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Case Report

Spontaneous Rectal Perforation in a Patient on Antiplatelet Therapy

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Abstract

Introduction: Intramural haematomas can develop anywhere within any the gastrointestinal tract [1]. These are most frequently associated with blunt trauma above the level of the rectosigmoid junction and very rarely occur in the rectum [2]. Spontaneous, non-traumatic haematomas are a rare clinical condition usually secondary to haematological blood disorders or anticoagulant therapy [3].

Case Presentation: A 56-year old gentleman presented to the emergency department with a 7 day history of worsening lower abdominal pain and PR bleeding. The patient had been taking regular aspirin and clopidogrel following insertion of coronary artery stents 2 years before. On clinical examination, he was peritonitic but all cardiovascular observations were stable and afebrile. An urgent CT of the abdomen reported pneumo-peritoneum with haemorrhagic ascites; due to a perforated rectosigmoid junction with a large localised haematoma. The patient underwent an emergency laparotomy and Hartmann's procedure (and incidental obligatory appendectomy). He recovered well with no significant post-operative complications. Histology reported the rectal perforation associated with an opened haematoma and no evidence of malignancy.

Conclusion: Spontaneous rectal perforations due to atraumatic cases in patients on anticoagulation therapy/anti-platelets remain a very rare cause of an acute abdomen which lacks representation in the literature.

There should be an awareness of spontaneous haematomas as a cause for perforation and peritonitis in patients on anticoagulant therapy.

Keywords: *Spontaneous; Intramural; Haematoma; Rectal*

Background

Intramural haematomas can develop anywhere within the gastrointestinal tract [1]. They are a poorly understood condition making early and precise diagnosis difficult. These are most frequently associated with blunt trauma above the level of the sigmoid colon and very rarely occur in the rectum [2]. On multiple occasions patients have demonstrated a negligible or minor level of trauma often forgotten by patients [3]. Spontaneous, non-traumatic haematomas are a rare clinical condition usually secondary to haematological blood disorders or anticoagulant therapy [3].

Case Presentation

A 56-year old gentleman presented with a seven-day history of diarrhoea and vomiting associated with colicky lower abdominal pain. For the previous 48 hours, the pain had increased in severity and was constant in nature upon presentation; and associated with new fresh rectal bleeding. The patient was a heavy smoker with hypertension and hypercholesterolaemia. He had a past medical history of ischaemic heart disease and underwent insertion of cardiac stents in 2017. He remained on dual anti-platelet therapy (clopidogrel and aspirin) since 2015.

On clinical examination, the patient looked unwell and clammy. His abdomen was distended and he was peritonitic. His vitals were: BP 180/80 mmHg, HR of 60 bpm, Temperature 36.6°C and RR 25/min. The patient's admissions blood tests reported an Hb of 11.8, WCC 10.1, platelets 270, INR 1.2 and CRP 78. His U&Es, amylase and LFTs were normal with a mildly raised lactate on venous blood gas of 1.5. An erect chest-x-ray reported free gas under the diaphragm and an abdominal-x-ray only reported a non-specific bowel pattern. An urgent computer-tomography (CT) of the abdomen reported pneumoperitoneum with haemorrhagic ascites due to a possible perforated sigmoid colon with a large localised haematoma.

The patient underwent an emergency laparotomy and Hartmann's procedure (and incidental obligatory appendectomy). He recovered well with no significant post-operative complications. Histology was sent and reported as a rectal perforation associated with an opened mesorectal haematoma but no evidence of malignancy.

Radiology

Urgent CT abdomen and pelvis with IV contrast only.

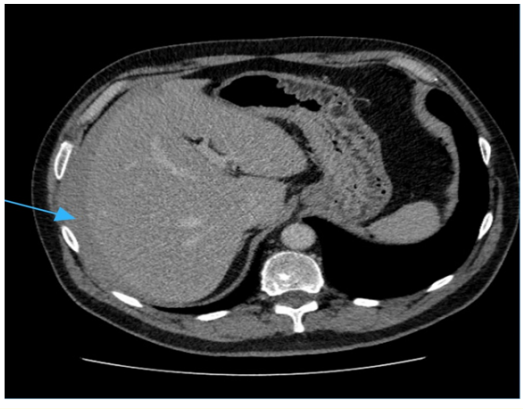

Figure 1: *Ascites around liver density over 50HU - haemorrhagic (normal fluid is up to 20HU). Arrow demonstrating haematoma.*

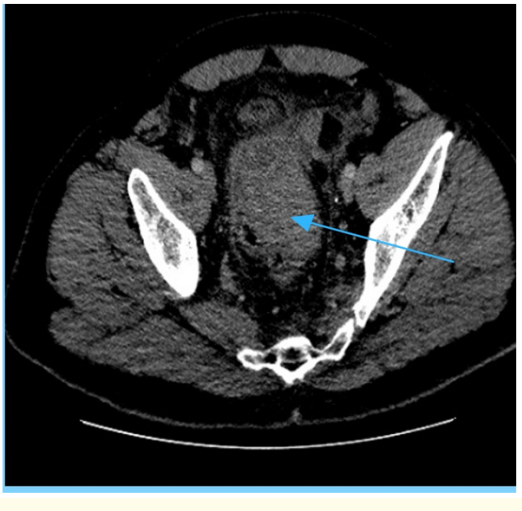

Figure 2: *Axial view. Arrow demonstrating haematoma.*

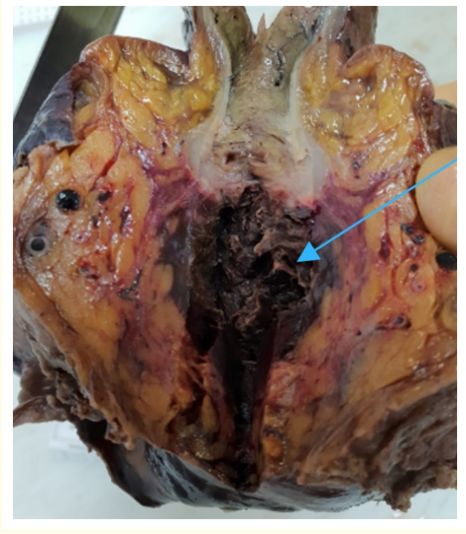

Figure 3: *Macroscopic view of rectal haematoma. Arrow demonstrating mesorectal haematoma.*

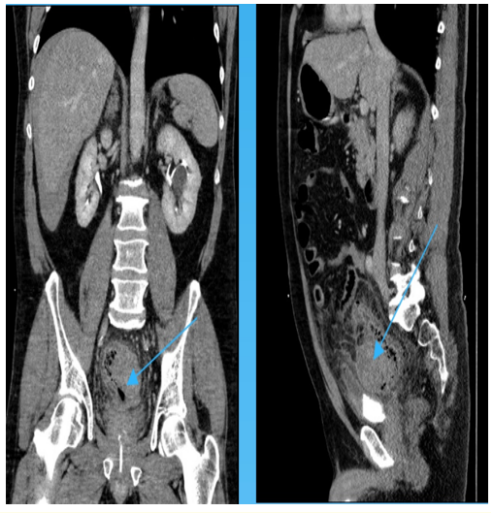

Figure 4: *Coronal and sagittal views of "mass" lesion adjoin to the wall of the recto-sigmoid junction, anterior on the left. Arrow demonstrating haematoma.*

Discussion

Spontaneous rectal perforation due to haematoma is a rare condition with only one other similar case report published based on literary search results. In the literature, 260 cases of intra mural haematoma have been previously reported with a minimum of approximately 30cc of blood in the intramural space required to clot and cause possible bowel obstruction [3]. Shearing of all layers because of trauma of the bowel wall has been thought to cause tearing in the submucosal vascular bed and thereby leading to intramural bleeding [5]. The majority of occurrences have been in patients over the age of 50-years and in the duodenum. It has been reported that 36 per cent

of intramural haematomas have been second to anticoagulant therapy [3]. 96% of cases were from patients on Warfarin therapy and 2% for heparin [3]. However, most studies have not mentioned antiplatelet agents. Interestingly, length of time on anticoagulation therapies has not been shown to have a significant effect in the development of intramural haematomas. These have been reported in patients who have been on these therapies from anything between 4 days and 7 years [6,7].

Only one other case of a spontaneous perforating haematoma of the rectum, with no trauma or anticoagulant therapy has been reported [4]. In Zhu-Lin Li's case report, a 52-year old patient presented with similar symptoms and a sigmoid colectomy was performed with good results. However, this patient had a 5-year history of warfarin anticoagulant therapy for cardiac co-morbidities.

Location, cause and age of patient has been shown to greatly affect the clinical picture with intramural haematomas. 68% of trauma cases presented with a 48 hour or greater delay between initial injury and admission. The delay in development of symptoms has been thought to relate to the "hyperosmotic effect of liquefying haematoma, which expanded by drawing fluid from the surrounding tissues" [8].

To our knowledge, no other report of a documented spontaneous haematoma of the rectum exists related to antiplatelet therapy.

Conclusion

Given the presentation with a perforation and peritonitis, surgery was the best and most appropriate line of treatment.

Unfortunately, there is a lack of comparative literature to guide future cases. However, the cases described above have adopted similar surgical techniques.

Spontaneous rectal perforations remain a very rare cause of an acute abdomen which lacks representation in the literature. We would encourage future cases of atraumatic cases in patients on anticoagulation therapy/anti-platelets to be reported and documented.

Finally, there should be an awareness of spontaneous haematomas as a cause for perforation and peritonitis in patients on anticoagulant therapy.

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