8th WORLD CONGRESS of PEDIATRIC SURGERY
WOFAPS
12-15 November 2025
Titanic Mardan Palace Hotel
ANTALYA, TÜRKİYE

Small Bowel Complications Following Choledochal Cyst Excision with Roux-en-Y Hepatico-jejunostomy – Insights from a Case Series

Kaushal Kulkarni, Pooja Prajapati, Vijai Datta Upadhyaya, Ankur Mandelia

Departments of Pediatric Surgery, SGPGIMS, Lucknow, India.

Introduction

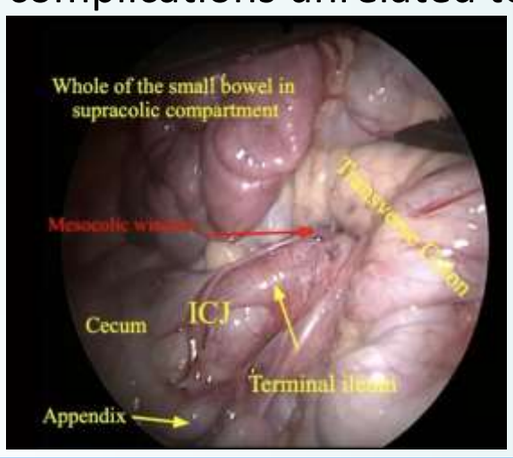
- Common causes of intestinal obstruction following definitive surgery for CBD include internal hernia (1.5%), adhesive intestinal obstruction (3-4%), and biliary-jejunal loop obstruction (0.8%)
- Following retrocolic Roux-en-Y hepaticojejunostomy, three potential mesenteric defects may arise:
  - **Peterson Space** : Between biliary-jejunal loop and transverse mesocolon
  - **Brolin space** : Between mesenteric attachments of two limbs of Y-shaped jejunal anastomosis
  - **Transverse Mesocolic defect** : Opening through which Roux limb passes through mesocolon
- Presentation – features of small bowel obstruction or that of Roux limb obstruction – a constellation of Nausea, Non- bilious vomiting, Colicky abdominal pain, Upper abdominal fullness

Aim

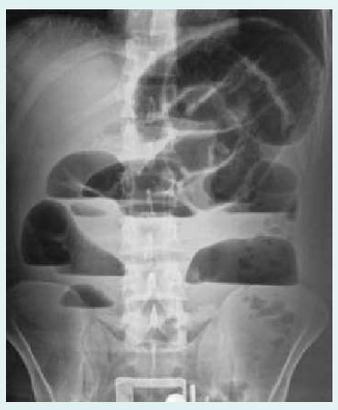
To review our experience in managing the Small Bowel Complications after Choledochal Cyst Excision + Roux-en-Y Hepato-jejunostomy (RYHJ)

Methodology

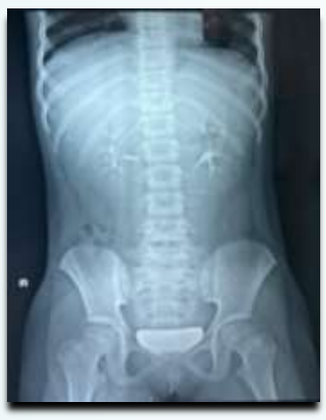
- Retrospective study of 4 patients – from 2019-2025
- Inclusion Criteria : All children under who underwent Laparoscopic/Robotic CDC Excision + RYHJ and presented with small bowel complications
- Exclusion Criteria : Children who presented with complications unrelated to the small bowel



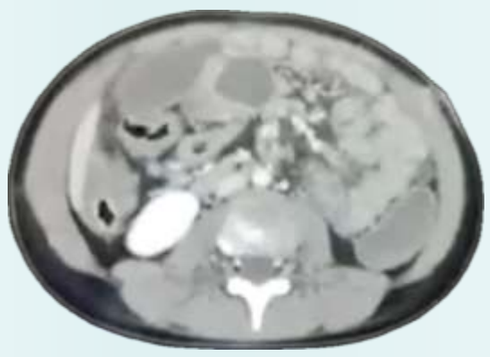
Results



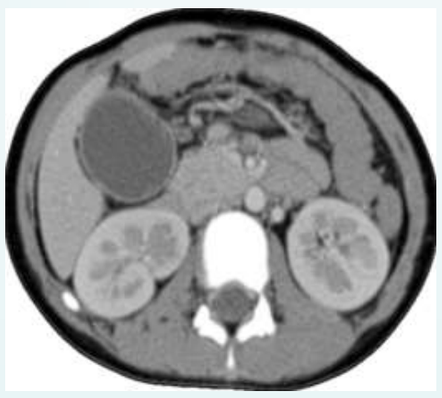
Adhesive Obstruction :
Air fluid levels ++



Roux limb Obstruction/ Internal Herniation : No Air fluid levels



Internal herniation of small bowel through mesocolic defect



Roux limb obstruction

n (Total)	4 (Robotic -50, Lap – 75)
Mean age [range]	7.25 (3-12) years
Male : Female	1:3
Primary surgery Robotic : Laparoscopic	1:1
Mean Duration : Primary surgery and Obstructive symptoms	15.25 (10-21) days
Mean Follow Up	14.25 (3-28) months

Discussion

- Four major types of biliary-jejunal loop obstruction:
  - Axial rotation of the Roux limb
  - Herniation of bowel into the Petersen's space, leading to obstruction or subsequent torsion ofthe biliary-jejunal loop
  - Herniation of the biliary-jejunal loop into the Brolin's space
  - Herniation of the biliary-jejunal loop through the mesocolic defect of the transverse colon, causing obstruction
- Presentation (abdominal pain and vomiting) requires differentiation from conditions such as biliary anastomotic stricture, reflux cholangitis, acute pancreatitis, acute gastroenteritis
- Abdominal CT is more valuable in evaluating abdominal pain and vomiting following Roux-en-Y reconstruction, especially when complications such as internal hernia need to be excluded
- Pathognomic imaging feature - biliary-enteric loop dilatation and intraluminal fluid retention

Conclusion

- A high index of suspicion should be kept in a post-op case of RYHJ presenting with typical comlaints
- Given the higher likelihood of
- internal hernia and its rapid progression to Roux limb necrosis, early surgical intervention should be considered.

References

1. Liu Z-s, Bian J, Yang Y, Wei D-c and Qi S-q(2025) Intestinal obstruction after surgery forcongenital biliary dilatation in children: diagnosis and management. Front. Pediatr. 13:1558884.doi: 10.3389/fped.2025.1558884