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Acute gastric volvulus: A vicious twist of tummy-case report

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ABSTRACT

INTRODUCTION: Gastric volvulus is an uncommon disorder and can present either in the acute or chronic setting with variable symptoms. A robust blood supply of the stomach from different sources does not allow ischemia to develop early. When it occurs in the acute scenario, patients present with severe epigastric pain and retching without vomiting. Together with inability to pass nasogastric tube, they constitute Borchardt's triad.

PRESENTATION OF CASE: We report a case which presented in the emergency department with severe abdominal pain, abdominal distension and vomiting and a previous history of pulmonary tuberculosis. An incidental finding of uterovaginal prolapse was present. A diagnosis of acute gastric volvulus with peritonitis was made and total gastrectomy with Roux-en-Y esophagojejunostomy for gangrenous and perforated stomach was performed.

DISCUSSION: Primary gastric volvulus occurs in the absence of any defect in the diaphragm or adjacent organ pathology and may be caused by weakening of gastric supports. We wish to highlight if there is a possible association of primary gastric volvulus with uterovaginal prolapse reflecting a general laxity of body ligaments or with fibrosis of the lung secondary to pulmonary tuberculosis resulting into the twisting of the stomach.

CONCLUSION: Acute gastric volvulus is a surgical emergency requiring early diagnosis and aggressive management, as a delay results into complications like gangrene and perforation which substantially increase the morbidity and mortality in these patients.

1. Introduction

Gastric volvulus is an abnormal rotation of the stomach by more than 180°. It is a rare clinical entity that is difficult to diagnose and can be fatal in the acute scenario. Borchardt's triad of severe epigastric pain, retching and inability to pass a nasogastric tube is present in 70% cases and is believed to be diagnostic for acute gastric volvulus [1]. Complications include gastric ischemia, gangrene, perforation, pancreatic necrosis [2], omental avulsion [3] and even splenic rupture [4] in few cases. The rarity of the disease accounts for the associated high mortality (30–50%) and hence requires high index of clinical suspicion [5]. A prompt and correct diagnosis followed by immediate surgery remains the key factor in reducing the morbidity and mortality.

2. Presentation of case

A 35 years old lady presented in the emergency ward with the complaints of pain in abdomen and nonbilious vomiting for last 2 days. Pain was gradual in onset, starting from upper part of abdomen. It quickly increased in intensity and spread to whole abdomen. There was history of low grade, intermittent fever and productive cough for last 10 days. There was no history of hematemesis. Patient was diagnosed with pulmonary tuberculosis 2 years back for which she took antitubercular treatment for 18 months. Patient had no other comorbidities. There was no history of trauma or any surgical intervention.

On examination, she was pale, severely dehydrated with sunken eyes. She was tachypneic, had pulse rate of 120/min and her blood pressure was 90/60 mm of Hg. Abdominal examination revealed marked distension in the epigastrium and umbilical region with generalized tenderness, guarding and rigidity. Bowel sounds were absent. All the hernial sites were normal and digital rectal examination was also normal. Chest auscultation revealed decreased air entry on the left side and bilateral coarse crepitation. Incidentally, she had third degree uterovaginal prolapse (Patient had two normal vaginal deliveries and there was no history of any pelvic trauma or surgery).

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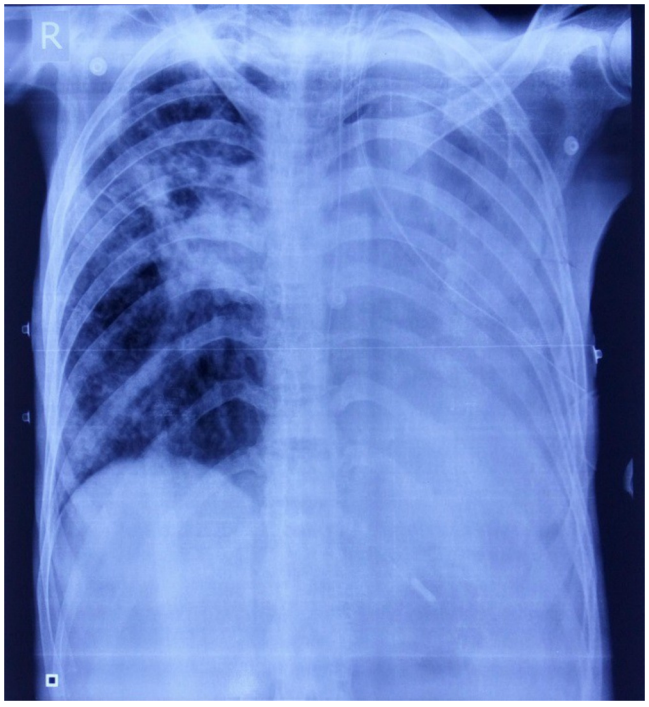


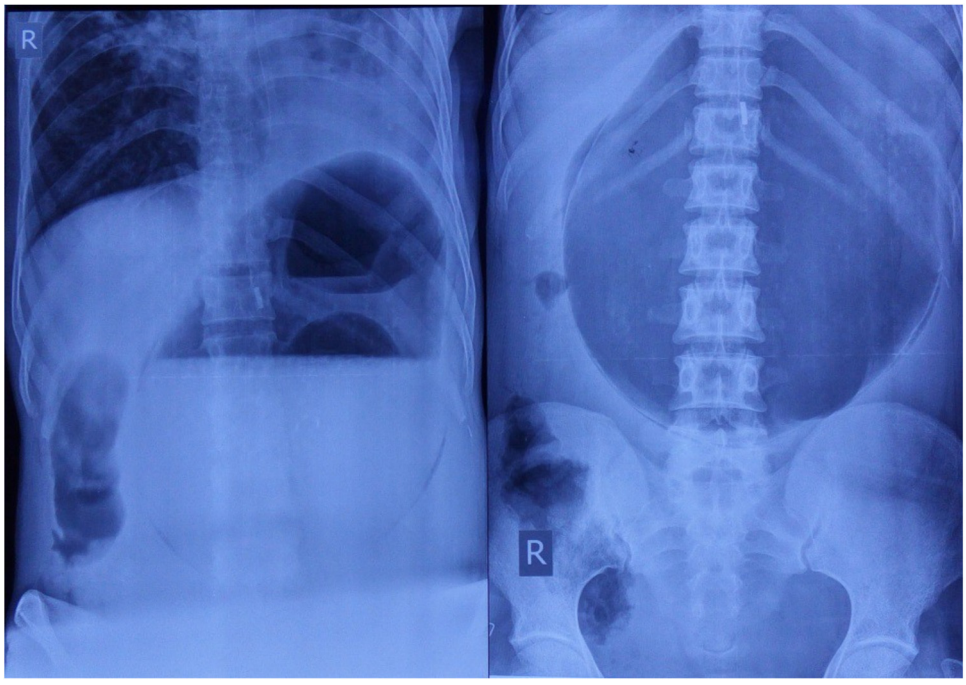
Fig. 1. Showing opaque left hemithorax with bronchiectatic changes on right side.

Patient was resuscitated with intravenous fluids to correct dehydration and electrolyte imbalance. A nasogastric tube was attempted but could not be passed through. Patient was investigated and her haemoglobin was 9.1 g/dl with leucocytosis (white cell count = 17,400/mm^3). Renal function test were normal. X-Ray chest PA view showed opaque left hemithorax with leftward shift of mediastinum and fibrobronchectatic opacities in right upper and middle zones (Fig. 1). Plain X-Ray abdomen revealed a single massively distended viscus occupying almost whole of the abdomen, predominantly in the epigastrium and the umbilical region, showing a large fluid level in erect position (Fig. 2). Ultrasound abdomen was compromised due to bowel gases. Based on the clinical features and typical finding on X-Ray abdomen, a provisional diagnosis of acute gastric volvulus with peritonitis was made.

Emergency exploratory laparotomy was performed in view of generalized peritonitis. On exploration, 500 ml of blackish, foul smelling toxic fluid was drained from the general peritoneal cavity. Stomach was markedly distended, twisted (organoaxially) and gangrene was present at the fundus and body (Fig. 3). A single 1.5 cm × 1.5 cm perforation was found in the upper part of the greater curvature of the stomach. Left dome of the diaphragm was intact. Rest of the abdominal viscera were normal. Total gastrectomy with Roux-en-Y esophagojejunostomy was performed (Fig. 4) with placement of left subdiaphragmatic drain near the esophagojejunostomy and another in the Morrison's pouch near the duodenal stump. Postoperatively, patient required ventilatory support due to poor respiratory function in an intensive care unit. She was started enteral feeds via nasojejunal tube from 5th postop day. She started taking oral feeds after weaning off from the ventilator and removal of nasojejunal tube. Postoperative CECT chest revealed bronchiectasis with fibrotic cavities in right lung and chronic empyema on the left side (Fig. 5). Sputum for acid-fast bacilli was positive and a diagnosis of relapse of pulmonary Koch's was made. She was put on category II antitubercular treatment and was discharged on 15th postop day.

3. Discussion

Volvulus is described as more than 180° rotation of a hollow viscus around its mesentery, resulting in obstruction, impairment of vascularity and eventually ischemia. Most common organ to undergo volvulus in adults is sigmoid colon, followed by caecum to a lesser extent. Gastric volvulus is very uncommon, usually presenting in the 5th decade [6]. It can present either in the acute or chronic form. Acute gastric volvulus may lead to gangrene in 5–28% of the patients [7]. There is no sex or racial predilection [8].



a **b**

Fig. 2. (a) Shows single large air-fluid level. (b) Shows single large gaseous shadow.