

A Case of Sealed Off Gastro-Intestinal Perforation

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Abstract: *Gastro-intestinal Perforation usually present as an acute abdomen. The patient will be in obvious distress, and the abdominal examination shows peritoneal signs. Usually, marked involuntary guarding and rebound tenderness is evoked by a gentle examination and is usually diagnosed by free air on plain radiography. However, a sealed-off gastro-intestinal perforation is very difficult to detect because of the vague symptoms and non-specific radiologic signs. A sealed off perforation is expected to have better prognosis compared with free perforation. In such cases, surgery can be avoided if patient is doing well. We report a 28-year-old male patient with sealed off gastro-intestinal perforation, managed conservatively.*

Keywords: Sealed off gastro-intestinal perforation, conservative management

1. Introduction

Gastro-intestinal Perforation usually presents as an acute abdomen. The patient can often give the exact time of onset of the excruciating abdominal pain. Initially, a chemical peritonitis develops from the gastrointestinal secretions, but within hours a bacterial peritonitis supervenes. The patient will be in obvious distress, and the abdominal examination shows peritoneal signs. Usually, marked involuntary guarding and rebound tenderness is evoked by a gentle examination [1, 2]. Upright chest X-ray shows free air in about 80% of patients. However, a sealed-off gastro-intestinal perforation is very difficult to detect because of the vague symptoms and non-specific radiologic signs [2]. A sealed off perforation is expected to have better prognosis compared with free perforation [4]. In such cases, surgery can be avoided if patient is doing well [1, 2]. We report a 28-year-old male patient with sealed off gastro-intestinal perforation, managed conservatively.

2. Case Report

A 28 years male patient presented with pain abdomen and vomiting since 2 days. Patient had 2 episodes of vomiting, which were non-bilious, non projectile and scanty in amount, containing food particles. His vitals were relatively stable and had no complaints of fever. Physical examination showed mild abdominal tenderness with no rebounding pain. There was no guarding and no rigidity. Laboratory investigations showed leucocytosis. Liver function tests and serum electrolytes were within normal limits. Electrocardiogram and Chest X-ray showed negative findings [Fig 1]. Transabdominal ultrasonography showed mild thickening of the terminal ileum with minimal free fluid in the pelvis. Suspicious foci of free air were seen at the surface of the liver [Fig 2]. Contrast enhanced computed tomography suggestive of few tiny air foci in peritoneal cavity with possibility of bowel perforation likely [Fig 3, 4]. There was mild prominence of small bowel loops and mild free fluid in peritoneal cavity [Fig 3, 4]. Patient was managed conservatively. Pain and vomiting subsided. Patient was discharged with no fresh complaints and stable vitals. Patient was seen in OPD basis there-after with no any complaints.



Figure 1: Chest X-ray of the patient showing no any evidence of gas under diaphragm

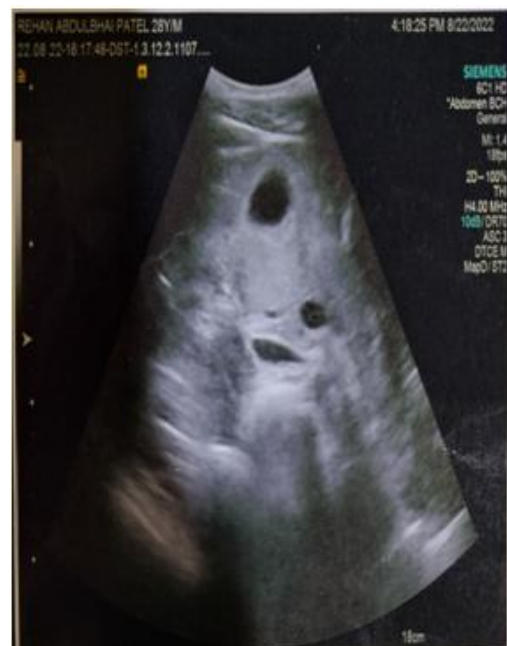


Figure 2: Sonography of abdomen showing foci of free air at the surface of liver.

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Figure 3: CECT abdomen with pelvis of the patient (sagittal view)



Figure 3: CECT abdomen with pelvis of the patient (axial view)

3. Discussion

Perforation of the gastrointestinal tract may be suspected based upon the patient's clinical presentation or the diagnosis becomes obvious through a report of extra-luminal free gas or fluid or fluid collection on diagnostic imaging performed to evaluate abdominal pain or another symptom [1]. Clinical manifestations depend somewhat on the organ affected and the nature of the contents released (gas, succus

entericus, stool), as well as the ability of the surrounding tissues to contain those contents [1].

The diagnosis of gastrointestinal tract perforation is usually based on the identification of extra-luminal leakage of gas and consequent inflammatory processes around the perforated sites. Erect chest and plain radiography is traditionally used as the first imaging modality to detect the free air in patients with an acute episode of gi perforation [2]. However, the sensitivity of plain radiography in detecting extra-luminal gas leakage is only 50–70% [2]. A contrast examination, especially with water soluble contrast agents, may be indicated when plain radiography fails to demonstrate the gas leakage [2]. However, the ambiguous clinical history without abrupt onset of abdominal pain and absence of peritoneal irritation in these patients make early diagnosis of gi perforation difficult [2]. Absence of gas leakage on plain radiography also leads to misdiagnosis [2].

Intestinal perforation can present acutely or in an indolent manner (eg., abscess, sealed off perforation or intestinal fistula formation). A confirmatory diagnosis is made primarily using abdominal imaging studies, but on occasion, exploration of the abdomen (open or laparoscopic) may be needed to make a diagnosis [1]. Specific treatment depends upon the nature of the disease process that caused the perforation. Some aetiologies are amenable to a non-operative approach, while others will require surgery [1]. However, the majority of patients present with vague abdominal symptoms and nonspecific imaging findings which preclude early diagnosis.

In conclusion, gastrointestinal perforation should be suspected in patients who develop a sudden onset of severe, diffuse abdominal pain [1]. However, in some patients with equivocal clinical history, vague abdominal symptoms and nonspecific imaging findings, a high index of suspicion is necessary for detecting this rare complication sealed off gastrointestinal perforation [1].

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