Rare disease

Spontaneous mesenteric haematoma; diagnosis and management

Sam G Parker,¹ Jeremy N Thompson²¹Department of Emergency Medicine, Royal Free Hospital, London, UK²Department of General Surgery, Chelsea and Westminster Hospital, London, UK

Correspondence to Dr Sam Parker, samparker@nhs.net

Summary

Spontaneous mesenteric haematomas are rare. They have been reported to be associated with coagulopathies, connective tissue disorders, past trauma, arteriopathy and pancreatitis. However, some cases have been reported in which there is no apparent underlying aetiology. Here we report such a case and we review the literature that discusses optimal diagnosis and management. In this case, spontaneous haemostasis occurred by intra-abdominal tamponade and the regression of the haematoma was monitored with regular imaging.

BACKGROUND

Spontaneous mesenteric haematomas are rare. It was first described in 1909¹ and for the remainder of the 20th century only 110 cases are reported in the literature.² Usually, haemorrhages are associated with trauma,³ connective tissue disorders,⁴ coagulopathies,⁵ pancreatitis,⁶ malignancy⁷ and arteriopathy.⁸ We describe a case of idiopathic spontaneous mesenteric haemorrhage, and discuss the imaging modalities used and the management options.

CASE PRESENTATION

A 54-year-old banker woke up normally and cycled into work as usual. While showering at work he began to suffer from a central colicky abdominal pain. He became nauseous and had a bout of mild diarrhoea. The pain became intermittently severe, the patient began to feel drowsy, cold, shivery and clammy. There was no history of melaena or haematemesis. The patient was previously fit and well with an alcohol history of 21 units per week, had not smoked for 25 years and had a right inguinal hernia repair. He took no medication and had no allergies. There was no family history of bleeding diathesis. He attended his general practitioner who found his blood pressure was 95/65 mm Hg, pulse 52 beats/min and temperature 34.5°C. The patient was drowsy with cold peripheries. On examination, the abdomen was soft but had a right-sided fullness and tenderness. The patient was transferred as an emergency to a hospital emergency department where he received analgesia and fluid resuscitation. The working diagnosis was query-leaking abdominal aortic aneurism.

Initial bloods showed a haemoglobin (Hb) of 14.2 g/dl, white blood cells of 14.1×10⁹/litre a platelet count of 251×10⁹/litre and a normal amylase. On venous blood gas the lactate was 3.5 mmol/l, the pH was 7.28. Fluid resuscitation continued with 3350 ml of fluids in and 140 ml out in the first 3 h. The haemoglobin dropped to 11.0 g/dl and the creatinine level rose to 143 µmol/l.

CT abdomen with arterial enhancement revealed a peri-duodenal and pancreatic haematoma with a normal

pancreas (figure 1). The haematoma was 18 cm×11 cm, selective visceral angiography of the coeliac trunk/superior mesenteric artery/gastroduodenal artery were all-normal; no source of bleeding could be found and therefore no embolisation was required. The patient's haemoglobin dropped to 8.2 g/dl 2 days after initial presentation. The patient was treated with conservative management; intravenous fluids, analgesia, anti-emetics and iron tablets. Once the pain had settled the patient was sent home with omeprazole 40 mg once a day and ferrous sulphate tablets 200 mg three times a day. He was followed up regularly in clinic; the haematoma was followed on ultrasound scanning as it resolved spontaneously over a period of several months. Since the event, all clotting screens have been normal, including von Willebrand and cofactor levels.

Figure 1 Transverse CT abdomen with contrast. The mesenteric haematoma can clearly be seen with intact pancreas posteriorly.

The patient's abdominal pain has resolved and his bowel habit is normal.

OUTCOME AND FOLLOW-UP

Even though this patient presented with an acute presentation and alarming CT images, the patient's condition was stabilised in the emergency department after fluid resuscitation. Haemostasis was achieved by intra-abdominal tamponade and no active bleeding was found with angiography. The patient was followed up with regular ultrasonography and clinical review. The haematoma resolved spontaneously.

DISCUSSION

This is a case that demonstrates the use of non-operative management in a clinically stable patient in which neither CT scanning nor visceral angiography could identify any active bleeding or cause for haemorrhage. Previous cases have also highlighted the importance of non-operative management and avoidance of emergency laparotomy in stable patients.⁹ Regular imaging and clinical follow-up is required to make sure the haematoma is reducing in size and the patient remains well.

In approximately one-third of cases of spontaneous idiopathic haemorrhage no active bleeding or cause can be identified.¹⁰ No active bleeding should result in non-operative management. The aetiology of these haemorrhages remains a mystery. Modern gene sequencing has suggested that a mutation in the COL3A1 gene, which results in production of abnormal procollagen type III, could be a possible cause.¹¹

Management of patients with mesenteric haematoma depends on their clinical stability. Patients in shock not responding to fluid resuscitation need an emergency operation. Patients stable after resuscitation require urgent imaging. CT scanning is the standard imaging modality. CT is required to rule out other more common causes of abdominal pain and shock; including abdominal aneurysm, malignancy and acute pancreatitis. These diagnoses are more common than spontaneous mesenteric haemorrhage. CT reports must be interpreted with caution. Cases have been reported where the laparotomy has been performed after CT misdiagnosis when; mass lesions have been reported on scans that have not been confirmed at laparotomy.¹²

If the patient is stable and the CT is suggestive of a mesenteric haematoma; selective visceral angiography should be performed. Where possible, bleeding vessels should be embolised.¹³ Recent studies have shown embolisation to be successful in the treatment of ruptured aneurysms secondary to pancreatitis¹⁴ and in post-operative bleeding events.¹⁵ Only tertiary centres provide this service; fast diagnosis and transfer from district general hospitals are therefore indicated.

Learning points

- ▶ Patients should be monitored closely for any signs of further deterioration.
- ▶ The role of angiography is crucial in early diagnosis of active bleeding.
- ▶ With no active bleeding conservative treatment can be used, in active bleeding interventional embolisation may be highly effective. Using these methods of treatment patients can be spared an emergency laparotomy.

Competing interests None.

Patient consent Obtained.

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