CASE REPORT

Spontaneous retroperitoneal haematoma resulting in bowel ischaemia

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SUMMARY

A 69-year-old man presented to the emergency department with sudden onset abdominal pain. He was hypotensive and tachycardic with a peritonitic abdomen. On admission, the patient had been taking clopidogrel, a known cause of spontaneous retroperitoneal haematoma. An initial computed tomography of the abdomen showed a mass in the pelvis, which was thought to most likely be a gastrointestinal stromal tumour arising from the sigmoid colon. Explorative surgery identified a retroperitoneal haematoma of the rectosigmoid region. There was no evidence of bowel perforation. Hence a washout and closure was performed. Five days following an initial improvement, the patient developed symptoms of peritonitis. A second operation revealed that the rectum had become necrotic and perforated with free faeces. The ischaemia was caused by the retroperitoneal haematoma restricting the blood supply to this part of the upper rectum.

BACKGROUND

The case highlights that ischaemia of the bowel can arise from a retroperitoneal haematoma and the importance of second look surgery. It also highlights the risks of antiplatelet therapy and the need for a high index of suspicion of retroperitoneal haematoma in the acute abdomen.

CASE PRESENTATION

A 69-year-old man presented to the emergency department with sudden onset of sharp abdominal pain extending throughout the abdomen and radiating to the lower limbs. He was hypotensive and tachycardic with a peritonitic abdomen. On admission, the patient had been taking clopidogrel, a known cause of spontaneous haematoma, for several years following a cerebrovascular accident.

INVESTIGATIONS

On admission, a focused assessment with sonography for trauma was carried out to rule out a ruptured abdominal aortic aneurysm (AAA); no pathology was identified. The patient had full blood count and inflammatory markers measure. It was noted he had a drop in haemoglobin and had a raised C reactive protein. Computed tomography of the abdomen (CTA) was then performed, which showed no acute pathology of the abdominal aorta. It showed aneurysmatic dilation in the right common femoral artery with a maximum diameter of 2.45 cm, however there were no signs of rupture. Furthermore, a large (11 cm) hypoattenuating lesion was visualised in the pelvis located

anteroposterior to the sigmoid colon as shown in figures 1 and 2, with some free fluid in pelvis.

DIFFERENTIAL DIAGNOSIS

On admission, the patient's history and examination were in line with a ruptured AAA. This however was ruled out by CTA. In addition, the unidentifiable mass could have been a tumour, probably a gastrointestinal stromal tumour with bleeding within, or a haematoma. The use of clopidogrel however made both options likely.

TREATMENT

On admission, the patient was resuscitated with intravenous fluids and managed conservatively, with the view of containing the bleed. Overnight, he became feverish and the decision was taken to perform a diagnostic laparotomy. This found a large retroperitoneal haematoma of the rectosigmoid region. The right side of the rectosigmoid appeared thickened, however in light of viable bowel the decision was made to simply close and perform a second look laparotomy in 48 hours.

OUTCOME AND FOLLOW-UP

The patient made a good postoperative recovery with his bloods and bowel functions returning to normal. Owing to his improvement, the planned second look laparotomy was not undertaken. However, 5 days after the initial laparotomy the patient started experiencing similar pain to that on admission and was showing signs of sepsis. This was initially unsuccessfully treated conservatively with intravenous antibiotics. A repeat CTA suggested perforation. Seven days following the initial surgery another diagnostic laparotomy was

Figure 1 CT image demonstrates a large (11 cm) hypoattenuating lesion in the pelvis in keeping with a large retroperitoneal haematoma.

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Figure 2 CT image demonstrates a large (11 cm) hypoattenuating lesion in the pelvis in keeping with a large retroperitoneal haematoma highlighted in red.

undertaken. The upper and mid-rectal wall had sloughed off, with free faeces in pelvis. A Hartmann's procedure was performed. Following this, he made a good recovery and was discharged after discontinuing clopidogrel. The decision to stop clopidogrel was made after a risk–benefit analysis for this patient was carried out in conjunction with the multidisciplinary team.

DISCUSSION

It has been repeatedly demonstrated that retroperitoneal haematoma is a potential complication of clopidogrel therapy. In a major randomised control trial involving clopidogrel, the relative risk of major bleeding requiring surgical intervention was significantly greater in the clopidogrel group (3.7%) versus that of the placebo group (2.7%) (relative risk, 1.38, $p=0.001$).^{1–4} Along with others, this complication should be a reason as to why this drug must be used with caution especially when there is no clear indication, as was seen in this case.

Initial laparotomy, the decision was taken not to perform a bowel resection as it was a contained haematoma and the bowel was viable. This is in line with the conventional treatment method of haematomas of this nature.⁵ It has been shown in various studies that second look surgery does improve mortality in some cases.^{6–8}

However, in this case, our patient showed resolution of his symptoms and his ability to open his bowels gave the impression that the haematoma was resolving and a further laparotomy would have put the patient through unnecessary risk.

A review of the literature demonstrated that femoral neuropathy,⁹ abdominal compartment syndrome¹⁰ and hypovolemic shock¹¹ are the major reported complications of retroperitoneal haematomas. However, we were unable to find any published

cases where these haematomas resulted in an isolated bowel ischaemia and subsequent bowel perforation.

Learning points

- ▶ Ischaemic bowel can be a complication of retroperitoneal haematoma.
- ▶ Risks of antiplatelet therapy need to be reviewed against benefits for each patient.
- ▶ The importance of second look surgery in retroperitoneal haematoma.
- ▶ High index of suspicion of retroperitoneal haematoma in patients on antiplatelets.

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Competing interests None declared.

Patient consent Obtained.

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