

Chylous Ascites Revealing Intestinal Malrotation with Ladd's Bands in a 4-Month-Old Infant: A Case Report and Literature Review

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ABSTRACT

Background: Intestinal malrotation is a congenital anomaly that may present with bowel obstruction in infancy. Chylous ascites associated with malrotation is rare.

Case presentation: A 4-month-old infant presented with bilious vomiting, abdominal pain, paroxysmal crying, abdominal distension, and cessation of stool and gas passage. Ultrasound suggested intussusception. Exploratory laparotomy revealed a Ladd's band compressing the duodenum, malrotation with fixation defect, multiple mesenteric lymph nodes, and chylous peritoneal effusion. Ladd's procedure and appendectomy were performed. Outcome was favorable.

Conclusion: Chylous ascites may be an unusual manifestation of intestinal malrotation and should be recognized during surgical exploration.

INTRODUCTION

Intestinal malrotation results from incomplete rotation and fixation of the midgut. Bilious vomiting in infancy requires urgent surgical assessment. Chylous ascites is an uncommon finding and may result from lymphatic obstruction secondary to volvulus or congenital anomalies.

METHODS

Clinical, radiological, operative, and postoperative data were retrospectively reviewed. Intraoperative photographs were collected after anonymization.

CASE PRESENTATION (RESULTS)

A 4-month-old infant presented with generalized abdominal pain, paroxysmal crying, bilious vomiting, and absence of stool and gas for two days in a context of deterioration of general condition. Examination showed an irritable but reactive infant with mild abdominal distension. Plain abdominal radiography demonstrated small bowel air-fluid levels. Ultrasound suggested ileocolic intussusception with a 21-mm target sign in the right iliac fossa. Exploratory laparotomy identified a Ladd's band compressing the duodenum, intestinal malrotation, multiple mesenteric adenopathies, and diffuse milky/chylous peritoneal fluid between bowel loops and within the pelvis. Complete release of the Ladd's band, exploration, appendectomy, lavage, and drainage were performed. The bowel was viable throughout.

DISCUSSION

This case highlights a rare association between malrotation and chylous ascites. The initial radiologic suspicion of intussusception illustrates the diagnostic challenge. Chylous fluid may result from lymphatic compression by congenital bands, intermittent volvulus, or mesenteric lymphatic congestion. Several authors have reported resolution of chylous ascites after correction of malrotation. Early surgical exploration remains crucial in infants with bilious vomiting. The presence of mesenteric adenopathy may reflect inflammatory stimulation secondary to obstruction. Differential diagnoses include primary intestinal lymphangiectasia, mesenteric cyst rupture, tuberculosis, and congenital lymphatic disorders. The favorable bowel viability in this case emphasizes the importance of timely intervention before ischemia develops.

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Figure 1: Intraoperative view demonstrating intestinal malrotation, with the small bowel predominantly located on the right side and the colon on the left side of the patient.

CONCLUSION

Intestinal malrotation with Ladd's bands should be considered in infants presenting with bilious vomiting and bowel obstruction. Chylous ascites is a rare but important associated finding. Prompt surgical treatment can prevent intestinal ischemia and lead to excellent outcomes.

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