An unusual acute gastric emergency

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A 72-year-old woman presented to Casualty with constant epigastric pain and bouts of vomiting shortly after having had a meal. This was followed by repeated retching. On examination, she was tachycardic with normal blood pressure. Her abdomen was tender in the epigastric region with no guarding. A nasogastric tube could not be passed into the stomach. Her chest X-ray is shown in figure 1. A Gastrografin swallow was performed, based on the chest X-ray findings, which revealed the stomach to be in an abnormal position as shown in figure 2.

Figure 1 Erect postero-anterior chest film showing air fluid level in the mediastinum

Figure 2 Gastrografin swallow demonstrating abnormal position and shape of the stomach with a normally located gastro-oesophageal junction. Note that there is no extravasation of contrast

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Questions

- 1 What is your diagnosis?
- 2 What predisposing factors could lead to this particular acute abdominal condition?
- 3 What are the principles of managing this condition pre-operatively?
- 4 What would be the dangers of delayed treatment?
- 5 What are the principles of operative management?
- 6 What other treatment methods are available in the management of gastric volvulus?

Answers

QUESTION 1

Volvulus of the stomach secondary to para-oesophageal hiatus hernia. A triad of constant abdominal pain, ineffectual retching and difficulty in passing a nasogastric tube into the stomach is suggestive of the above diagnosis. This is called Borchardt's triad.

QUESTION 2

Several predisposing factors have been recognised, the most common being congenital diaphragmatic eventration. Diaphragmatic herniae such as para-oesophageal and Bochdalek herniae are other frequently occurring diaphragmatic abnormalities associated with volvulus of the stomach.¹ Rarely, pyloric carcinoma can present with intrathoracic stomach volvulus.

QUESTION 3

Intravenous access with adequate fluid resuscitation along with analgesia is vital. The patient must be maintained nil by mouth with no forced attempts at passing a nasogastric tube as this can cause perforation of the oesophagus or stomach.² Anti-emetics are contra-indicated.

QUESTION 4

Delayed surgery could result in strangulation and necrosis of the stomach, leading to perforation and peritonitis.

QUESTION 5

Following adequate resuscitation, an upper abdominal laparotomy should be performed. The stomach is examined with a view to derotation of the viable stomach and fixation

(gastropexy) to prevent recurrence.¹ Various methods of fixation have been described, including posterior gastroenterostomy, gastropexy to the abdominal wall, etc.³ If treatment is delayed, strangulation and necrosis of the stomach ensue, with the need for gastrectomy. In extreme cases, a total gastrectomy with oesophago-jejunostomy may be necessary. The underlying predisposing abnormalities, such as diaphragmatic defects, need correction as a preventive measure against recurrence.¹ Addition of anti-reflux procedure such as Nissen's fundoplication, is controversial. In idiopathic gastric volvulus there would be only ligamentous laxity of the gastric attachments; a Polya gastrectomy with a retrocolic gastroenterostomy is considered to be the best method of ensuring gastric fixation.³

QUESTION 6

Chronic gastric volvulus can be an asymptomatic condition, usually diagnosed incidentally on radiological examination,² the definitive treatment of which is controversial, especially in idiopathic gastric volvulus. Symptomatic chronic volvulus can be corrected by gastropexy through laparotomy and more recently a laparoscopic approach has been described.⁴ Double percutaneous endoscopic gastrostomy fixation appears to be an effective treatment for a recurrent gastric volvulus, with the advantage of avoiding laparotomy.⁵

Final diagnosis

Strangulated gastric volvulus secondary to para-oesophageal hiatus.

Keywords: gastric volvulus; para-oesophageal hiatus

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