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Boerhaave's syndrome: Conservative management followed early diagnosis

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Introduction

Boerhaave's syndrome (BS) is a rare and often fatal condition characterized by spontaneous oesophageal rupture. It results from sudden increase in intra-oesophageal pressure combined with negative intra-thoracic pressure caused by straining or sudden violent vomiting against a closed glottis [1]. Meckler's triad of vomiting, pain and subcutaneous emphysema are characteristic features of BS [1]. The nonspecific nature of the symptoms may contribute to a delay in diagnosis and a poor outcome [2]. In most cases, the tear occurs at the left postero-lateral aspect of the distal oesophagus and extends for several centimeters proximally [3]. BS is associated with high mortality and morbidity in the absence of proper management.

Case report

A 74 year old previously healthy Sri Lankan lady, presented to the Emergency unit with sudden onset of severe chest pain and difficulty in breathing after violent vomiting .On examination, she was in distress, dysphonic, afebrile.Her blood pressure was 140/90. Breath sounds were reduced on left side of the chest.Urgent chest film showed pneumomediastinum and left side pleural effusion with subcutaneous emphysema [Figure1].

Later CT-thorax confirmed a perforation at the left posterior aspect of mid oesophagus [Figure2]. She was diagnosed as having Boerhaave's syndrome. Conservative management was planned considering her stable general condition, early diagnosis and absence of sepsis or malignancy. She was managed her with tube thoracostomy, intravenous fluids, broad spectrum intravenous antibiotics (Imipenem), nil by mouth and frequent nasogastric suction. After 3 days, a feeding jejunostomy was done for the purpose of enteral nutrition. She clinically improved after 3 weeks of inward management.

The repeat contrast oesophagogram showed minimal leakage with reduced size of perforation. She was discharged with drainage bag attached to the thoracostomy site and feeding jejunostomy for enteral nutrition at home. She was followed up regularly with 2 monthly contrast oesophagogram. Six months after the initial presentation, oesophageal rupture site healed with a small diverticulum and the thracostomy site too was completely healed.

Figure 1 (CXR): Pneumomediastinum & L/S effusion with subcutaneous emphysema

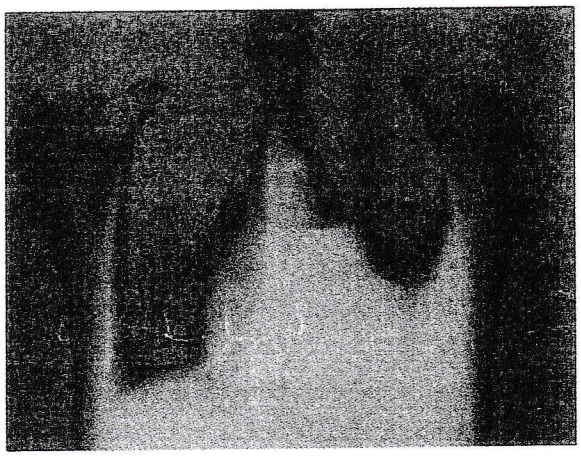
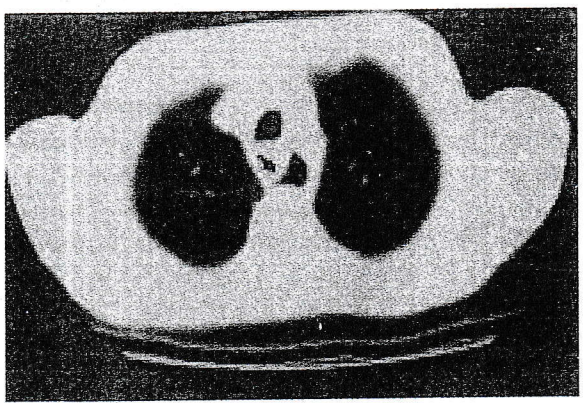


Figure 2 (CT-thorax): A perforation at the left posterior aspect of mid oesophagus



One week after the radiological confirmation of healing of oesophageal rupture oral feeding was started. Patient tolerated the oral feed well. Subsequently feeding jujunostomy was removed and patient recovered completely.

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Discussion

Boerhaave's syndrome accounts for 15% of rupture or perforation of the esophagus. Overall mortality rate is approximately 30%. Most surgeons believe that surgical intervention gives good outcome than conservative management [4]. Specific surgical technique (primary repair, stent and resection) depends on the extent, time of injury and location of the perforation.
Emerging evidence indicates that patients with small well-defined tears and minimal extra oesophageal involvement may be better managed conservatively [5, 6]. This was possible with our patient. .

Early diagnosis or delayed diagnosis with contained leak; tear outside abdomen-contained to mediastinum; no neoplasm or obstruction; no signs or symptoms of sepsis favours conservative management [6]. This includes immediate broad-spectrum intravenous antibiotic therapy to prevent mediastinitis and sepsis, intravenous fluid therapy to replace the fluid loss since oral rehydration is impossible, nil by mouth and placement of nasogastric tube to clear gastric contents and to limit further contamination. Thoracostomy may be used to decompress the chest.

Early diagnosis, stable general condition, tears outside the abdomen, no distal obstruction and no features of sepsis favoured the conservative management in our patient. Although a contained oesophageal rupture to mediastinum would have been ideal, our patient had a left sided pleural effusion. This may have contributed to the delayed healing of the oesophageal rupture. Upper gastrointestinal endoscopy with endoscopic clipping in a well trained hand is the other alternative that practiced in some centres [5].

Even though Boerhaave's syndrome is generally considered to have poor prognosis without surgical treatment, this case has shown with early diagnosis and appropriate selection of patient, conservative management would be an effective alternative.

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