Acute gastrointestinal haemorrhage: a rare presentation of aortic dissection

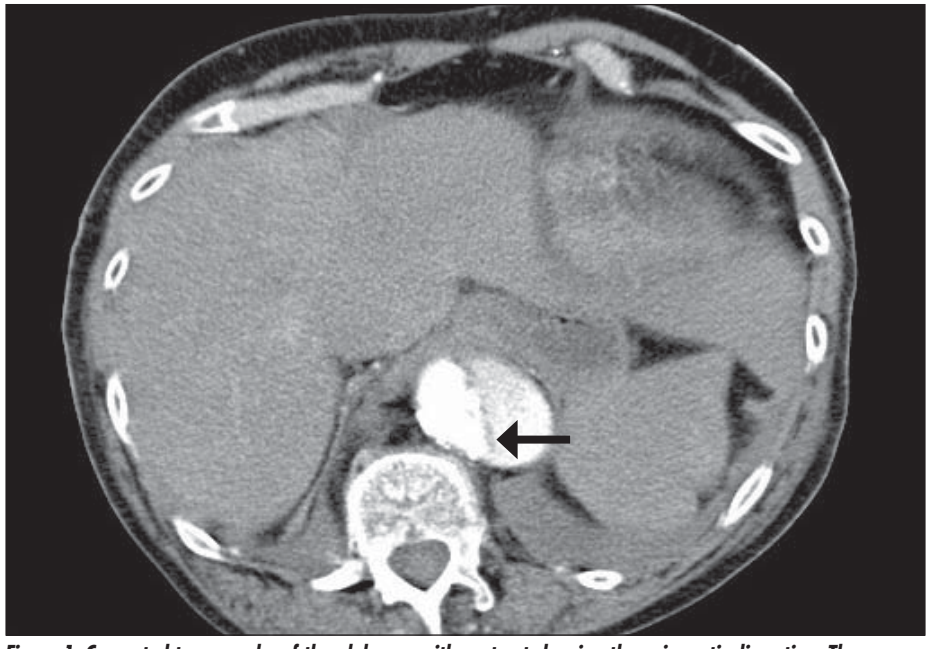

Figure 1. Computed tomography of the abdomen with contrast showing thoracic aortic dissection. The arrow highlights the 'double barrelled aorta' formed by the true aortic lumen and the false lumen of the dissection.

Discussion

Acute gastrointestinal haemorrhage is a rare presentation of aortic dissection (Nath et al, 1986). Direct compression of the oesophagus by the false lumen of aortic dissection may result in oesophageal ischaemia, dysphagia and odynophagia (Elloway et al, 1992; Svensson et al, 1994), and involvement of the mesenteric arteries may result in bowel infarction and intestinal haemorrhage (O'Dell and Hakim, 1990). Successful outcome in aortic dissection depends on early diagnosis and awareness of the whole spectrum of presenting symptoms (Khan, 2001). BJHM

Elloway RS, Mezwa DG, Alexander T (1992) Foregut ischaemia and odynophagia in a patient with a type III aortic dissection. *Am J Gastroenterol* **87:** 790–3

Khan IA (2001) Clinical manifestations of aortic dissection. *J Clin Basic Cardiol* **4:** 265–7

Nath HP, Jacques PF, Soto B, Keller FS, Ceballos R (1986) Aortic dissection masquerading as gastrointestinal disease. *Cardiovasc Intervet Radiol* **9:** 37–41

O'Dell KB, Hakim SN (1990) Dissecting thoracic aortic aneurysm in a 22-year-old man. *Ann Emerg Med* **19:** 316–18

Svensson LG, Shahian DM, Davis FG et al (1994) Replacement of entire aorta from aortic valve to bifurcation during one operation. *Ann Thorac Surg* **58:** 1164–6

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Case Report

A 72-year-old woman presented with a 24-hour history of severe upper jaw pain and more recent onset central chest pain. She denied difficulty breathing or nausea. Her past medical history included cluster headaches, mild chronic obstructive airways disease and hypertension. She had been well on review in outpatient clinic the day before.

On examination, she was apyrexial, blood pressure 130/60 mmHg, pulse 95 beats per minute and regular, oxygen saturation 96% on room air. Clinical examination was unremarkable. There were no new electrocardiogram changes and a chest X-ray was reported as normal. Blood tests showed haemoglobin 9 g/dl, a 2 g/dl drop from the previous day in clinic. The remaining laboratory tests were normal. With no identified source of bleeding or associated rise in urea, her full blood count was repeated to exclude a spurious result.

Over the next 24 hours, her chest and jaw pain eased but she developed diarrhoea and tachycardia. Her blood pressure remained stable at 140/65 mmHg. The haemoglobin drop was confirmed with a repeat value of 8.7 g/dl but still no source of bleeding was identified. Over the course of the day, the patient's diarrhoea continued with increasing abdominal discomfort, until she suddenly passed fresh blood per rectum associated with a blood pressure drop to 70 mmHg systolic. She was resuscitated promptly and a decision made to manage her conservatively with oesophagogastroduodenoscopy and colonoscopy scheduled for 24 hours later, as it was the weekend and endoscopy services were limited.

However, she continued to pass fresh blood per rectum and suffer severe generalized abdominal pain, and so an urgent computed tomography scan with contrast was performed (*Figure 1*). This showed a type A aortic dissection extending from the left coronary artery to involve the carotid arteries and extend down below the renal arteries. The Stanford classification divides dissections into 2 types: A and B. Type A involves the ascending aorta, type B does not. The ascending and transverse colon appeared thickened and oedematous on the scan. The most likely cause of bleeding in this case was ischaemic colitis, secondary to aortic dissection impeding inferior mesenteric artery blood flow. Cardiomegaly raised the probability of pericardial involvement.

On the basis of these findings, the patient was immediately reviewed by the on-call vascular surgical team. Given the extent of the dissection, surgery was not felt to be an option. Shortly afterwards she became profoundly hypotensive and died. The most likely cause of death was cardiac tamponade, although an echocardiogram was never performed. The family declined a post mortem.