

# Strangulated Paraumbilical Hernia with Gangrenous Stomach - A Rare Case

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**Abstract:** *Herniation of stomach through the ventral abdominal wall is very rare. We present a rare case report of a 75 yr old male who presented to us with a swelling in upper part of umbilicus in casualty and was operated on emergency basis and was found to have gangrenous stomach as a content in the hernia sac, gangrenous anterior wall was excised and remnant stomach was made into a tube and anastomosed with the jejunum like side to side anastomosis.*

**Keywords:** Gangrenous Stomach; strangulated paraumbilical hernia

## 1. Case report

75 yr old male patient presented to us with a swelling in the upper aspect of umbilicus for the past 6 months, which has increased in size and severe abdominal pain with vomiting (non bilious and brown black colored) for 7 days. Constipation and obstipation for 3 days. He was a diabetic diagnosed for past 2 yrs.

He was toxic with pulse rate- 106/min, BP- 140/90mmhg, anemic, dehydrated. Clinical examination revealed 10 X 8 cm swelling including superior part of umbilical ring, extending 8cm above (Fig-1), it was tense, tender and inflamed, cough impulse was absent, guarding present. Diagnosis of strangulated paraumbilical hernia was made and the patient was immediately taken up for emergency surgery with high risk in view of his biochemical reports. Random blood sugar- 600mg/dl, urea - 60mg/dl, creatinine - 3mg/dl. ECG - signs of lateral wall ischemia and COPD.

Under epidural with general anaesthesia horizontal incision was made at the level of umbilicus, hernia sac dissected, there was a defect of size 3cm involving the umbilical ring through which the sac was emerging. Fundus of the sac was opened and about 100ml of dark colored toxic fluid as let out. Omentum and stomach was found to be the content of the hernia sac of which the omentum was gangrenous and adherent to hernial sac, whole of anterior wall of the stomach was black and gangrenous. Patient suddenly went into cardiac arrest and was resuscitated intraoperatively. In view of cardiac arrest and poor vital signs gastrectomy was deferred and the gangrenous anterior wall of stomach was excised along with gangrenous omentum and remaining stomach was sewn into tubular fashion and was anastomosed to jejunum as side to side gastrojejunostomy as the pylorus was edematous occluding the gastroduodenal orifice. Hernial defect was anatomically closed, without mesh in view of gangrenous contents and abdomen was closed after keeping a tube drain.

He was shifted to ICU and was put on ventilator support and the patient became stable in the 2<sup>nd</sup> post operative day and was extubated on the same day. Patient made an uneventful recovery and was taking oral fluids and liquid diet after 5<sup>th</sup> postoperative day, He was discharged on the

10<sup>th</sup> post operative day. He was healthy at 1 month follow up following discharge.

## 2. Discussion

Stomach presenting as content in hernia through the ventral abdominal wall is very rare. The involvement of the stomach in these hernias and its rarity is explained by relatively fixed position of the stomach in the abdomen by its ligamentous attachments, which includes the gastrohepatic ligament along the lesser curvature, the gastrosplenic and gastrocolic ligaments along the greater curvature, and the gastrophrenic ligament along the posterior aspect of the fundus. Also, the esophagus holds the stomach superiorly in place, and the fixed duodenum anchor it inferiorly (1). Thus, the stomach is fixed in position compared with the relatively mobile small intestine, transverse colon, and sigmoid, which are more frequently involved in abdominal wall hernias. Apparently, only in the middle-aged or elderly with elongated stomach due to lax ligaments, the mobility of the stomach becomes sufficient to allow such herniation (2).

It is usually the omentum or the small intestinal loops that is found in a hernia sac of the abdominal wall. Gangrenous Stomach presenting as a content in a ventral hernia is exceptionally rare with only one case report so far available in the website or literature, which is a case of incarceration into an umbilical hernia (3) Previously the stomach has been reported to herniate into the thoracic space secondary to trauma or surgery on the stomach or near the diaphragm with a few cases presenting with incarceration (4). Finally, a more common type of hernias are the congenital diaphragmatic defects (Bochdalek's and Morgagni's hernia) usually identified upon neonatal ultrasound with just one case of delayed presentation, resulting in stomach incarceration, has been reported (5).

This case report demonstrates that not only naturally mobile structures may herniate. The mechanisms for this displacement are unknown but increased mechanical stress over time could lead to stretching and elongation of the supporting ligaments and the oesophagus. Alternatively, the stomach itself may elongate over time as the muscular structure allows for shape and size variation. Although large hernias may remain asymptomatic, they should be

evaluated on a regular basis as not only intestines may be at risk of strangulation but also other structures may herniate into large, untreated abdominal wall defects. Investigation can be made with plain film contrast investigation or abdominal CT or upper Glendoscopy.

Various surgical options for gangrenous stomach involves 1)gastroplasty for focal gangrene involving part of stomach wherein interrupted nonabsorbable silk Lambert sutures applied to healthy adjoining gastric seromuscular layers to invaginate the gangrenous portion.

2) Resection of the necrotic or gangrenous portion of gastric wall can be done especially if there was a clear demarcation between viable and nonviable tissues like our patient. Other methods includes a proximal partial gastrectomy and a total gastrectomy with a Rouxen- Y oesophagojejunostomy for patients with extensive gastric gangrene, since they are more extensive procedures, they may be associated with increased morbidities and mortality.

## References

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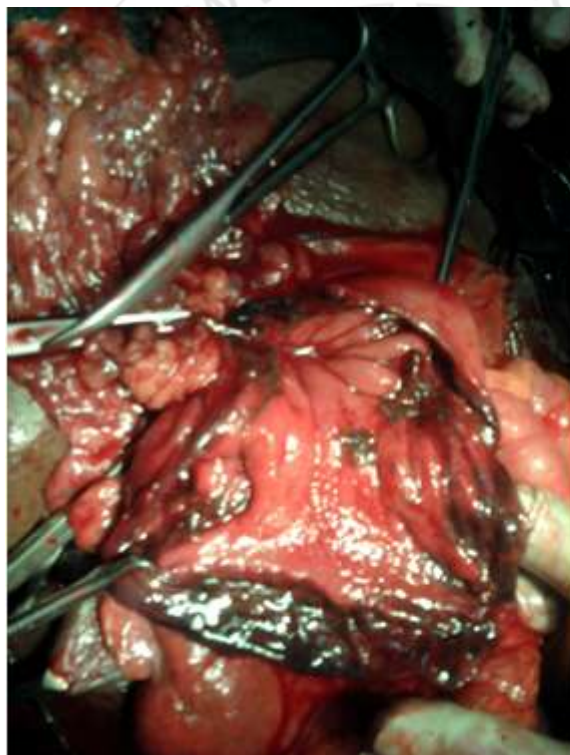
**Figure 1:** pre operative picture of the patient showing the location of hernia, which appears tense, inflamed



**Figure 2:** Showing the hernial sac after meticulous dissection showing hemorrhagic and congested contents

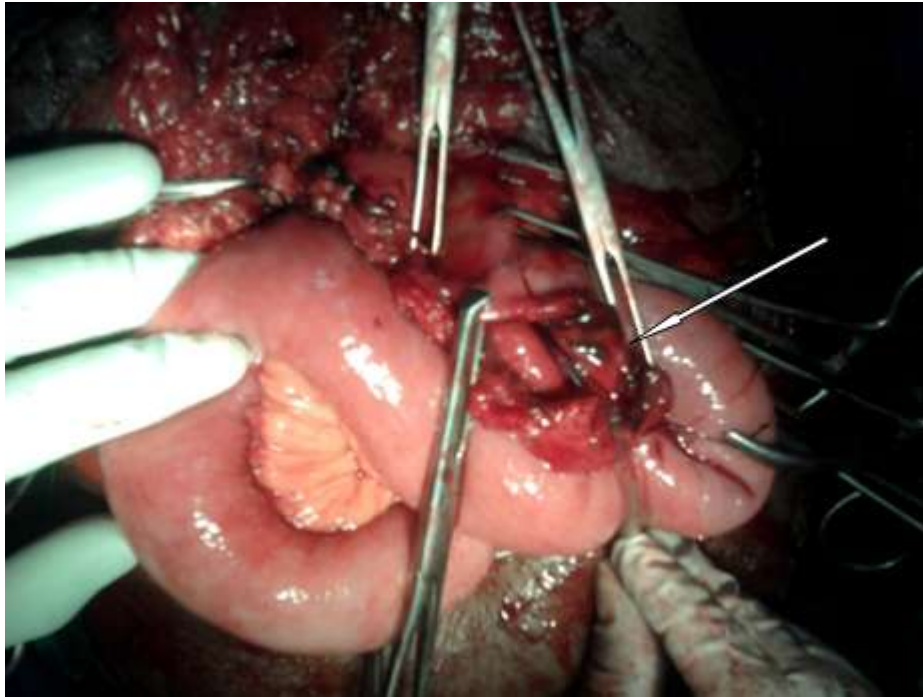


**Figure 3:** Hernial sac opened from the fundus showing gangrenous omentum and gangrenous stomach



Remnant stomach

**Figure 4:** Showing remnant stomach and rugosities, after excising gangrenous anterior wall



**Figure 5:** Showing remnant stomach sewn into tubular fashion and anastomosed with jejunum as side to side anastomosis

