We describe a case of life-threatening oesophageal rupture where the patient presented with features of an upper gastrointestinal bleed. Oesophageal rupture is rare with an incidence of 3/1,000,000 and a high mortality rate, which increases exponentially with delay in treatment. This case portrays oesophageal rupture presenting in a rare way which deserves increased clinical awareness given the serious outcomes if missed.

Case report

A 49-year-old woman presented with haematemesis in the context of alcohol intoxication. On arrival she was haemodynamically unstable with a blood pressure of 60/40mmHg, respiratory rate was 40/min and heart rate was 119/min. Blood tests showed a pH of 6.89, lactate >19.9mmol/L, haemoglobin 119mg/dL, white cell count of 23.4x10⁶ and Urea 24.7μmol/L. Initial chest radiograph was unremarkable.

The patient proceeded to emergency gastroscopy after resuscitation. Gastroscopy revealed a distal oesophageal perforation with soiled posterior mediastinum on view (Figure 1). Gastroscopy was immediately abandoned and the patient was transferred to a tertiary centre. She required inotropic support with noradrenaline 60μg/min and adrenaline 20μg/min. She received antimicrobial cover with tazocin and fluconazole.

An emergency laparotomy was performed where the perforation was identified close to the gastroesophageal junction with surrounding ulceration and the contaminated mediastinum was lavaged. An on-table gastroscopy was performed and a fully covered oesophageal stent was deployed and secured in the stomach. A mediastinal and abdominal drain were inserted. A nasogastric tube was inserted and an 8Fr jejunostomy was formed for enteral nutrition.

Post-operatively she received care in the intensive care unit and was extubated at day two post-op. Her post-operative course was complicated by a recurrent pleural effusion requiring drainage (Figure 2). At day 30 post-op she was discharged home. At day 54 post-operation she was electively re-admitted for removal of the oesophageal stent and jejunostomy tube (Figure 3). At endoscopy a recurrence of the oesophageal stricture was dilated and the stent was successfully removed. She was discharged on pantoprazole and regular antiemetics.

Discussion

Boerhaave’s syndrome is the spontaneous rupture of the oesophagus due to vomiting and retching. It is a rare but is a serious condition associated with an overall mortality rate of 30%. The condition is more common in men aged between 40–60 years. The Mackler triad of vomiting, chest pain and subcutaneous emphysema is diagnostic but uncommon occurring in 14% of presentations. A pleural effusion is present in 90% of cases however this is not diagnostic. Other radiographic features include pneumothorax or pneumomediastinum. Similarly, as in our case, the chest radiograph may be normal. The site most likely to perforate is the left posterolateral wall of the distal oesophagus due to anatomic weakness. Delay in definitive treatment results in an exponentially increased risk of mortality from 18% with treatment within 24 hours, compared to as high as 60% with treatment after 48 hours and is almost invariably fatal without treatment.
Figure 1: Endoscopic view of soiled posterior mediastinum.

Figure 2: Computerised tomography in coronal plane showing oesophageal stent in situ and left pleural effusion.
Classically in Boerhaave's syndrome the perforation occurs as a linear tear due to the pressure and tensile forces from the vomiting or retching in an otherwise normal oesophagus. In this case, the perforation may have occurred from vomiting due to alcohol intoxication. Spontaneous bleeding from the ulceration and reflux oesophagitis lead to witnessed haematemesis mimicking the presentation of an upper gastrointestinal haemorrhage. This case demonstrates how a life-threatening oesophageal perforation can mimic an upper gastrointestinal bleed. The features that pointed towards an alternate pathology were the severe lactic acidosis with haemodynamic instability and a normal haemoglobin. The key points in the management of this patient were the early recognition of oesophageal perforation, termination of gastroscopy upon diagnosis with appropriate aspiration of stomach contents to limit contamination and referral for immediate surgical management.
Competing interests:
Nil.

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