisted mesentery at right lower abdomen with small bowel ischemia, moderate amount ascites

Report of CT scan whole abdomen :

Moderate degree of focal dilatation with lack of bowel wall enhancement of bowel loops locating at mid lower abdomen (probably ileum), Abrupt change of caliber at terminal ileum with twisted mesentery at right lower abdomen. No free air and generalized ascites

Conclusion : Finding are concern for chronic ileal loops obstruction with bowel ischemia probably due to transmesenteric hernia.

After result of CT whole abdomen. Patient was taken to operating room. We perform emergency laparotomy and found ileum ischemia from closed loop obstruction from transmesenteric hernia at ileum with dense fibrous adhesion to abdominal wall at Right lower abdomen away from surgical scar 5 cm medially. We lysis adhesion and resection 40 cm in length of distal ileum that ischemia and performed end to end anastomosis with hand sewn suture.

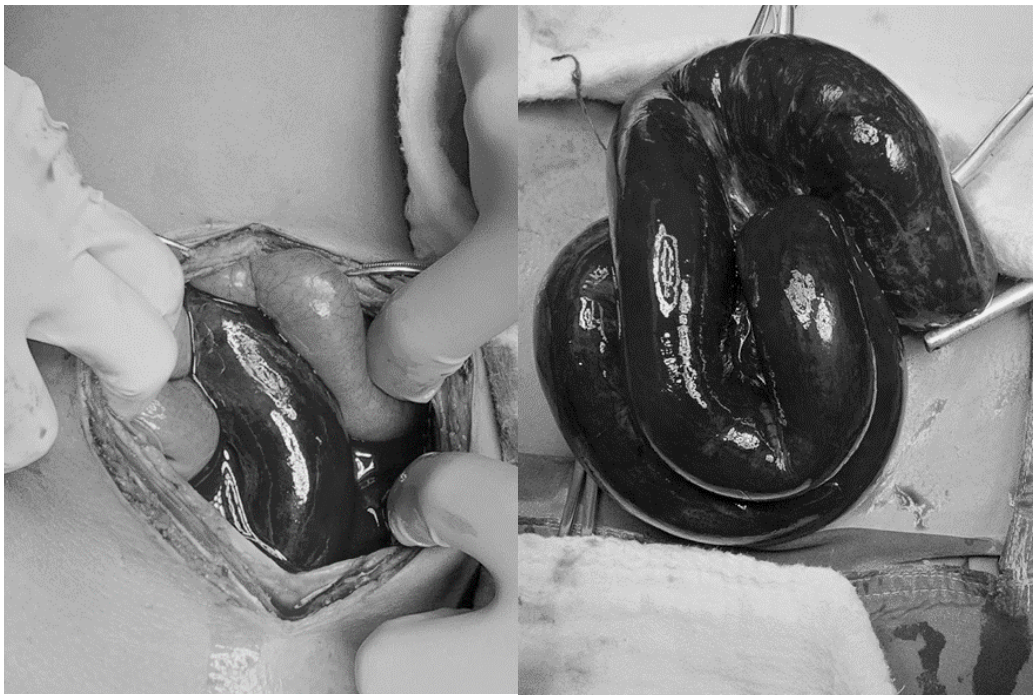

Figure 3. Intraoperative picture show segmental of distal ileum that ischemia.

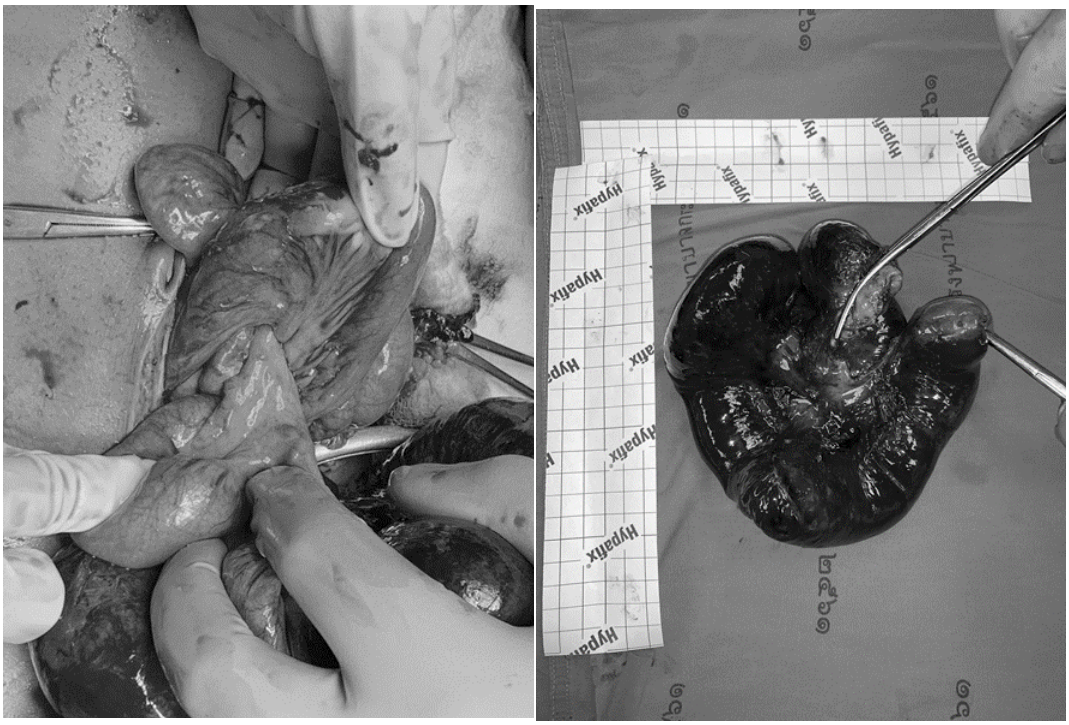

Figure 4. Intraoperative picture show (Left) Dense fibrous adhesion of ileum to abdominal wall and herniated loop of ileum that incarcerated and twisted mesentery. (Right) Specimen of ischemic distal ileum.

After surgery she had no fever ,no sequelae of organ damage and she can step diet and remove penrose drain and discharge after post op day 9.

Discussion

Although this case not true transmesenteric hernia because she don't have defect of mesentery but her pathology was made from small bowel adhesion to abdominal wall to created window of interbowel loop that can lead herniated bowel loop. So her clinical and operative finding and CT scan show as transmesenteric hernia.

In pediatric patients small bowel obstruction from transmesenteric hernia is very rare, Presentation of small bowel obstruction there are nausea vomiting, obstipation and colicky pain. In children we missed diagnosis small bowel obstruction from enteritis or gastritis but we should concern for small bowel obstruction in case of patient had previous surgery and remind small bowel ischemia especially if patient had abdominal pain dissociate to abdominal sign. Transmesenteric hernia and lack of specific radiological or laboratory investigations reaffirms the importance of surgeons maintaining a high index of suspicion for this surgical emergency.

Reference

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