

A lower gastrointestinal bleeding in a haemodialysis patient as a potential precursor of small bowel ischaemia

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Introduction

A 77-year-old man presented with anorexia, nausea, vomiting and bloody diarrhoea. The patient had a past medical history of heart transplantation, multiple myeloma and chronic kidney disease (CKD) requiring haemodialysis. Clinical examination revealed a diffusely tender abdomen. His vital signs included a low blood pressure of 80/55 mmHg, tachycardia of 112 bpm, normothermia (36.2°C) and a SpO₂ of 97% when breathing room air. Laboratory studies were significant for haemoglobin 13 g/dL (16 g/dL a few days earlier), CRP 179,8 mg/L, leukocyte count 13,75 x10³/μL, lactate 4,46 mmol/L and known CKD. A multiphase contrast-enhanced abdominal computed tomography did not show any acute pathology, nor vascular contrast extravasation.

Considering the presentation of an acute lower gastrointestinal bleeding of undetermined aetiology, a colonoscopy within the first 48 hours after haemodynamic stabilisation was performed (Figure 1a-d).

Question

What is the most likely diagnosis?

Answer

Colonoscopy was suspicious for isolated right-sided colonic ischaemia (IRCI) with caecal ischaemia (figure 1a) and a pseudo-tumoral mass (figure 1b and 1c) in the ascending colon. The mucosa of the remainder of the colon was normal (figure 1d). Histopathological examination showed non-specific features consistent with colon ischaemia (CI). CT-angiography documented a severe stenosis of the ostium of the celiac trunk and the superior mesenteric artery (SMA). Percutaneous transluminal angioplasty and stenting of the coeliac trunk and SMA was performed.

Discussion

In contrast to left-sided CI which is more often an acute, self-limiting condition with a transient hypoperfusion (1), IRCI is associated with more severe forms of CI and occurs more frequently in patients requiring haemodialysis (1-3).

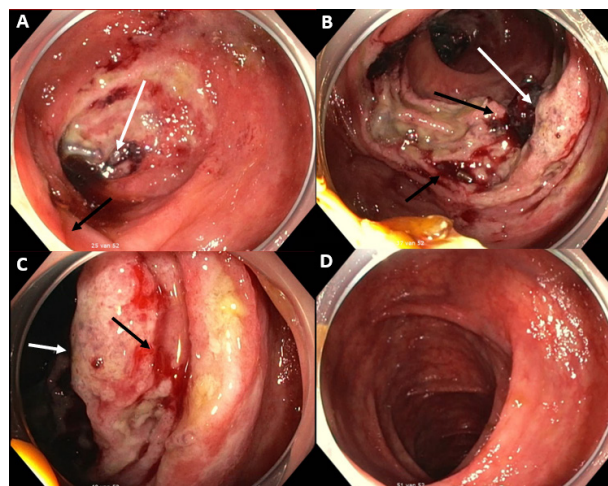


Figure 1. — A: caecal ischaemia around the appendiceal orifice (white arrow). The entrance of the ileocecal valve is highlighted with the black arrow. B & C: pseudo-tumoral mass (white arrow) with signs of oedema and (sub)mucosal and spontaneous haemorrhage (black arrow) and ulcerations. D: normal colon mucosa of the transverse colon.

It has been hypothesized that haemodynamic insufficiency is the underlying cause of IRCI in dialysis patients, involving a ‘supply and demand’ problem in the setting of a predisposing factor. Haemodialysis may be associated with extensive intravascular fluid shifts, predisposing to hypotensive episodes, and may induce vasoconstriction of the vasa recta of the right colon, resulting in ischaemia in association with other predisposing factors e.g. occlusive disease of the SMA (2,3). The right colon is prone to ischaemia because there is limited collateral circulation (3). IRCI may herald the unmasking of an otherwise clinically silent focal obstruction of the SMA and subsequently small intestinal ischaemia. (2,3).

Most cases of CI resolve spontaneously, but specific targeted therapy toward the underlying cause is a therapeutic modality that should be considered (2-3).

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The main strategy to prevent IRCI is to minimise hypotensive episodes during dialysis (3).

Authors' Contributions

Writing manuscript and literature research: K.F.
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and D.T.

Conflict of Interest

The authors have no potential conflict of interest relevant to this brief report to be reported.

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