



A RARE CASE OF TYPE 4 PEPTIC PERFORATION AT GASTROESOPHAGEAL JUNCTION: CASE REPORT

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**ABSTRACT**

Peptic ulcers are erosions in the GI mucosa that extends through the muscularis mucosae.<sup>4</sup> Most common symptoms of peptic ulcer disease is dyspepsia but can be complicated by bleeding, perforation and gastric outlet obstruction. A thorough clinical examination with radiological investigations can help diagnose peptic perforation and its complications early and reduce the overall mortality rate. The usual site for peptic perforation is 1st part of duodenum or pylorus of the stomach which are categorized as type 1 as per the Johnson's classification. There are other sites of perforation which includes..... peptic perforation at gastroesophageal junction is also rare which presents in < 10% cases. Here we are reporting a case of type 4 peptic perforation at GE junction in a young male patient.

**KEYWORDS :** PUD, Esophago-gastric junction, perforation peritonitis

**INTRODUCTION**

Peptic ulcer disease (PUD) comprises of gastric ulcers and duodenal ulcers. Diagnosis of perforation peritonitis is usually made by clinical examination and radiological investigations like gas under both the domes of diaphragm. The usual site for peptic perforation is 1<sup>st</sup> part of duodenum or pylorus of the stomach. Gastric ulcers can occur at any location in the stomach however perforation at gastro esophageal junction is rare.<sup>5</sup> There is scarce documentation of such cases in literature.

They are not associated with excessive acid secretion. Surgical intervention is required for complications arising from gastric ulcer disease. For budding surgeons diagnosis of these ulcers is likely to be missed due to their unusual location even on laparotomy. Exploratory laparotomy and repair of the perforation is the management for perforated gastric ulcers.<sup>6</sup>

**Case Report**

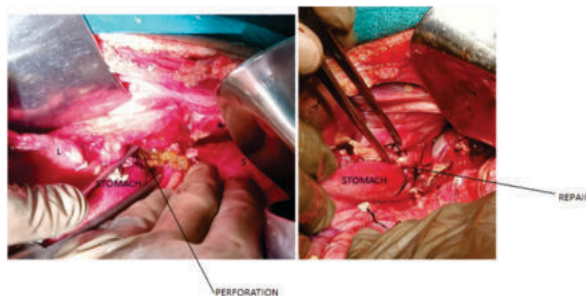
A 33-year gentlemen, non smoker and non alcoholic presented to emergency with complaints of generalized abdominal pain for 3 days which was sudden in onset, initially mild and then becoming severe in intensity, not associated with nausea, vomiting, constipation and which got aggravated on changing the position and relieved by lying still on the bed. He was non-alcoholic and non-smoker. He denied any history of recurrent episodes of heartburn or any previous treatment for epigastric pain.

On presentation, the patient was conscious and oriented. On recording his vitals he had tachycardia of 110/min, blood pressure of 138/88 mm of Hg and afebrile. His abdomen was distended with generalized tenderness without any guarding or rigidity. Bowel sounds were present and normal.

Blood investigations were sent and were found to be within normal limits. An abdominal radiograph was done which revealed free air under diaphragm.

On this basis, gastrointestinal perforation with peritonitis was suspected and the patient was taken up for emergency laparotomy. On exploration, there was a gush of air that erupted from the abdomen on opening the peritoneum without signs of any bilious or fecal content. Thorough peritoneal

examination was done to look any perforation in stomach, small & large intestine but no perforation was found, A 14 FG Ryle's tube was infused with 50 ml air and followed by 100 ml saline which helped in finding leakage of some gastric content higher up from the left side of the stomach near the left crus of the hiatus. After mobilizing the stomach by dividing omentum from greater curvature a gastric perforation of size approximately 1.5 × 1 cm was found near the gastroesophageal junction. Rest of the intra abdominal organs were found to be normal.



A thorough lavage with warm normal saline was done. Margins of the perforation were sent for biopsy. After freshening the margins the gastric perforation was repaired primarily by silk 2-0 in interrupted fashion. Ryle's tube was kept for post-operative gastric drainage.

A feeding jejunostomy was done 30 cms distal to duodeno-jejunal junction. Drains were placed. Immediate post operative period was uneventful. On 3<sup>rd</sup> post operative day,

Feeding jejunostomy was started and on 5<sup>th</sup> post op day sips of liquids allowed followed by gradual feeds of liquids and semi-solids after 7<sup>th</sup> day. On 8<sup>th</sup> day the patient was discharged in stable condition. His further post operative course has been uneventful.

## DISCUSSION

Most common cause of spontaneous peptic perforation is peptic ulcer disease that includes gastric and duodenal perforation. The major causes being NSAID overuse and *H.pylori* infection. The incidence of peptic ulcer disease (PUD) is estimated to be ~ 1.5–3%, the lifetime prevalence of perforation is ~5% and mortality ranges from 1.3 to 25%.<sup>3</sup> 30–50% of ulcer perforations are associated with NSAIDS.

Bleeding, perforation, or gastric outlet obstruction are the main complications of peptic ulcer disease. Perforation typically presents with sudden onset of intense pain in the upper abdomen. Dependent on age and comorbidity, mortality can be as high as 20%. Gastric ulcers can occur at any location in the stomach although lesser curvature is the most common site.

**Table: Johnson's classification.**<sup>4</sup>

Type	Location	Incidence
Type 1	ulcers are located on lesser curvature	60
type 2	gastric body with a duodenal ulcer	15
Type 3	prepyloric region	20
Type 4	high up on lesser curvature, near gastroesophageal junction	10
Type 5	associated with NSAID use	

Furthermore, there may be some ulcers that occur on greater curvature of the stomach which account for approximately less than 5%. In our case, the perforation was found higher up at fundus regio near the gastroesophageal junction. The closest differential diagnosis for perforation at this site is Boerhave syndrome.<sup>7</sup>

In this patient there was no history of binge alcohol intake or sudden retching which ruled out this diagnosis. A peptic perforation at gastroesophageal site is a rare occurrence as was found in our patient with paucity of documented cases in literature. A peptic perforation at such a location as gastroesophageal junction is very likely to be missed.

Management of suspected cases of gastrointestinal perforation remains exploratory laparotomy.<sup>6</sup>

## CONCLUSION

Peptic perforation are a well known complication of peptic ulcer disease and commonly encountered surgical emergency that requires urgent intervention. With improved medical treatment of PUD the incidences are on decrease. Suspected cases of peptic perforation require a thorough exploration so that perforations at rare sites are not missed and pushing air through a Ryle's tube or using charcoal.

**Conflict of Interest :** None declared

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