

CASE REPORT

UNUSUAL CASE OF TORSION GALL BLADDER WITH GANGRENE PRESENTING AS PERITONITIS

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ABSTRACT: Torsion of Gall bladder is extremely rare condition and poses diagnostic challenge. The incidence of this condition is uncommon in children. We report a case of torsion of Gall bladder in a child presenting as peritonitis which was only detected at laparotomy. The gallbladder was found to be twisted around its pedicle and to be gangrenous. Cholecystectomy was performed, and the patient had an uneventful postoperative course. We also reviewed 245 cases reported in the Japanese literature.

KEYWORDS: Torsion, Gangrene, Gall bladder, Peritonitis, Mesentry, Perforation, rebound tenderness.

INTRODUCTION:

- An unusual case of torsion of the gall bladder presenting with peritonitis in a 14yr old boy.
- Torsion of gall bladder has been reported in the literature suggesting the age of presentation in the seventh decade of life and uncommon in paediatric age group.
- The condition is very difficult to diagnose preoperatively and most often established at laparotomy.
- Torsion of G.B. with gangrene is extremely uncommon, unusual condition presenting as acute abdomen.
- The aetiology of this condition is mainly attributed to the long mesentry of the gall bladder and non-attachment of the gall bladder to the undersurface of the liver-floating gall bladder.

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- A 14 yr old boy reported to this institution with diffuse severe acute abdominal pain for the last 1 day.
- Associated with vomiting's, fever and anorexia.
- Past history of mild attacks of colicky abdominal pain which subsided spontaneously.
- **Examination:** The patient was in a state of shock with severe dehydration, tachycardia, tachypnoea, hypotension.

Abdominal examination revealed diffuse tenderness, rebound tenderness with rigidity. Bowel sounds were absent. Normal hernial orifices. All these features were suggestive of peritonitis due to hollow viscus perforation? Appendicular Perforation.

Investigations:

- Blood investigations- neutrophilic leucocytosis.
- X-ray abdomen- gas filled bowel loops.

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- Ultrasound abdomen - free fluid in the pelvis, paracolic gutters with internal echoes suggestive of peritonitis.

MANAGEMENT:

- The case posted for exploratory laparotomy & procedure under GA through a midline incision.
- On opening the peritoneal cavity, the following findings were appreciated.
 1. Gangrenous gall bladder with twisted mesentery –meso-gallbladder around 360 degree.^[1]
 2. About 700 ml of bile stained fluid in Morrisonsperisplenic paracolic gutters and pelvis present.
 3. Perforation of gall bladder of size 0.5cm X 0.5cm at fundus.
 4. Meckel's diverticulum with narrow base was a coincidental finding.
 5. Appendix, rest of the abdominal viscera are normal.
- Cholecystectomy & resection and anastomosis of Meckel's diverticulum was performed.
- Abdomen was closed in layers and skin wound secured with Clips.
- Post-operative period was uneventful and patient was discharged on 9th POD.

Histopathology:

- Inflamed congested hemorrhagic mucosa of the G.B. with chronic inflammation-hemorrhagic cholecystitis
- Follow up-the patient was asymptomatic after 6 months follow up period.

DISCUSSION:

- Torsion of the G.B. with gangrene and perforation is unusual condition causing peritonitis
- The common age incidence is in 7th decade of life.^{[1][2]}
- There are specific aetiologies for this condition, the commonest being lengthy gall bladder mesentery with floating G.B.- congenital.^[3]
- Other factors – old age leading to resorption of fat in G.B. fossa causing apparent lengthening of the duct and vascular pedicle making it vulnerable to torsion and gangrene.^{[1][2]}
- The condition is extremely difficult to diagnose pre-operatively and can only be suspected in CT scan abdomen with contrast.^[2]
- Gallbladder torsion observed by ultrasonography or computed tomography is a markedly enlarged "floating" gallbladder with a continuous hypoechoic line indicating edematous change in the wall.^[4]
- MRI & MRCP may be useful in definitive diagnosis.^[5]
- Several case series have been reported in Japanese literature.
- Cholecystectomy is the treatment option.^[3]

CONCLUSION: Torsion of gall bladder is extremely rare condition in paediatric age group. The common cause of this condition is the long mesentery of the gall bladder. This condition is difficult to diagnose preoperatively.^[6] A high index of clinical suspicion may be required because majority of the cases diagnosis is made at laparotomy.

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Fig. 1: Showing gangrenous gall bladder



Fig. 2: Gangrenous gall bladder on a twisted mesentery

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Fig. 3: Gangrenous gall bladder with long mesentery (Floating gall bladder)

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