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A RARE CASE OF INTERNAL HERNIATION OF BOWEL WITH GANGRENE

- **Presentation by :**

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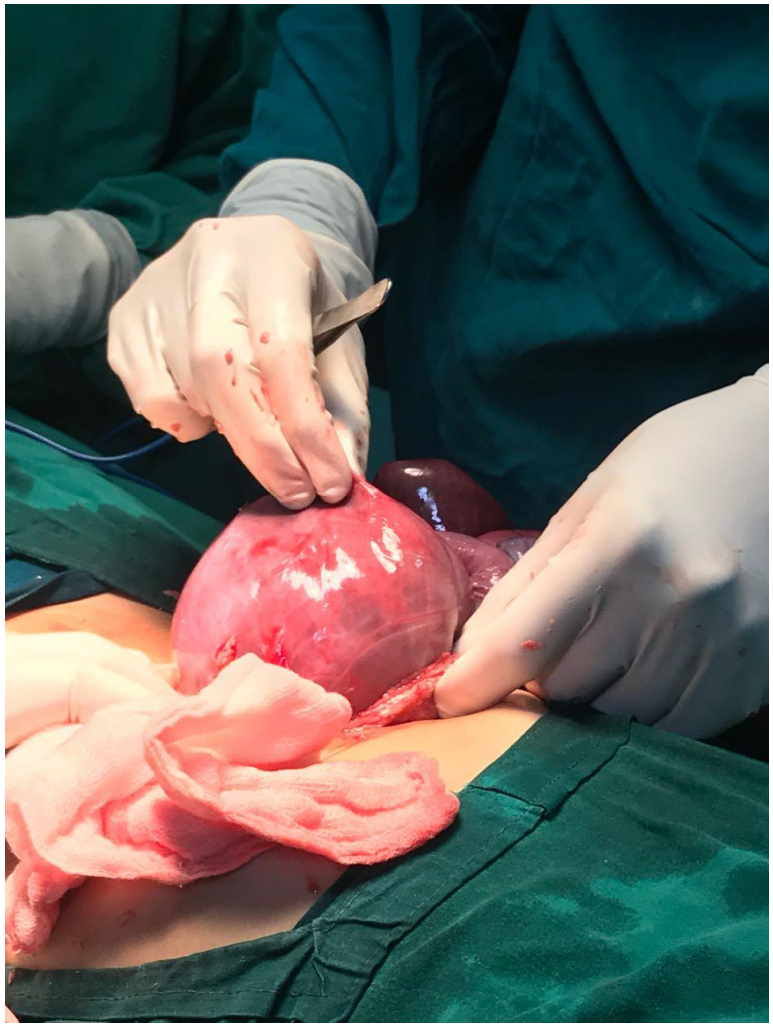
CASE REPORT

- **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 1st,2nd part of duodenum overdistended upto 3rd part of duodenum.**
  - **3rd part of duodenum.is abnormal in location and is herniating with 4th part of duodenum, jejunum and adjacent mesentery into a clsac 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

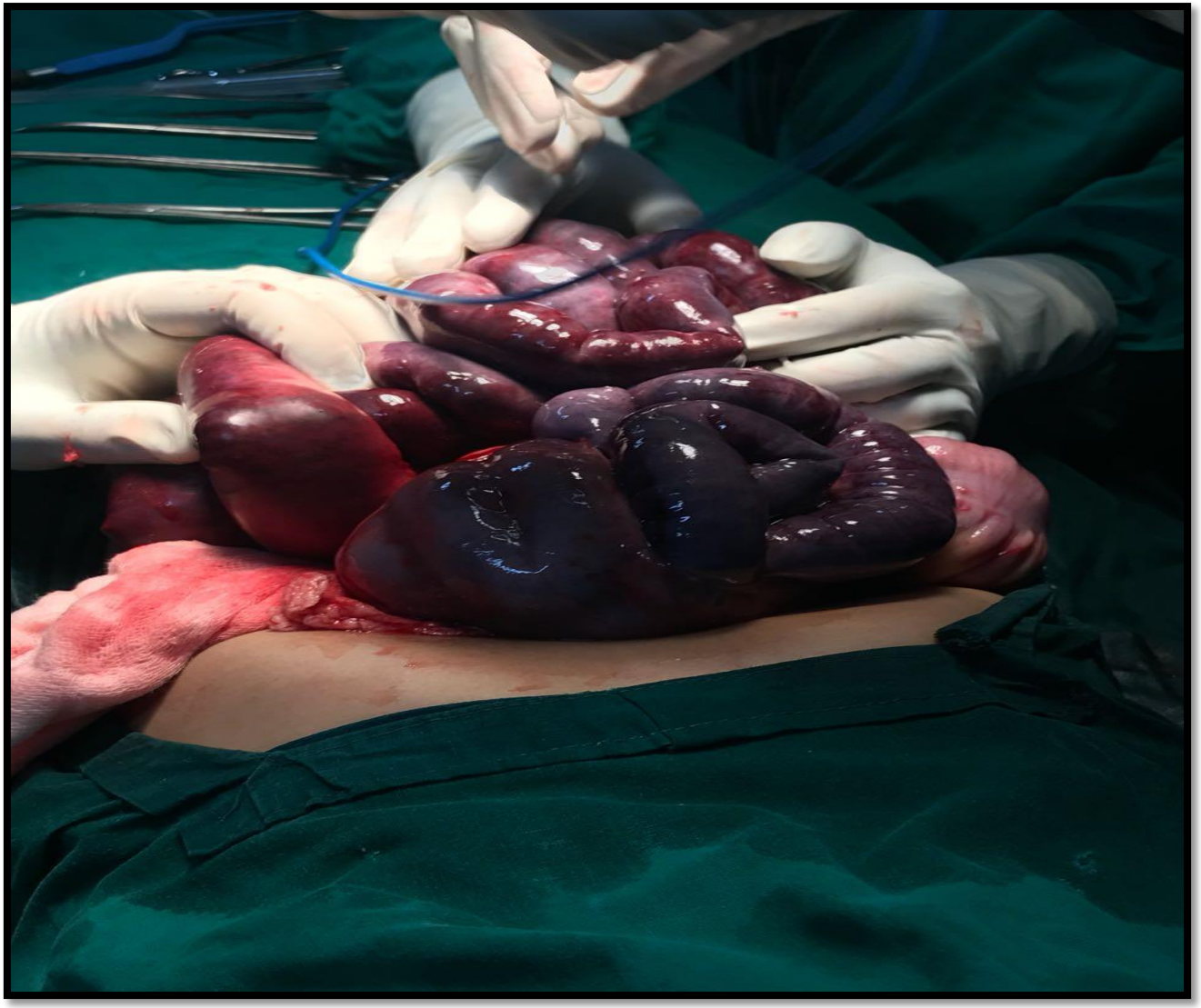


INTRAOPERATIVE FINDINGS

- **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



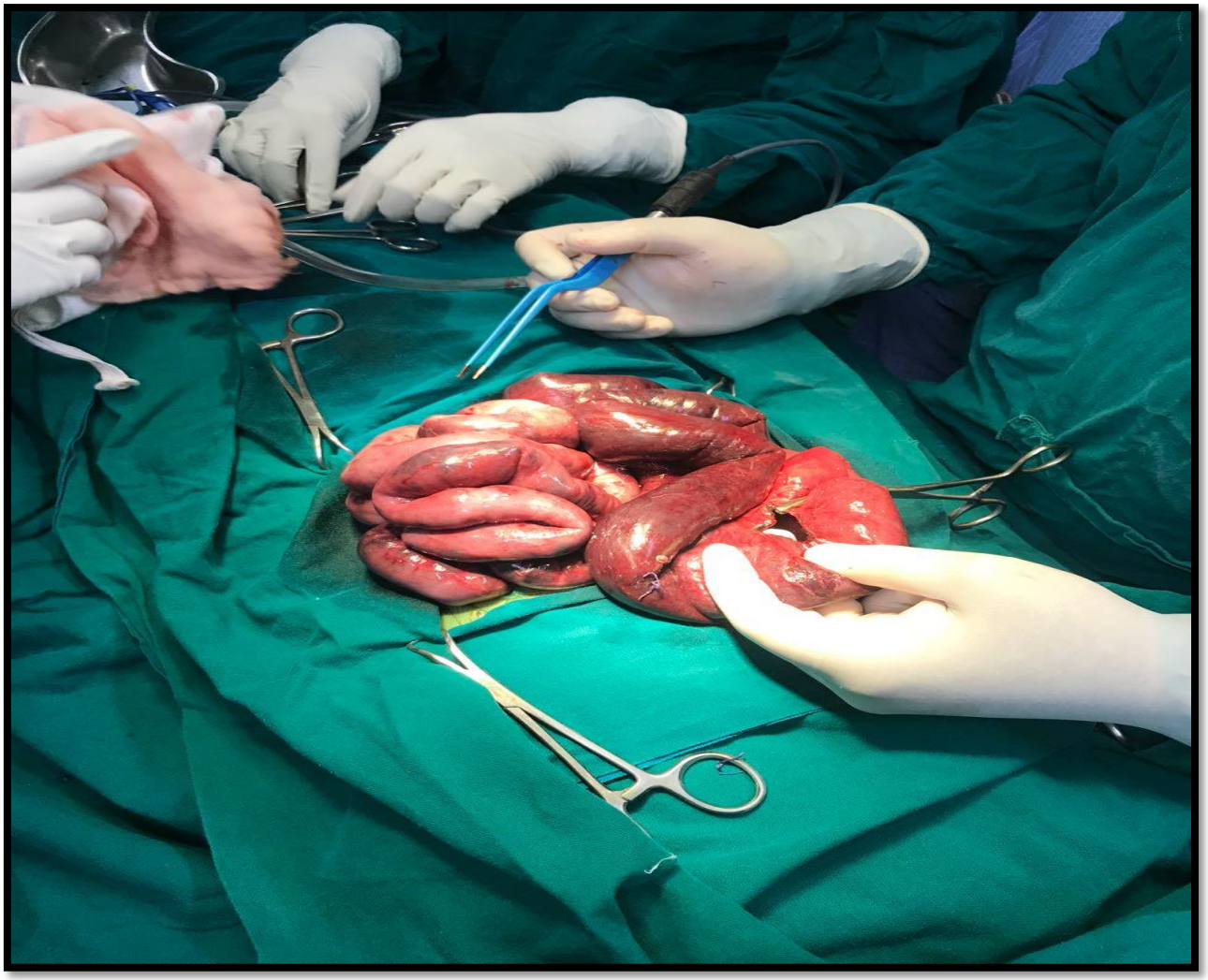
CASE REPORT

- **Once contents were reduced, there were changes of ischaemia extending from DJ upto IC junction.**
- **Resecting all the affected bowel would be incompatable with life**

POST OPERATIVE PERIOD

- **We waited for 48 hours as per protocol to allow any borderline viable tissue to reperfuse**

SECOND LOOK LAPAROTOMY

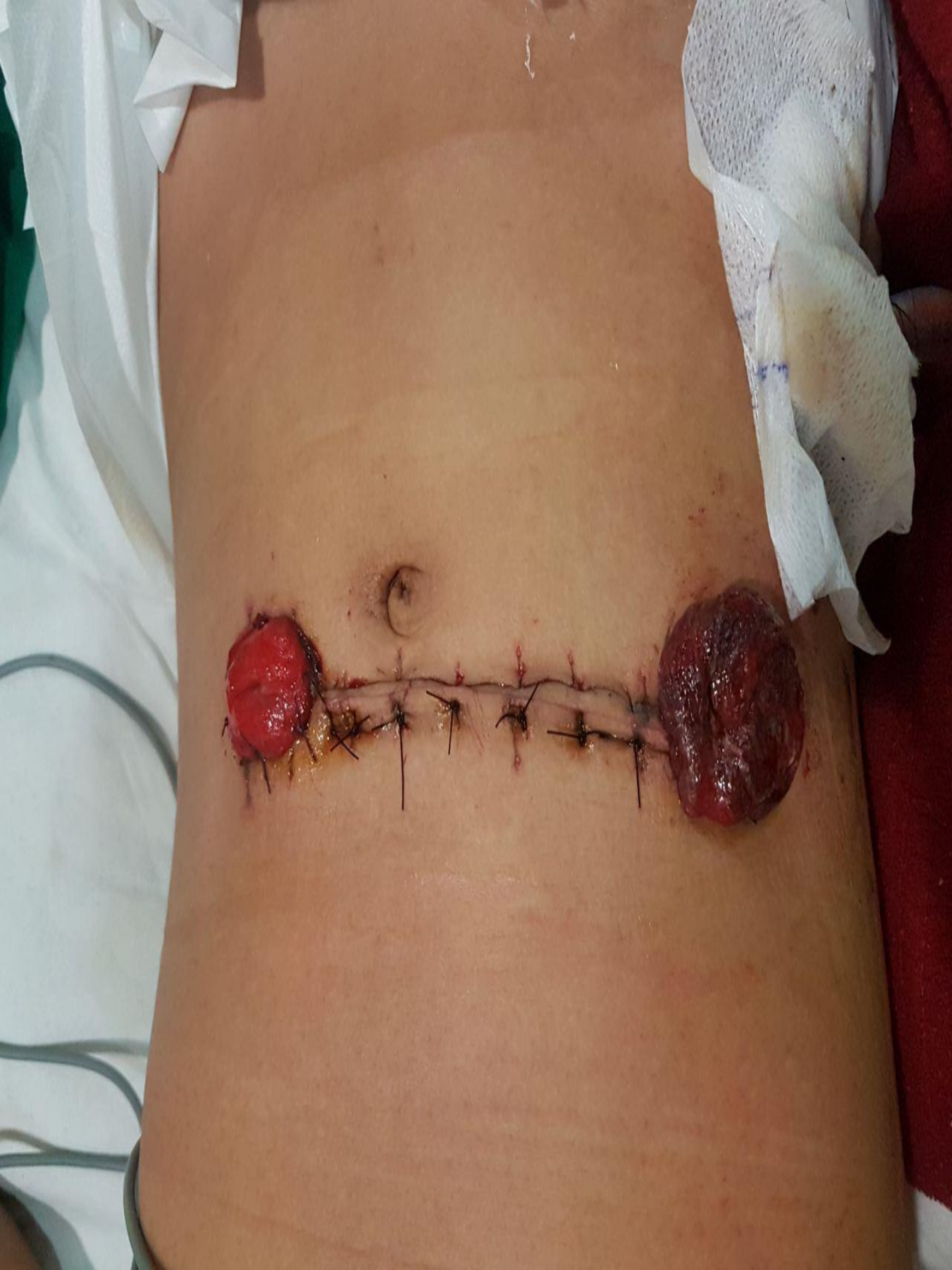


CASE REPORT

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

- **Demonstrable pulsations in mesentry and visible peristalsis.**

- **Gangrenous bowel was resected and stomas created**



POSTOPERATIVE COURSE

- **Patient required parentral 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**

DISCUSSION

- **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

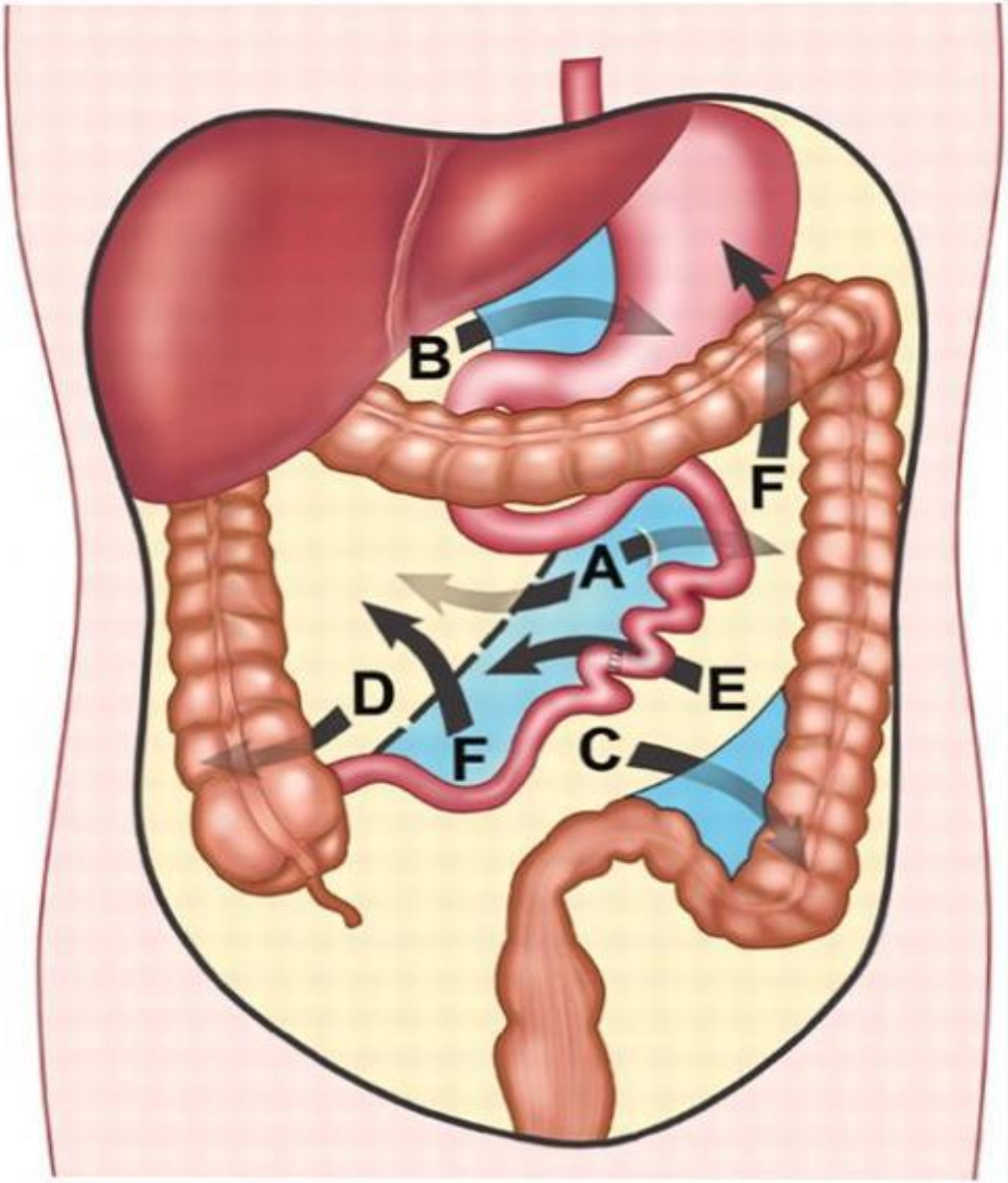
D = pericecal

E = transmesenteric, transomental, and transmesocolic

F = retroanastomotic

g = falciform ligament

h = supravesical and pelvic



CURRENT GUIDELINES

- **Internal herniation or transmesentric 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 upto 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 anastamosis should never be attempted in setting of sepsis and shock.**