

CASE REPORT

Boerhaave's Syndrome Presenting as a Subphrenic Abscess: A Case ReportMd. Rashidul Hoq¹, Ahmed Sayeed², Md. Mustafizur Rahman Khan³**Abstract:**

A 25 years young healthy male presented and treated as a case of subphrenic abscess was subsequently diagnosed as a case of Boerhaave's syndrome and managed successfully.

Introduction:

The Boerhaave's syndrome is a type of spontaneous oesophageal perforation usually occurring due to barotraumas. When somebody vomits against closed glottis, pressure in the oesophagus rapidly increases and it burst at its weakest point at the lower third. The usual presentation is with mediastinal symptoms due to contamination with infected gastric contents. But this patient presented as a case of left subphrenic abscess which is a rare event. Because of the rareness of this condition and considering the importance of an urgent treatment this case is reported.

Case report:

A healthy 25 years old male was admitted in the surgery department of Holy Family Red Crescent Medical College Hospital with five days history of severe abdominal pain, 20/25 times vomiting at the onset, mild fever and

yellow discoloration of the sclera. He was a known case of peptic ulcer disease (PUD) and was taking anti-ulcer drugs regularly. But five days back he had homeopathic medicine for his PUD and about six hour after, the symptoms of acute abdomen developed. After three days of conservative treatment in thana health complex he came to Holy Family Hospital.

On admission, he had tachycardia, mild anaemia and mild jaundice with low grade fever, moderately distended rigid tender upper abdomen with absence of bowel sound; provisional diagnosis of acute pancreatitis was made and treatment was given accordingly. Routine investigations showed raised ESR, SGPT and LDH; there was hypokalaemia and hypochloreaemia. X-ray abdomen in erect posture showed a huge fluid gas level in upper abdomen (Fig.-1). In the next day, his condition deteriorated, he had high fever and there were increased features of toxicity. Ultrasonography (USG) and CT scan of abdomen showed large fluid collection with air fluid level across the upper abdomen displacing the stomach to the left. There was mild left basal consolidation with small pleural fluid collection.

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After a brief pre-operative preparation, exploratory laparotomy was done through upper midline incision and a left anterior subphrenic abscess was found. General peritoneal cavity and all other organs were found normal. Pus from the abscess site was collected for culture and sensitivity examination and adequate toileting was done. Abdomen was closed with a drain. As the patient was improving and hepatic enzymes became normal, he was given water by mouth on the fifth post-operative day, but it was found that immediately after drinking, the water came out through the drain tube. Then contrast X-ray of oesophagus and stomach was done and it was found that part of the contrast medium was passing through the drain tube and little amount passing in to the stomach. It also showed a possible site of leakage in the lower oesophagus (Fig.- 2). After five to six days of observation with supportive treatment re-exploration through previous midline incision was done; on examination two perforations of around 2 cm in size each were found in the posterior aspect of the oesophagus just above the gastro-oesophageal junction. After excision of the unhealthy margins of the tear, repair was done with Vycryl separately with reinforcement by surrounding soft tissue. A feeding jejunostomy was also done and the abdomen was closed after keeping a drain.

The high fever subsided after appropriate antibiotics. Light milky fluid nearly 200 ml daily came through the drain tube up to eighth post-operative day, then gradually declined. A check contrast X-ray on twenty first day showed no contrast in the drain tube. During those three weeks he was given

high protein diet only through the jejunostomy tube. The patient lost around 10 kg of body weight since the time of hospitalization. He was discharged on the twenty third day of second laparotomy after 38 days of hospitalization with advice to continue feeding only through the jejunostomy tube (no oral feeding). Ten days after discharge from the hospital the patient was again admitted with blockage of the feeding jejunostomy tube. At this time contrast X-ray showed no leakage and after test feeding by mouth there was also no leakage. So, the drain and the jejunostomy tube were removed 48 days after he was first admitted to the hospital. He was symptom when he came for a follow up after six weeks.



Fig - 1: X-ray abdomen in erect posture showing a huge fluid gas level encroaching the upper abdomen.



Fig. – 2: Contrast X-ray of oesophagus and stomach showing the contrast in the stomach and at the same time in the drain tube.

Discussion:

Boerhaave's syndrome, first described by Herman Boerhaave, is a fatal and relatively uncommon condition of acute gastric distress, and occurs due to complete tear of lower oesophagus just above the cardia usually between the age of 40 and 60 years. Male to female ratio is 2:1. The patients may have long history of chronic duodenal ulcer, reflux oesophagitis, hiatal hernia, history of child birth, severe convulsion, cardiopulmonary resuscitation, neurological disorder, tumours, excessive crying (there is a report on a four years old girl). This syndrome usually present with mediastinal symptoms, such as severe chest pain, dyspnoea, with or without sudden severe epigastric pain, which develops after a violent episode of retching or vomiting. Dull on percussion and decreased breath sound in basal region of left lung may be found. There

may be tension pneumothorax, hydropneumothorax, pneumomediastinum, surgical emphysema and shock. But the reported patient presented with features of acute abdomen with subphrenic abscess. Such presentation is yet to be reported in any literature.

Chest skiagram usually show left sided pleural effusion or pneumothorax. Plural fluid cytology for undigested food particle may be done. But in this case there was no pleural effusion and X-ray abdomen in erect posture showed a huge fluid gas level in upper abdomen. Contrast X-ray of oesophagus and stomach is necessary to establish the diagnosis. Differential diagnoses of such cases are myocardial infarction, perforated peptic ulcer, pulmonary embolism, dissecting aortic aneurysm and acute pancreatitis.

Ideally, Boerhaave's syndrome has to be treated in a centre for esophageal/thoracic surgery. After confirming the diagnosis the immediate measures are endotracheal intubation, management of shock, drainage of pleural effusion, placement of esophageal/gastric tubes, and systemic antibiotics. The surgical intervention would come after stabilization of vital parameters and it would depend on length, location, and containment of the rupture, time interval to diagnosis, intraoperative aspect of the esophagus, and general condition of the patient. Repair of the tear with non-absorbable suture and additional diaphragmatic/pericardial flap or fundal patch or Nissen fundoplication after left thoracotomy are the ideal procedures. Simple T-tube drainage also possible where the diagnosis is delayed. There are some endoscopic procedures like self expanding metallic stent application. But in the reported case, an exploratory laparotomy through upper midline

incision and delayed primary repair of the tear with delayed absorbable suture Vycryl was done. A feeding jejunostomy tube was also given for post-operative feeding. Long free interval between injury and initiation of treatment is fatal in most of these cases, where early thoracotomy is essential. In this case, as the patient presented with subphrenic abscess, he was healthy (75 kg body weight) and received adequate jejunal feeding, so he had a better outcome even though he had a long post-operative leakage.

A retrospective study on 25 patients showed that long free interval before treatment did not preclude primary oesophageal repair in Boerhaave's syndrome. Oesophageal exclusion might be more often than not avoided in most cases. Their principle of treatment was surgical treatment and avoidance of oesophageal exclusion or oesophagectomy, whichever was possible. They also showed that the patients of surgical intervention had the mean hospital stay of 63 days. But the reported patient spent a total of 38 days in the hospital. Another study on 22 patients also concluded that in the era of advanced intensive care capabilities, primary repair of intrathoracic esophageal perforation could be safely accomplished in most patients regardless of the time interval between perforation and operation. Leakage at the suture site is common unless primary repair is carried out without delay. Postoperative leakage, however, is usually inconsequential and does not necessarily result in an adverse outcome.

Therefore, it may be concluded that during laparotomy for perforation of hollow viscera and subphrenic abscess cases, one should look for lower oesophageal perforation because such cases need early surgery with good

nutritional management, and an efficient pre- and post-operative care.

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