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.

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?
Self-assessment corner

Answers

QUESTION 1
Volvulus of the stomach secondary to paraoesophageal 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 herniation. 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 dero-tation of the viable stomach and fixation (gastropexy) to prevent recurrence. 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,4 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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