



A RARE CASE OF PEPTIC ULCER PERFORATION IN YOUNG ADULTS

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ABSTRACT

Peptic ulcer perforation (PUP) is the most common perforation in gastrointestinal tract (GIT), very serious complication which affects 2-10% of individuals. PUP demands early diagnosis, appropriate resuscitation and proper surgical management which leads to reduction in morbidity and mortality. We are presenting a case of peptic ulcer perforation in young adult. 28-year gentleman diagnosed with perforation peritonitis, Xray abdomen revealed air under diaphragm, underwent urgent laparotomy. A high degree of suspicion with a detailed evaluation of the patient's medical history and clinical presentation, plays crucial role for timely management and outcome.

KEYWORDS : Peptic ulcer perforation, pneumoperitoneum, modified Graham's Patch repair, young, H. Pylori, NSAIDS.

INTRODUCTION:

Peptic ulcer perforation (PUP) is the most common perforation in gastrointestinal tract (GIT), very serious complication which affects 2-10% of individuals. PUP demands early diagnosis, appropriate resuscitation and proper surgical management which leads to reduction in morbidity and mortality [1].

In the past few decades, the incidence of PUP has increased in young adults, which may be due to the association with *Helicobacter pylori* infection; stress related to work in this competitive era, non-steroidal anti-inflammatory drugs (NSAIDs) abuse, increased smoking and alcoholism [2].

Case Presentation:

28-year gentleman came to emergency department with chief complaint of pain in upper abdomen and non-passage of stool and flatus for last 3 days. Patient did not have history of fever, abdominal distension, vomiting, weight loss, jaundice. He is chronic smoker for last 5 years. Non-alcoholic, no history of non-steroidal anti-inflammatory drugs (NSAIDs). No other known comorbidities. On general physical examination; he was tachycardiac, afebrile, blood pressure was 90/60 millimeter of mercury. Per abdomen was distended, guarding+, rigidity +, absent bowel sounds. Per rectal examination, no fecal staining. Patient was immediately resuscitated with intravenous fluids, antibiotics, nasogastric tube insertion, Foley's catheterization. Routine blood investigations were in normal range except raised total leukocytes counts. Xray abdomen revealed air under diaphragm (figure 1).



Figure 1: Chest Xray showing air under diaphragm suggestive of perforation.

Patient diagnosed with perforation peritonitis. Patient immediately planned for emergency laparotomy. Midline upper abdominal incision was made. Intraoperatively we found 1500 ml purulent collection with pus flakes in perihepatic, bilateral paracolic gutters, pelvis and inter-bowel area. Generously irrigation done with 4-5 liter of warm saline. we found 0.5x0.5 cm perforation at anterior surface of antero-pyloric junction of stomach. Biopsy was sent from perforation and modified Graham's Patch repair was done, drain was inserted in pelvis and wound was closed in layer. Postoperatively patient was comfortable, NG tube removed on postoperative day (POD)-2. Enteral feed started from POD-4, gradually progressed. Patient recuperated well, discharged on POD-5. On follow up, H. pylori Kit was started. Biopsy revealed nonspecific inflammation with leukocytes infiltration, no evidence of malignancy. Follow up remained uneventful.

DISCUSSION:

Peptic perforation relatively uncommon in young adults refers to perforated peptic ulcers (PPU), is commonly associated with underlying pathology such as *Helicobacter pylori* infection and chronic use of non-steroidal anti-inflammatory drugs (NSAIDs) [2,3]. But, when it occurs in young adults may raise suspicions of alternative etiologies and patient's medical history should be investigated to identify potential risk factors such as medication use, alcohol consumption, and smoking habits [4].

The clinical presentation of peptic perforation is characterized by sudden and severe abdominal pain, nausea and vomiting, often with a well-localized point of maximum tenderness and rebound tenderness. In young adults, the diagnosis may be delayed due to atypical presentation with a lower index of suspicion with poor outcome. Patient's may present with air under diaphragm in X-ray abdomen a serious complication requiring prompt intervention [5].

Peptic perforation's diagnosis typically involves a combination of clinical presentation and radiological imaging. Abdominal X-ray may reveal free air under the diaphragm, a classic sign of either in stomach or bowel perforation. Computed tomography (CT) scans can provide detailed information about the location and size of the perforation. Routine laboratory tests may reveal signs of infection or metabolic derangements [6]. Perioperative management involves addressing any sepsis, fluid

resuscitation, electrolyte abnormalities and the prevention of postoperative complications such as surgical site infections [7].

The management of peptic perforation in young adults should be adjusted to the individual patient's clinical presentation and size and site of the perforation. Surgical intervention is management of choice to repair the perforation and perform an omental patch or primary closure [8]. With advancement, Laparoscopic approaches have gained popularity due to their minimally invasive nature, quicker recovery times which reduces morbidity and mortality.

The outcome of peptic perforation in young adults is generally depends when diagnosed and treated promptly. Delayed diagnosis or inadequate treatment can lead to severe complications, including sepsis, intra-abdominal abscesses, multi-organ dysfunction and coma. The better outcomes for long term may also be influenced by the underlying cause of the peptic ulcer, such as *H. pylori* infection or NSAID use. To prevent recurrence, close follow-up and appropriate management of these underlying factors are essential [9, 10].

CONCLUSION:

Peptic perforation in young adults is a rare and clinically challenging condition that warrants prompt early diagnosis, appropriate resuscitation and proper surgical intervention. A high degree of suspicion with a detailed evaluation of the patient's medical history and clinical presentation, plays crucial role for timely management and outcome. Advancement in surgical techniques and perioperative care have improved outcomes for these patients after addressing underlying causes and providing long-term follow-up remains essential.

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