CASE REPORT

Graft-enteric Erosion: an Unusual Colonoscopic Diagnosis

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Introduction

Communications between vascular grafts and the bowel are rare complications of vascular surgery. After aortic grafting, aorto-enteric fistulae occur in 1–2% of patients.1,2 This usually occurs at anastomotic suture lines, and true erosion of the graft into the bowel is a much rarer event.3,4 We report a case of erosion of the right limb of an aortic bifurcation graft into the caecum. The diagnosis was established at colonoscopy.

Case Report

A 78-year-old man had an aorto-bifemoral graft inserted in the repair of an inflammatory aortic aneurysm. He was well for 3 years, when he presented with a lump in the right groin. ESR and white blood count were elevated, but aspiration of the lump revealed no pus and culture of the fluid aspirated and blood cultures grew no organisms. A CT scan showed a collection behind the right limb of the graft. Surgical exploration of the right groin revealed only oedematous muscle, but no abscess or perigraft fluid collection. In keeping with local protocols,5 he was treated for a presumed graft infection with long-term ciprofloxacin and rifampicin.

Seven years later he was readmitted with fever, rigors and right groin pain. Blood cultures grew Clostridium ramosum, and he was treated with appropriate antibiotics. Over the next 2 years he presented on three further occasions with bacteraemias due to Escherichia coli, Bacteroides fragilis, and Klebsiella sp., for which he received appropriate antibiotics. An abdominal MRI scan showed a cuff of abnormal tissue in close relation to the right hand graft limb, although the anastomosis to the common femoral artery in the right groin was well defined and free from signs of infection. An episode of rectal bleeding was investigated by colonoscopy. At colonoscopy marked sigmoid diverticular disease was noted, and two adenomatous polyps were removed from the hepatic and splenic flexures.

Following a further episode of E. coli bacteraemia associated with left-sided abdominal pain and weight loss, a repeat colonoscopy was arranged 2 years later. This showed the right-hand limb of the graft within the caecum.

The patient subsequently underwent a limited procedure to remove the right colon and the majority of the right graft limb crossing the caecum (Fig. 1). In addition, a rifampicin-bonded cross-over graft was

Fig. 1. Right limb of aortobifemoral graft eroding through the caecum. The caecum has been opened to reveal the erosion through its posterior wall. Broad arrows = caecum; thin arrow = right limb of eroded graft.

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inserted from the proximal part of the original left graft limb to the remainder of the right limb just above the inguinal ligament.

Discussion

Communication between graft and bowel following aortic grafting is a rare occurrence. Usually this manifests as a fistula between the proximal anastomotic suture line and the duodenum, although this may occur at other sites in the gastrointestinal tract. These patients present clinically with major gastrointestinal haemorrhage, often preceded by several smaller “herald” bleeds.

Late chronic aortic graft sepsis is a more insidious process and is associated with staphylococcal infection in 60–70% of cases, and more rarely with fungal infection. Infection with Gram-negative intestinal organisms is rare, and raises the possibility of graft-enteric erosion (GEE). GEE is a much rarer complication than graft-enteric fistulae, and erosion of the limb of an aortic bifurcation graft into the caecum has not been previously reported. Colonoscopy has not been reported to diagnose any of the cases of GEE reported in the literature to date, but upper and lower gastrointestinal endoscopy should be considered in the investigation of patients with unexplained graft sepsis where Gram-negative organisms are cultured from blood or perigraft fluid collections.

References


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