

IMAGE | COLON

Aortic Graft Erosion Into the Duodenum Presenting With Recurrent Bacteremia

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CASE REPORT

A 72-year-old woman with a medical history of a coronary artery bypass graft surgery, carotid artery stents, and bilateral aortofemoral bypass 7 years ago presented with septic shock. Over the past year, she had multiple admissions for sepsis at an outside hospital and was worked up with a transesophageal echocardiogram, radiolabeled white blood cell scan, and multiple abdominal and pelvic computed tomography (CT) scans without source identification, and was treated with multiple courses of home intravenous antibiotics. On this admission, blood cultures grew *Streptococcus anginosus* and abdominal and pelvic CT showed no abscess with stable nonocclusive thrombus visualized within the right iliac portion of the graft (Figure 1). A positron emission tomography scan revealed no increased metabolic activity surrounding the abdominal aortic graft. Vascular surgery suspected a graft infection and consulted the gastroenterology service. A push enteroscopy was performed, which revealed a 2-cm fistula in the third portion of the duodenum with graft tissue seen in the



Figure 1. Preoperative computed tomography scan showing aortic graft without obvious signs of a fistula.

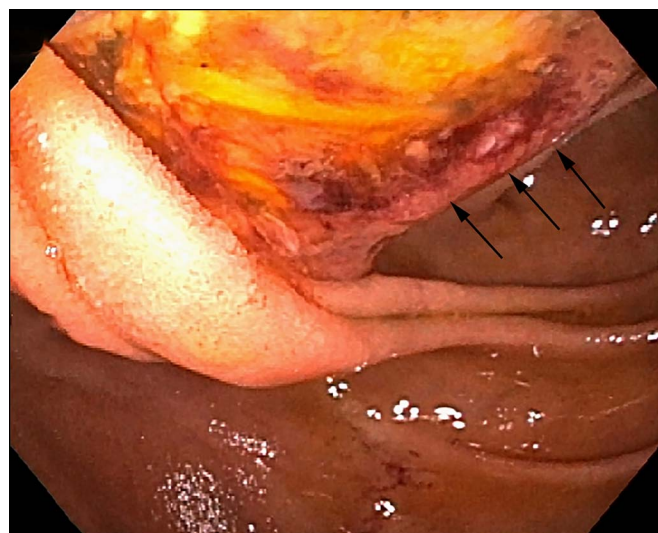


Figure 2. Push enteroscopy revealing a 2-cm aortoenteric fistula in the third part of the duodenum (arrows).

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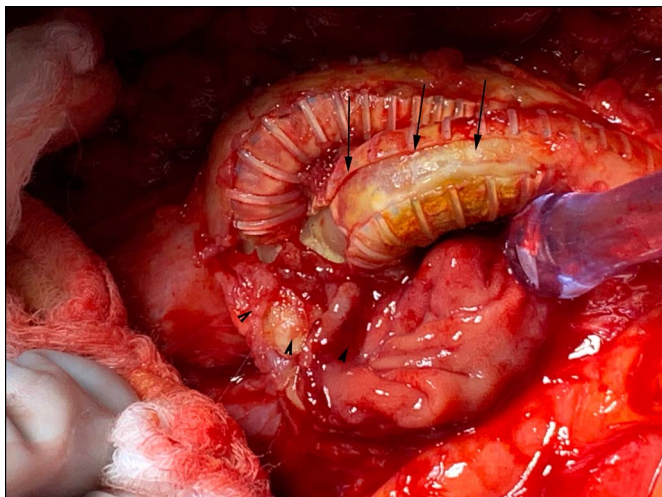


Figure 3. Intraoperative picture showing the aortic graft defect (arrows) and the duodenal defect (arrowheads).

duodenal wall but without active bleeding (Figure 2). The patient subsequently underwent a laparotomy which revealed the third portion of the duodenum to be densely adherent to the proximal graft, with a large erosion/defect approximately 40% of the circumference of the lumen (Figure 3). The duodenal defect was surgically repaired, the graft was then removed, and an end-to-end anastomosis was performed using the proximal end of a new cadaveric graft to the infrarenal aorta (Figure 4). The patient tolerated the procedure and was ultimately discharged on intravenous antibiotics. On follow-up a month later, she was doing well with no signs or symptoms of recurrent infection.

Secondary aortoenteric fistulas occur after previous aortic surgery in 0.77% to 1.6% of cases, and most commonly involve the third and fourth part of the duodenum, as it is most vulnerable to vascular impingement because of its retroperitoneal fixation and proximity to the pulsating aorta.¹ Patients most commonly present with gastrointestinal bleeding (~70%), followed by sepsis in up to 40% of patients.² The incidence of infected aortic endografts in the modern era is less than 1%.³ CT findings may be difficult to see without a high index of suspicion, and there are a number of disorders that may mimic a fistula such as perigraft infection, aortitis, and mycotic aneurysms.⁴ Owing to its rarity, it is unclear how often a CT scan is unable to reach a definitive diagnosis, but small studies have suggested the sensitivity of CT in detecting aortoenteric fistula may be as low as 50%.⁵ In many cases upper endoscopy may be requested for direct visualization and may be diagnostic in less than half of cases.¹ Patients with aortic grafts who present with recurrent bleeding or infections and questionable imaging findings should prompt gastroenterologists to consider enteroscopy for direct visualization in the evaluation of suspected aortoenteric fistulas because they may not be apparent on imaging or routine esophagogastroduodenoscopy. A high



Figure 4. Intraoperative picture showing the new cadaveric graft (arrows) and the repaired duodenum (arrowhead).

degree of clinical suspicion is warranted, and a multidisciplinary approach is essential.

DISCLOSURES

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