A RARE CASE OF INTERNAL HERNIATION OF BOWEL WITH GANGRENE

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CASE REPORT

- Admitted with complains of pain in abdomen.

- On and off vomitting.

- X ray suggestive of few dilated bowel loops.

- USG mild ascitis, sluggish peristalsis.

- Patient in shock, not operable immediately.

- Inotropic support.

- Surgically explored after 12 hours, once pulses could be felt.
CASE REPORT

• CT abdomen done after stabilization:

  – Stomach and 1\textsuperscript{st}, 2\textsuperscript{nd} part of duodenum overdistended upto 3\textsuperscript{rd} part of duodenum.

  – 3\textsuperscript{rd} part of duodenum is abnormal in location and is herniating with 4\textsuperscript{th} part of duodenum, jejunum and adjacent mesentery into a cavity measuring approximately 8.7cm×11.2cm×8.2cm.

  – Sac is present anterior to the inferior mesenteric vein and posterior to the superior mesenteric vein s/o paraduodenal hernia.

  – Moderate ascitis.
INTRAOPERATIVE FINDINGS
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- Internal herniation of small bowel loops from D-J flexure upto I-C junction through a peritoneal recess.

- Herniac sac formed by peritoneum and contents strangulated by margins of the sac.
EXTENSIVE BOWEL ISCHAEMIA
CASE REPORT

• Once contents were reduced, there were changes of ischaemia extending from DJ upto IC junction.

• Resecting all the affected bowel would be incompatible with life
POST OPERATIVE PERIOD

• We waited for 48 hours as per protocol to allow any borderline viable tissue to reperfuse
SECOND LOOK LAPAROTOMY
CASE REPORT

• Around 1 feet of small bowel distal to the DJ flexure and approximately ½ feet of small bowel proximal to the IC junction had improved in colour.

• Demonstrable pulsations in mesentry and visible peristalsis.

• Gangrenous bowel was resected and stomas created
POSTOPERATIVE COURSE

• Patient required parenteral nutrition and I.V antibiotics for 2-3 weeks.

• Once physiology stabilized stoma closed after around 1 month.

• Post operative oral feeds started after 1 week.

• TPN support continued for 1 month post op.

• Discharged on oral diet after weight stabilized.
OPTIONS IN FURTHER MANAGEMENT

- Prolonged TPN
- Bowel lengthening procedures
- Intestinal transplantation
Internal hernia (IH) is defined as herniation of viscera through a normal or abnormal aperture within the peritoneal cavity.

Acute intestinal obstruction due to IH is quite unusual, representing 0.5 to 5.8% of reported intestinal obstruction.

However, IH is associated with high mortality of up to 50%.
DISCUSSION

• There are several types of congenital IH, which are classified according to their locations as follow:
  • Foramen of Winslow
  • Paraduodenal
  • Pericecal
  • Transmesenteric
  • Transomental
  • Intersigmoid hernias.

• The most common types that present in children are paraduodenal and transmesenteric hernias.
Internal Hernia

A = paraduodenal
B = foramen of Winslow
C = intersigmoid
D = pericecal
E = transmesenteric, transomental, and transmesocolic
F = retroanastomotic
G = falciform ligament
H = supravesical and pelvic
CURRENT GUIDELINES

• Internal herniation or transmesenteric hernias are extremely rare.

• A google search for internal herniation showed 6 case reports with all patients having gangrene. Outcome was dependent on segment of bowel incarcerated in the hernia.

• One study showed a mortality up to 57%.

• Symptoms usually develop once gangrene has set in.
CURRENT GUIDELINES

• USG and X ray have poor sensitivity for bowel ischaemia.

• CT scan with contrast is best method to detect bowel ischaemia.

• Second look laparotomy is gold standard method to salvage borderline viable bowel.

• Primary anastomosis should never be attempted in setting of sepsis and shock.