ORIGINAL RESEARCH PAPER

General Surgery

# GASTRIC ULCER PERFORATING POSTERIORLY – A RARE CASE REPORT WITH REVIEW OF LITERATURE

**KEY WORDS:** Posterior Gastric perforation, Emergency Laparotomy, Peptic ulcer disease

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**ABSTRACT**

The population studies have shown that peptic perforation remains a major health problem worldwide. The lifetime frequency of peptic ulcer diseases in United States has been shown to be approximately 10%. The epidemiology of peptic ulcer is showing declining trend in India over last two decades. The frequencies of both duodenal ulcer and gastric ulcer showed a decline from 1988 to 2008 that is from 12% to 2.9% and 4.5% to 2.7% respectively. Although there is decreasing trend in peptic ulcer diseases, complications are encountered in 10-20% of cases and 2-14% of ulcers perforate. Peptic ulcer can occur in body of stomach, lesser curvature, and pylorus to duodenum. These perforate most commonly on anterior aspect of duodenum. However anterior or incisural gastric ulcers may perforate posteriorly in to lesser sac, which can be particularly difficult to diagnose as these may not have symptoms of peritonitis even. If peritonitis is present and perforation not found on normal course then, they should be looked over in lesser sac also.

## Introduction

The population studies have shown that peptic ulceration remains a major health problem worldwide. The lifetime frequency of peptic ulcer diseases in United States has been shown to be appx 10 % (1). The epidemiology of peptic ulcer is showing declining trend in India over last two decades. The frequencies of both duodenal ulcer and gastric ulcer showed a decline from 1988 to 2008, i.e. from 12 % to 2.9 % and 4.5 % to 2.7 %, respectively (2). Although there is decreasing trend in peptic ulcer diseases, complications are encountered in 10-20% of cases and 2-14 % of ulcers perforate (3,4).

Peptic ulcer can occur from body of stomach, lesser curvature, pylorus to Duodenum. These perforate most commonly on anterior aspect of Duodenum. However the anterior or incisural gastric ulcer may perforate and, in addition gastric ulcer may perforate posteriorly in to lesser sac, which can be particularly difficult to diagnose as these patient may not have symptoms of peritonitis even (5).

Here we are presenting a case of patient with posterior perforation with review of literature

## Case Report

A 48-year-old male came to casualty with pain in abdomen for 3 days and vomiting one day back. Patient was asymptomatic before 3 days then he started developing pain in epigastric region, which then spread to whole abdomen. Pain was insidious in onset, progressive in nature and severe in intensity, associated with vomiting yesterday.

On examination patient was afebrile and Pulse =78/minute with Blood Pressure 106/74 mm of Hg. Per abdomen tenderness present all over abdomen with no guarding and he was passing stool which was loose in consistency. Patient was investigated, His total leucocyte count was raised (12000/cumm) and chest X ray showed free gas under diaphragm and emergency laparotomy planned.

On exploration there is small sero purulent fluid present in Rt paracolic gutter and pelvic cavity. No perforation was found on stomach, duodenum (even after kocherisation) and bowel. Then lesser sac was opened and same fluid was present in lesser sac, which was aspirated, and posterior side of stomach was examined. 1x1 cm sized perforation present on posterior part of stomach near incisura angularis (figure 1,2). Perforation was freshened, biopsy taken and closed in two layers. Thorough peritoneal lavage was given and abdominal drain kept. Patient recovered well and discharged on postoperative day 9th in stable condition. Biopsy consistent with perforation with no evidence of malignancy.

## Discussion

Perforation peritonitis is common condition encountered in daily emergency set up. Perforation site may be stomach, duodenum, small bowel or large bowel, which may be traumatic or pathological. Although peptic ulcer incidence is on decreasing trend still bulk of perforation peritonitis patient is formed by peptic ulcer perforation peritonitis. Most common site being duodenum followed by pre pyloric region. Once acid started oozing from perforation site in to peritoneal cavity, it incites peritoneal reaction later on followed by development of infection and sign and symptoms of perforation peritonitis. Most of peptic ulcers perforate anteriorly. Ulcer may present on posterior side of stomach wall also. If both Anterior and posterior ulcers are present mostly near incisura angularis, condition is called "Kissing Ulcer". Posterior ulcers are known to bleed rather than perforation. But posterior perforation is rare and also behaves differently as in our case. In a series of 125 consecutive perforated peptic ulcer patients operated upon by Hamilton Bailey, there was only one case of perforation on the posterior surface of the stomach (6).

There are fewer than 30 cases reported in the literature. Wong and colleagues (2003) reviewed nine patients with posterior perforations, who were treated from January 1990 to June 2002. Their findings were sealed perforation, localized retroperitoneal abscess, and generalized peritoneal contamination of the lesser sac and peritoneal cavity In the case of posterior perforation of pyloric or duodenal ulcers, these ulcers penetrate into the retroperitoneal space, which results in either retroperitoneal abscess formation, or the perforation will be sealed off by the local inflammatory reaction and fibrosis of the surrounding adherent retroperitoneal tissue (7).

## Conclusion & Teaching point:

As posterior perforation has more indolent course and their diagnosis is delayed. In inexperienced hands they can be missed and associated with high mortality , there should be high index of suspicion if patient present with peritonitis and surgeon is not able to locate perforation. Lesser sac should be opened and inspected thoroughly posterior gastric

perforation. If facilities available preoperative CECT (Abdomen) should be done to know for the site of perforation.

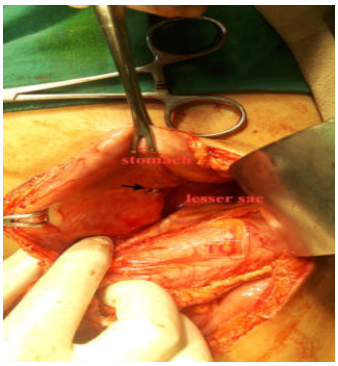


**Figure: 1 Posterior Gastric Perforation Found after opening Lesser Sac.**

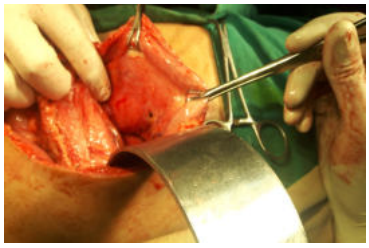

**Figure: 2 Posterior Gastric Perforation near Incisura angularis.**

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