became acutely ill complaining of generalised abdominal discomfort. The pulse rose to 120 per minute and the blood pressure fell to 90/50 mm Hg. The abdomen became considerably distended, with no audible bowel sounds, but vomiting did not occur and her temperature was normal. Supine and erect abdominal x-ray films showed considerable distension of the stomach with gas and fluid, but neither the small nor large bowel showed distension or fluid levels. Gastric aspiration produced 2500 ml of light brown fluid and continuous drainage yielded a further 6000 ml of fluid over the next 24 hours. During this period she received a replacement intravenous infusion of normal saline with potassium supplements and her plasma electrolytes were maintained within the range of normal. Sustained improvement occurred—the pulse, blood pressure, bowel sounds, and urine output gradually returning to normal. After a further few days of convalescence she had recovered fully and was discharged.

Discussion

Acute dilatation of the stomach is a life-threatening condition which has been encountered and studied more intensively in surgical rather than medical practice.¹ Awareness of its gravity and the more routine use of the nasogastric tube have reduced the frequency and mortality of this complication after surgery or trauma. Although it has been described in diabetic coma and as a complication of the treatment of anorexia nervosa,² it remains a rare but important medical emergency since any delay in treatment carries a high mortality.³ Both amitriptyline and orphenadrine may affect the gastrointestinal tract adversely, producing paralytic ileus and faecal impaction,⁴ which have been attributed to their anticholinergic properties. A search of published work, however, has failed to uncover any account of acute gastric dilatation complicating such drug poisoning. Our experience with this patient indicates the need to bear this possibility in mind and also emphasises that, like the cardiac arrhythmias, it may be a late complication.

¹ Starr, K W, *Annals of Royal College of Surgeons*, 1953, **12**, 71.

² Jennings, K P, and Klidjian, A M, *British Medical Journal*, 1974, **2**, 477.

³ Evans, D S, *British Journal of Surgery*, 1968, **55**, 940.

⁴ Warnes, H, *et al*, *Canadian Medical Association Journal*, 1967, **96**, 1112.

Dumfries and Galloway Royal Infirmary, Dumfries DG1 4AP

J HOW, MB, MRCP (UK), registrar in general medicine (now lecturer in haematology, University of Aberdeen)

R W STRACHAN, MB, FRCPE, consultant physician

Retrosternal goitre presenting as bleeding oesophageal varices

Oesophageal varices are normally due to portal hypertension. Occasionally, however, they are seen in association with mediastinal obstruction, usually with malignant superior vena caval obstruction: the so-called "downhill" varices. Bleeding is rare. The following case presented with massive gastrointestinal haemorrhage in the absence of clinical superior vena caval obstruction. Large, bleeding mid-oesophageal varices were demonstrated endoscopically and radiologically, which disappeared after the excision of a large, benign, retrosternal goitre.

Case report

A 64-year-old woman was admitted as an emergency. Three days previously she had suddenly developed severe retrosternal and epigastric pain, followed by a small haematemesis. Subsequently she complained of episodic retrosternal pain and melaena. There was no relevant previous medical history. On examination she was pale, ill, and hypotensive. The left lobe of the thyroid was enlarged and irregular. There was mild epigastric tenderness and melaena on rectal examination. There were no other abnormal physical signs. Haemoglobin was 9 g/dl on admission and rapidly fell further. Endoscopy showed considerable oesophageal displacement to the right, and large bleeding varices were seen at 15–20 cm. Below this, there was no abnormality. A chest radiograph showed displacement of the trachea by a large superior mediastinal mass, and a barium series confirmed the marked oesophageal displacement and showed varices in the midoesophagus in the region of the obstruction. A thyroid scan showed a large retrosternal goitre.

Chest radiograph showing large superior mediastinal tumour.

Portal pressure measured by splenic puncture was normal. At laparotomy, the liver and spleen appeared healthy and the portal vein pressure was normal. A liver biopsy was taken, the abdomen closed, and a sternotomy performed. The left lobe of the thyroid was greatly enlarged and descended behind the trachea to the right side, displacing the oesophagus. The lobe was mobilised and excised. Subsequent progress was uneventful. No further bleeding occurred and a gastroscopy four months later showed no trace of varices. The large, nodular tumour removed was shown histologically to be a benign colloid goitre. The liver biopsy was normal.

Discussion

The submucosal and perioesophageal venous plexus of the mid-oesophagus drains into the azygos system and thence into the superior vena cava (SVC). This anatomical arrangement probably accounts for oesophageal varices with SVC obstruction. Most cases have been due to neoplastic lymph node enlargement. Felton and Lessure reviewed 30 cases in 1964.¹ The cause was bronchogenic carcinoma in 15, Hodgkin's disease in two, with single cases of metastatic carcinoma, surgical caval ligation, and an undetermined mediastinal mass. Seven were thought to have mediastinal fibrosis, and three had retrosternal goitres. The preponderance of malignant tumours was confirmed by Gerstenberg in 1971.² Keminger and Kolb in 1972³ described two cases of cervical oesophageal varices with retrosternal goitres and advised phlebography prior to thyroidectomy.

The present case is unusual in that SVC obstruction was not clinically apparent. The situation of the tumour would, however, readily account for pressure on the superior vena cava, or more locally on the azygos system or oesophageal plexus. Phlebography would have been interesting, especially since the varices appeared to be predominantly lateral to and below the obstruction, so that it is not clear that they pursue a "downhill" course. The other feature of interest is the mode of presentation. Most varices of this sort are asymptomatic, though bleeding has occasionally been reported.^{4,5} The case demonstrates the value of early endoscopy in the management of upper gastrointestinal bleeding. Evidently, the possibility of mediastinal obstruction needs to be at least considered in the differential diagnosis, though in many cases a chest radiograph will suffice to exclude it.

¹ Felton, B, and Lessure, A P, *Diseases of the Chest*, 1964, **46**, 740.

² Gerstenberg, E, *et al*, *Medizinische Welt* (Stuttgart) 1971, **22/37**, 1433.

³ Keminger, K, and Kolb, R, *Chirurgie*, 1972, **43/6**, 277.

⁴ Mikkelsen, W J, *Radiology*, 1963, **81**, 95.

⁵ Snodgrass, R W, and Mellinkoff, S M, *Gastroenterology*, 1961, **41**, 505.

North Manchester General Hospital, Crumpsall, Manchester M8 6RB

P V BARBER, MB, MRCP, senior registrar in chest diseases

J D EDWARDS, MB, MRCP, registrar in medicine

B A ENOCH, MB, MRCP, consultant physician

M SHAFIQ, MB, FRCS, consultant surgeon

A G VALLON, MB, CHB, senior house officer